



Pre-Review Questionnaire

***prepared for the
American College of Surgeons
Consultative Visit***

May 5 – 8, 2013

This document is written by the Trauma Service staff from Cincinnati Children's Hospital with submission date of March 2013. A Priority 2 Research Grant from the Ohio Department of Public Safety funded this project.

Table of Contents

Introduction	2
PRQ Organization	5
Acronyms	6
Section 1: Assessment	
Injury Epidemiology	11
Indicators as a Tool for System Assessment	23
Section 2: Policy Development	
Statutory Authority and Administrative Rules	28
System Leadership	39
Coalition Building and Community Support.....	59
Lead Agency and Human Resources within the Lead Agency.....	68
Trauma System Plan.....	75
System Integration	84
Financing	88
Section 3: Assurance	
Prevention and Outreach.....	91
Emergency Medical Services	103
Definitive Care Facilities.....	119
System Coordination and Patient Flow.....	132
Rehabilitation	141
Emergency Preparedness.....	150
System-wide Evaluation and Quality Assurance	155
Trauma Management Information Systems (MIS)	160
Research.....	178
State Focused Questions.....	184
Appendices	
Appendix A: Ohio Revised Code 4765.....	185
Appendix B: Historical Timeline of Ohio Trauma System Development.....	236
Appendix C: Historical Timeline of Trauma MIS Development.....	240

Introduction

Ohio's History

Ohio is the birthplace of seven U.S. presidents, the first professional baseball team, the hot dog, the Football Hall of Fame, and the Rock and Roll Hall of Fame! The state name "Ohio" is the word the Iroquois Indians used when referring to the Ohio River and means "large or beautiful river".



Rene-Robert Cavelier, Sieur de La Salle was the first European to explore the state in 1669 and established a system of trading posts to control the fur trade in the region for France. It wasn't until 1788 that the first permanent settlement was established in Marion, Ohio. Partitioned from the Northwest Territory, Ohio was admitted to the Union as the 17th state on March 1, 1803. The state bird is the cardinal and the state flower is the large white trillium.

A "buck's eye" was the term used to describe the nut of the buckeye tree indigenous to the state of Ohio. Ohio historical lore implies the first use of "Buckeye" to describe an Ohioan in 1788. But it was during William Henry Harrison's successful election bid for President in 1840 that forever associated the buckeye with the state, as the buckeye was chosen as his election symbol. The buckeye tree was formally adopted as a state symbol in 1953.



Prior to 1850, Ohio was largely an agricultural state; however, the mid-19th century brought rapid industrial growth in part due to its geography. With ports along Lake Erie and major rivers throughout, Ohio was able to produce and deliver many products. Industry has encompassed steel, automobiles, rubber products, chemicals, machine tools and building materials in addition to the agricultural commodities. Both farming and industry were hit hard by the 1930 Great Depression. Subsequently, labor strife and economic restructuring in steel and other manufacturing areas cost the state many jobs in the late 20th century.

Today in Ohio



New economic models have led to different kinds of development for Ohio in the late 20th and 21st centuries. Modern state, national, and global businesses and industries are found throughout Ohio. Recently, Ohio has been named one of five states recognized as a global center for the fuel cell industry due to its unique combination of knowledge, resources and infrastructure. Ohio is one of the nation's industrial leaders, ranking third in manufacturing employment nationally in terms of gross domestic product. It is a national leader in the production of lime, clays and salt, and is a historic center of ceramic and glass industries. Lake Erie ports, chiefly Toledo and Cleveland, handle iron, copper, ore, oil and finished materials, to include steel and automobile parts. In spite of the massive industrial decline since the 1960s, the state retains many manufacturing centers.

Ohio's transition into the 21st century is best symbolized by the Third Frontier program, a 10-year financial commitment, started in 2002, to support technology-based economic development within the state. As of 2010, the Third Frontier program is credited with attracting 637 new high-tech companies to the state and adding 79,464 new jobs while having a \$6.6 billion economic impact with an investment return ratio of 9:1. In 2010, the program won the International Economic Development Council's Excellence in Economic Development Award, celebrated as a national model of success. The Ohio Third Frontier program has specifically impacted Ohio health care through financial investments in the medical imaging and the biomedical programs.

Even with the growth of the service sector, Ohio was hit hard by the recent recession and manufacturing employment losses during the most recent period. The recession cost the state 376,500 jobs and recorded 89,053 foreclosures in 2009, a record for the state. The median household income dropped 7% and the poverty rate ballooned to 13.5% by 2009. By the second half of 2010, the state started showing signs of recovery.

Recent employment statistics indicate that Ohio's largest sector is trade/transportation/utilities, which employs 1,010,000 Ohioans, or 19.4% of Ohio's workforce, while the health care and education sector employs 825,000 Ohioans (15.8%), government employs 787,000 Ohioans (15.1%), manufacturing employs 669,000 Ohioans (12.9%), and professional and technical services employs 638,000 Ohioans (12.2%). Fifty-nine of the United States' top 1,000 publicly traded companies (by revenue in 2008) are headquartered in Ohio, including Procter & Gamble, Goodyear Tire & Rubber, AK Steel, Timken, Abercrombie & Fitch, and Wendy's.

Geography

Ohio has 88 counties with the capital city of Columbus, located close to the center of the state. Ohio has 44,828 square miles making it the 34th in the nation according to land mass. The length of the state is 205 miles, while the width is 230 miles. To the north, Lake Erie provides Ohio 312 miles of coastline, which allows for numerous ports. Ohio's southern border is defined by the Ohio River. Ohio's neighbors are Pennsylvania to the east, Michigan to the northwest, Ontario Canada, to the north, Indiana to the west, Kentucky on the south, and West Virginia on the southeast.



Ohio's Population

From just over 45,000 residents in 1800, Ohio's population grew at rates of over 10% per decade until the census of 1970, which recorded just over 10.65 million Ohioans. Growth then slowed for the next four decades. Ohio's population (2010 census) was 11,536,504, up 1.6% from the 2000 census. Currently, Ohio is the 7th most populous state in the U.S., with 282 persons per square mile. Age distribution in Ohio is very close to the national average for children less than five (6.2% vs. 6.5%), individuals less than 18 years of age (23.7% vs. 24%) with a slightly higher > 65 year old population (14.1% vs. 13%). By 25 years of age, 86.8% of the Ohio population has received a high school degree and 23.6% have received a college degree.

The ethnicity of the Ohio population has changed slightly since the 2000 Census reports. Black, Hispanic and Asian populations have increased, becoming closer to the national norm. The Hispanic population, even with an increase to 3.1% still continues to be much lower than the national average of 16.3%. In the most recent census, 6.1% of Ohio's population does not use English as their primary home language, lower than the national average of 19.6%.

Ohio's Medical Resources

Currently in Ohio, there are 183 acute care hospitals with 32,613 beds (2011 stats) with an average occupancy rate of 61.3%.

Welcome

The trauma service staff of Cincinnati Children's Hospital has worked diligently to accurately depict the current status of trauma system development in Ohio. The PRQ describes system accomplishments and acknowledges where challenges still remain. To the best of our ability, we have provided current data, charts, maps, documents or studies, to assist the reviewers in gaining an understanding of trauma care and the trauma system in Ohio. The trauma service at Cincinnati Children's Hospital, as well as the trauma community constituents, look forward to your consultative visit and final report providing guidance and recommendations for system enhancement and thus improving care to the injured patient in Ohio.

The entire Ohio trauma community says, "Welcome to Ohio!"



A handwritten signature in blue ink, reading "Lynn Haas".

Lynn Haas RN, MSN, CNP
Trauma Program Manager
Cincinnati Children's Hospital

A handwritten signature in blue ink, reading "Richard Falcone".

Richard Falcone, MD, MPH
Trauma Program Director
Cincinnati Children's Hospital

A handwritten signature in black ink, reading "Margot Daugherty".

Margot Daugherty RN, MSN
Trauma Education Specialist
Cincinnati Children's Hospital

A handwritten signature in black ink, reading "Suzanne Moody".

Suzanne Moody, MPA
Trauma Researcher
Cincinnati Children's Hospital

A handwritten signature in black ink, reading "Vanessa Hartman".

Vanessa Hartman, BS
Administrative Assistant
Cincinnati Children's Hospital

PRQ Organization

The attached application is laid out in the order that the questions are posed in the Systems Consultation Guide. The PRQ and subsequent answers to the questions is being provided to you in hard copy and an electronic file on the enclosed jump drive and CD. The attachments or supporting documentations are all available on the jump drive or CD or on the Internet. To find the reference material, simply locate the desired section in the electronic version of the PRQ and click on the attachment link. If you have any difficulty accessing information, please contact Lynn Haas, Trauma Program Manager, at (513) 636-8636 or Vanessa Hartman, Trauma Administrative Assistant, at (513) 636-3617.

This trauma system consultative review is based on the benchmarks and indicators from the *Model Trauma System Planning and Evaluation (MTSPE)* document developed by the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services. At the beginning of each of the 18 sections within this document, there is a chart that outlines the following:

- MTSPE Benchmarks which are pertinent for that section;
- MTSPE Indicators which are pertinent for that section;
 - Most recent Ohio score (range from 1-5) for the specific indicator;
 - Determination if that specific indicator was included in the most recent Ohio trauma strategic plan (i.e. Ohio Framework).

Acronyms

ABA	American Burn Association
ACS	American College of Surgeons
AEMT	Advanced Emergency Medical Technician
AOTR	Alliance of Ohio Trauma Registrars
ALS	Advanced Life Support
ATLS	Advanced Trauma Life Support
BRFSS	Behavioral Risk Factor Surveillance System
BIS	Benchmark, Indicators and Scoring
BLS	Basic Life Support
CARF	Commission on the Accreditation of Rehabilitation Facilities
CFOI	Census of Fatal Occupational Injuries
CDC	Center for Disease Control and Prevention
CE	Continuing Education
CODES	Crash Outcome Data Evaluation System
COTS	Central Ohio Trauma System (Columbus)
CFR	Child Fatality Review
CPS	Child Passenger Safety
CIRP	Center for Injury Research and Policy (Columbus)
CODES	Crash Outcome Data Evaluation System
DAG	Data Action Group
DEMS	Division of Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EMA	Emergency Management Agency
EMR	Emergency Medical Responder
EMS	Emergency Medical Services
EMS Board	Emergency Medical Services Board
EMS-C	Emergency Medical Services for Children
EMSIRS	Emergency Medical Services Incident Reporting System
EMT	Emergency Medical Technician
ESF	Emergency Support Functions
FARS	Fatality Analysis Reporting System
FTE	Full Time Equivalent (a full-time position)
HICS	Hospital Incident Command System
HID	Hospital Inpatient Discharge
HIL	Hospital Incident Liaison
HRSA	Health Resources and Services Administration
HSEEP	Homeland Security Exercise and Evaluation Program
HVA	Hazard Vulnerability Assessments
ICS	Incident Command System
IRSAC	Incident Reporting System Advisory Committee
ISS	Injury Severity Score
JCARR	Joint Committee on Agency Rule Review
LMCI	Local Mass Casualty Incident
LTA	Lead Trauma Agency
MARCS	Multi-Agency Radio Communications Systems

MCI	Mass Casualty Incident
MCH	Maternal and Child Health
MOU	Memorandum of Understanding
MTSPE	Model Trauma System Planning and Evaluation
MVC	Motor Vehicle Crash
NASEMSO	National Association of State EMS Officials
NCIPC	National Center for Injury Prevention and Control
NDMS	National Disaster Medical System
NEMSIS	National Emergency Medical Services Information System
NHTSA	National Highway Traffic Safety Administration
NIMS	National Incident Management System
NORTN	Northeast Ohio Regional Trauma Network (Akron)
NORTR	Northwest Ohio Regional Trauma Registry (Toledo)
NOTS	Northern Ohio Trauma System (Cleveland)
NPDS	National Poison Data System
NREMT	National Registry for Emergency Medical Technicians
NRF	National Response Framework
NTDB	National Trauma Data Bank
NVDRS	National Violent Death Reporting System
NVSS	National Vital Statistics System
OAC	Ohio Administrative Code
OBB	Ohio Buckles Buckeyes
OCTF	Ohio Children's Trust Fund
ODH	Ohio Department of Health
OVDRS	Ohio Violent Death Reporting System
ODPS	Ohio Department of Public Safety
OHA	Ohio Hospital Association
OIBRS	Ohio Incident Based Reporting System
OIPP	Ohio Injury Prevention Partnership
ORA	Office of Research and Analysis
OMTB	Ohio Medical Transportation Board
ORC	Ohio Revised Code
OSHA	Occupational Safety & Health Administration
OSTNL	Ohio Society of Trauma Nurse Leaders
OTR	Ohio Trauma Registry
PDAAG	Prescription Drug Abuse Action Group
PHHSBG	Preventive Health and Health Services Block Grant
PRQ	Pre-Review Questionnaire
RHC	Regional Healthcare Coordinator
RPAB	Regional Physician Advisory Board
SACWIS	Statewide Automated Child Welfare Information System
SAMHSA	Substance Abuse and Mental Health Services Administration
SCI	Spinal Cord Injury
SHIP	State Health Improvement Plan
SORTS	Southwest Ohio Regional Trauma System (Dayton)
STAT	State Technical Assessment Team
STIPDA	State and Territorial Injury Prevention Director's Association
SWOT	Strength / Weakness / Opportunity / Threat

STEMI	ST Segment Elevation Myocardial Infarction
TAT	Technical Assistance Team
TACR	Trauma Acute Care Registry
TBI	Traumatic Brain Injury
TNCC	Trauma Nurse Core Curriculum
TRAS	Trauma Registry Advisory Subcommittee
TRR	Trauma Rehabilitation Registry
TSTC	Tri-State Trauma Coalition (Cincinnati)
TSEPC	Trauma Systems Evaluation and Planning Committee
TCD	Time Critical Diagnosis
TCS	Transportable Communications System
TVC	Trauma Visionary Committee
VIPP	Violence and Injury Prevention Program
VoIP	Voice over Internet Protocol
WISQARS	Web-Based Injury Statistics Query and Reporting System
WONDER	Wide-Ranging Online Data for Epidemiologic Research
YPLL	Years of Potential Life Lost
YRBS	Youth Risk Behavior Survey

Injury Epidemiology

Benchmark 101: There is a thorough description of the epidemiology of injury in the system jurisdiction using population-based data and clinical databases.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-101.1) = There is a thorough description of the epidemiology of injury mortality in the system jurisdiction using population-based data.	1	Y Goal 8
(I-101.2) = There is a description of injuries within the trauma system jurisdiction including the distribution by geographic area, high-risk populations (pediatric, elderly, distinct cultural/ethnic, rural, and others), incidence, prevalence, mechanism, manner, intent, mortality, contributing factors, determinants, morbidity, injury severity (including death), and patient distribution using any or all of the following: vital statistics, ED data, EMS data, hospital discharge data, state police data (data from law enforcement agencies), medical examiner data, trauma registry, and other data sources. The description is updated at regular intervals.	3	N
(I-101.3) = There is a comparison of injury mortality using local, regional, statewide, and national data.	1	Y Goal 8
(I-101.4) = Collaboration exists among EMS, public health officials, and trauma system leaders to complete injury risk assessments.	2	Y Goal 2
(I-101.7) = The trauma system works with EMS and public health agencies to identify special at-risk populations.	2	N

Benchmark 205: Collected data are used to evaluate system performance and to develop public policy.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-205.4) = Injury prevention programs use trauma management information system data to develop intervention strategies.	2	Y Goal 2

Benchmark 208: The trauma, public health, and emergency preparedness systems are closely linked.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-208.1) = The trauma system and the public health system have established linkages, including programs with an emphasis on population-based public health surveillance and evaluation for acute and chronic traumatic injury and injury prevention.	2	Y Goal 2

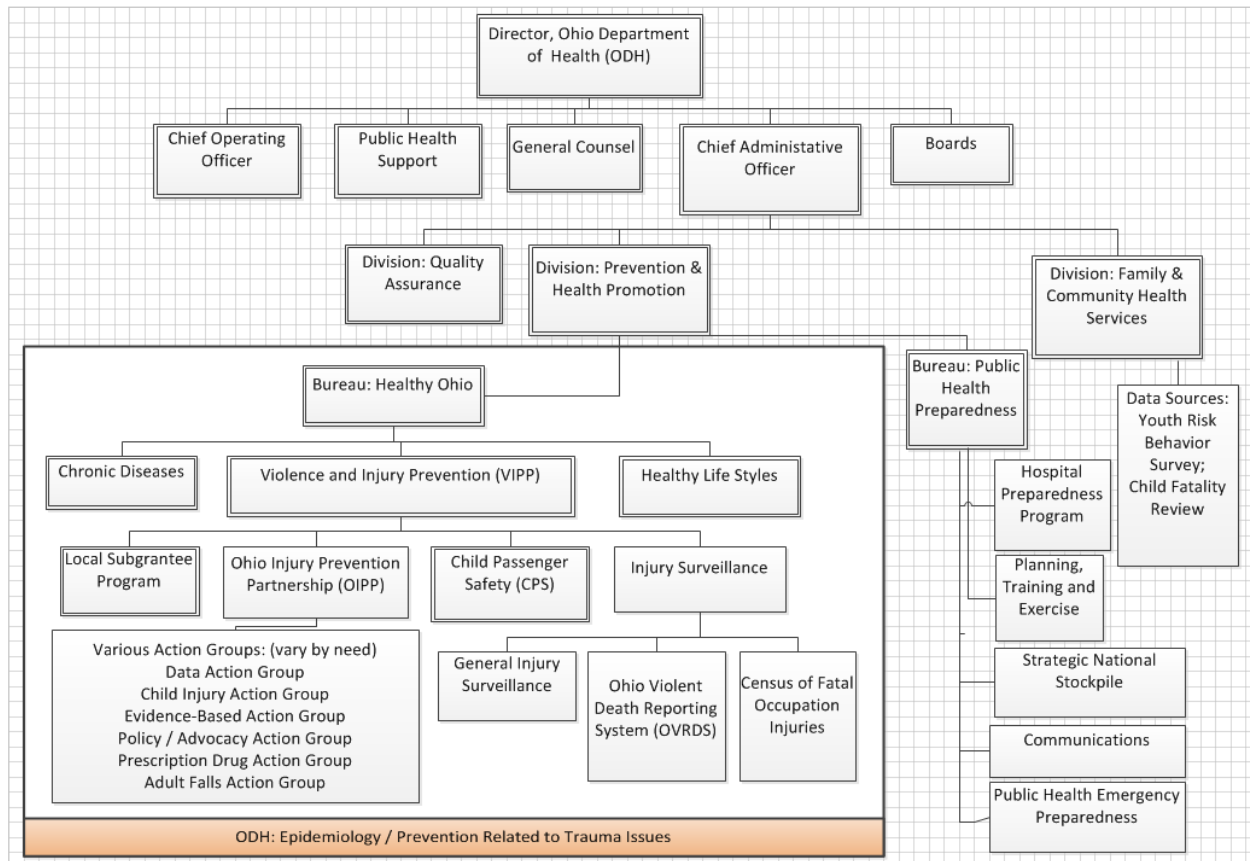
Benchmark 304: The jurisdictional lead agency, in cooperation with the other agencies and organizations, uses analytic tools to monitor the performance of population-based prevention and trauma care services

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-304.1) = The lead agency, along with partner organizations, prepares annual reports on the status of injury prevention and trauma care in the state, regional, or local areas. (Note: Annual reports may be distributed electronically rather than, or in addition to, printed copies.)	1	Y Goal 1
(I-304.2) = The trauma system management information system database is available for routine public health surveillance. There is concurrent access to the databases (ED, trauma, prehospital, medical examiner, and public health epidemiology) for the purpose of routine surveillance and monitoring of health status that occurs regularly and is a shared responsibility.	2	Y Goal 8

Injury Epidemiology

Pertinent History:

The Ohio Violence and Injury Prevention Program (VIPP), within the Ohio Department of Health (ODH), is the primary organization at the state level responsible for coordinating the surveillance systems that collect and analyze injury related data (<http://www.healthyohioprogram.org/vipp/injury.aspx>). The VIPP assesses the burden of overall and specific types of injury in Ohio through the examination of multiple data sets including hospital discharge, death, trauma registry, EMS data and risk factor surveillance. The program monitors and reports trends and emerging injury issues, produces annual reports and responds to requests for data. See following ODH organizational chart.



The Ohio Injury Prevention Partnership (OIPP) was convened in 2007 and is coordinated by ODH with funds from the Centers for Disease Control and Prevention (CDC) and National Center for Injury Prevention and Control (NCIPC). The OIPP is a statewide group of professionals representing a broad range of agencies and organizations concerned with building Ohio's capacity to address the prevention of injury. It is comprised of action groups that advise and assist the VIPP with establishing priorities and future directions regarding injury and violence prevention initiatives in Ohio. The ODH Data Action Groups vary according to the injury needs of the state as evidenced by the recent addition of the Prescription Drug Action Group, which is a recently documented and increasing public health issue within Ohio. In particular, the Data Action Groups were established to:

- Improve networking, communication and collaboration among injury/violence-related data owners and key stakeholders;
- Explore statewide injury-related data sources by reviewing survey results and asking data owners to provide an overview for data action group members;
- Make recommendations to the ODH VIPP about new data products;
- Assess the quality and availability of existing data sources and opportunities for linkages or shared data products;
- Inventory existing injury/violence-related data products and create a resource list for stakeholders;
- Assess OIPP needs surrounding violence and injury prevention priority areas (i.e., prescription drug poisoning/overdose, falls among older adults, child injury including motor vehicle traffic, asphyxiation, falls and violence) and the availability of related state and local data sources;
- Increase the quality and availability of statewide and county-specific injury-related data for planning, surveillance, and evaluation;
- Provide updates to OIPP so that data informs priorities and prevention efforts;
- Improve the availability and quality of existing violence and injury data sources through partnerships or linkages.

An epidemiologist is on staff within the Office of Research and Analysis (ORA), Division of EMS within the Ohio Department of Public Safety (ODPS). Additional information is available within the Lead Agency and Human Resources within the Lead Agency section of this document (pg. 67). An [ODPS Trauma Report 2010](#) was produced which summarized the Ohio Trauma Registry (OTR) data for that year. Previous registry reports were produced in 2002, 2003 and 2009.

Currently, there is no formal relationship between the ODPS and ODH epidemiologists working on injury-related issues.

Injury-related reports are generated by some counties and regions within Ohio. It is unknown how many counties and regions use regional data to implement change and improve care. There is no formal reporting structure of these reports to the Ohio Trauma Committee, VIPP or the OIPP.

Question 1: Describe the epidemiology of injury in your region and unique features of:

This ODH document titled [Burden of Injury in Ohio, 2000–2010](#), is the primary document used to outline the epidemiology of injury in Ohio. Of note, this document which is a 278 page in-depth analysis was found during research for this PRQ. To the author's knowledge, the information from this document is unknown to members of the Ohio Trauma Committee and has not been utilized to develop intervention strategies for trauma system development. The data from this document does not include any information from the Ohio Trauma Registry (OTR).

a. Overall Population Statistics

The following injury data in this section is provided by the document titled [ODH Burden of Injury in Ohio, 2000–2010](#), with the appropriate reference page noted. The complete document provides in-depth analysis of injury patterns within Ohio.

Ohio Overview

- Unintentional injuries are the leading cause of death and disability for Ohioans ages 1 through 44 and the fifth-leading cause of death for all Ohioans, following only heart disease and cancer (pg. 5);
- Injuries are a significant public health problem in Ohio. On average in Ohio in 2010, there was more than one injury-related hospitalization every 7 minutes and an emergency department visit every 23 seconds, and an average of nearly 20 injury-related deaths per day to Ohioans in 2010 (pg. 16) (Table 2.2).

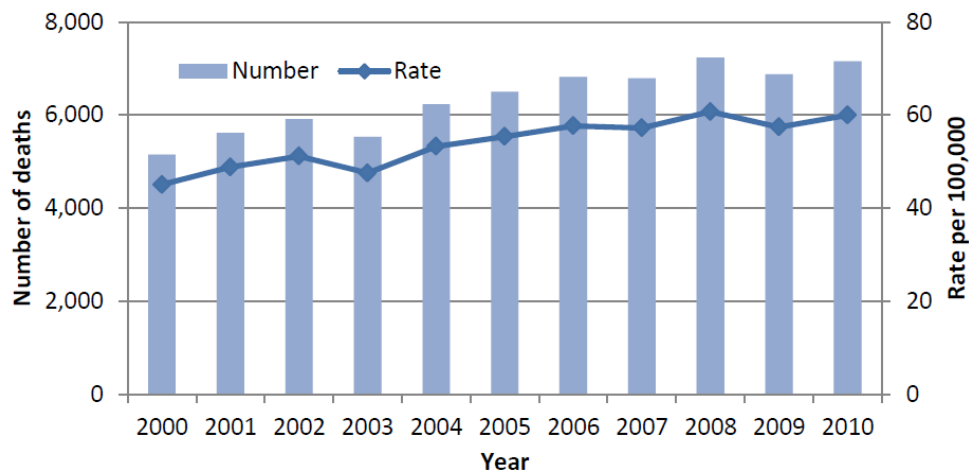
Table 2.2 Ohio Average Injury Frequency, 2010

Injury-related	Total 2010 Number	Per Day	Per Hour	Per Minute	Seconds....
ED Visits	1,360,000	3,726	155	2.6	An ED visit every 23 seconds
Hospitalizations	72,485	199	8	A hospitalization every 7 minutes	
Deaths	7,156	20	A death every 1 hour 23 minutes		

Fatality

- Since 2000, fatal injury rates have increased 33 percent from 45 per 100,000 in 2000 to 60 per 100,000 in 2010 (pg. 17) (see Figure 2.4). The death rate increased by an average of 1.5 deaths per 100,000 per year (pg. 17);

Figure 2.4. Number and age adjusted rate of all injury deaths by year, Ohio, 2000-2010



Source: Ohio Department of Health, Vital Statistics

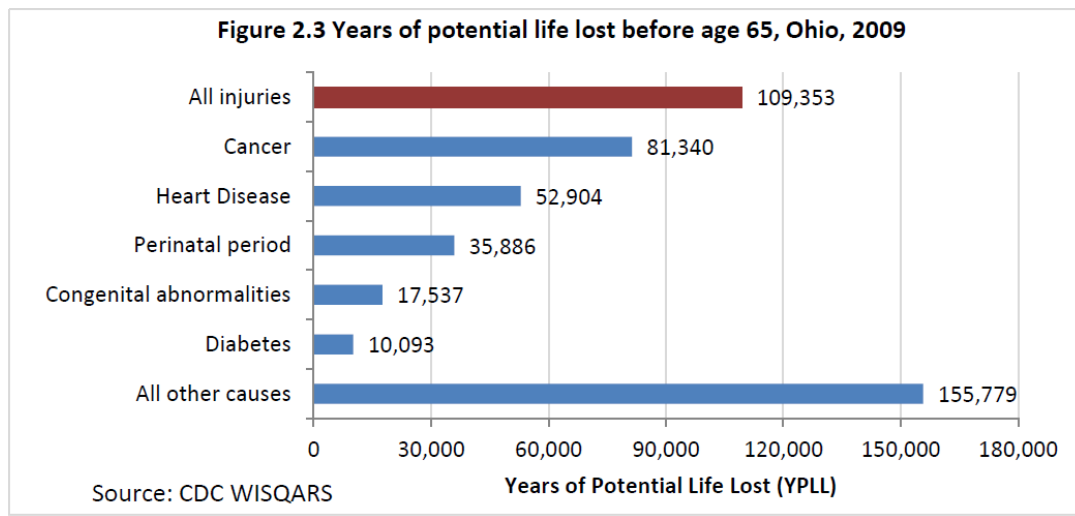
- The leading causes of injury death in 2010 were unintentional poisoning, suicide, motor vehicle traffic crashes, and falls;
- Death rates increased rapidly for poisoning, suicides, and fall related injuries while rates have decreased for motor vehicle traffic related injuries between 2000 and 2010.

Hospitalizations

- Over 72,000 hospitalizations resulted from injuries in Ohio in 2010. The injury hospitalization rate was 588 per 100,000 (pg. 19);
- Since 2002, injury hospitalization rates have increased 5 percent from 561 per 100,000 in 2002 to 588 per 100,000 in 2010 (pg. 19);

Economic Impact

- Injury related deaths, hospitalizations, and ED visits cost Ohio an estimated \$13 billion in 2010 (pg. 257);
- If these costs were equally divided among all Ohioans, injuries would cost every man, woman and child more than \$1,200 per year (pg. 257);
- The leading cause of injury costs in 2010 were falls (\$2.6 billion), motor vehicle traffic (\$2.3 billion), unintentional poisoning (\$2.0 billion), suicide or self-harm (\$1.7 billion), and homicides or assaults (\$1.3 billion) (pg. 257);
- Another measure of the burden of injury is Years of Potential Life Lost (YPLL), or life lost by a premature death.
 - According to the CDC WISQARS web-based query system, injuries were the leading contributor to YPLL for Ohio in 2009 (See Figure 2.3). Approximately 109,000 YPLL were attributed to all injuries. Unintentional injuries contributed 65,239 YPLL followed by suicides (24,287 years) and homicides (16,675) (pg. 15).



Additional Trends:

- Poisoning:
 - Unintentional poisoning death rates increased more than 372% from 1999 to 2010, largely due to a dramatic increase in prescription drug overdoses ([2010 Ohio Drug Overdose Data: General Findings](#)).
- Suicide:
 - The suicide rate has increased 27% from 2000 to 2010, the highest rates of suicide were found among adults ages 45-54. In 2010, 1,420 Ohioans took their own lives and at least 14,000 attempted suicides (pg. 192).

- Motor Vehicle:
 - Death and hospitalization rates are on the decline while Emergency Department visit rates increased slightly (pg. 69);
 - In 2010, 1,155 deaths resulted from unintentional motor vehicle traffic crashes and fatality rate was 9.8 per 100,000 (pg. 69);
 - Fatal and non-fatal injury rates have decreased the most among ages 15-34 (pg. 69);
 - Percentage of adults who reported always using their seat belt increased from 76 percent in 2002 to 83 percent in 2010 (pg. 69).

b. Children

Infants (Less than 1 Year Old)

The [ODH Special Emphasis Report: Infant and Early Childhood Injury, 2010](#) outline the following conclusions:

- In 2010, the leading causes of injury death among infants were unintentional suffocation in bed (42%), homicide (19%), other unintentional suffocation (16%), and transportation (7%);
- All other unintentional causes (fire/burns, natural causes, and other specified causes) contributed to 9% of injury deaths;
- Deaths of undetermined intent led to 8% of injury deaths;
- The leading cause of injury hospitalizations among infants were falls (17%), assaults (11%), and fire/burn (3%).

Young Children (Ages 1-4)

The [ODH Special Emphasis Report: Infant and Early Childhood Injury, 2010](#) outlines the following conclusions:

- The leading causes of injury death among young children were homicides (19%), unintentional drowning (18%), transportation (18%), and fire/burns (15%);
- All other unintentional causes (falls, poisoning, struck by/against, and natural causes) contributed to 15% of injury deaths;
- Deaths of undetermined intent led to 9% of injury deaths;
- The leading cause of injury hospitalization among young children were falls (11%), poisoning (10%), fire/burn (5%) and transport (4%).

The [OIPP / ODH Preventing Injury in Ohio, A Resource for Policy Makers, \(2012 Edition\)](#) outlines the following conclusions:

- Ohio's maltreatment fatality rates increased by 53% from 1998 to 2009;
- In 2010, 8,091 young passengers were injured in motor vehicle crashes in Ohio;

Children (Ages 5-9)

[ODH Office of Vital Statistics](#) provided the following information:

- Between 2008-2010, the leading cause of injury death among children ages 5-9 were transportation, homicide, fire/burn and drowning;
- Falls are the leading cause of non-fatal injury for both Emergency Department visits and hospitalizations.

Adolescents

[ODH Office of Vital Statistics](#) provided the following conclusions on adolescent injuries:

- The leading cause of injury death among children ages 10-14 during 2008-2010 were transportation, suicide, drowning and homicide;

- The leading causes of death of teens and young adults (ages 15-24) during 2008-2010 were motor vehicle traffic, suicide, poisoning and homicide;
- The top 4 causes of inpatient hospitalizations for 15-24 year olds were from injuries due to self-harm, motor vehicle traffic, assault and falls;
- The leading causes for Emergency Department visits were due to injuries as a result of struck by/against, falls, motor vehicle traffic and overexertion.

[Preventing Injuries in Ohio, A Resource for Policy Makers, \(2012 Edition\)](#) provided the following adolescent information:

- In 2010, 114 Ohioans ages 16-20 were killed and more than 16,000 were injured in motor vehicle crashes.

c. Elderly Adults

[ODH Fall-related Injury among Older Adults in Ohio](#) provided the following statistics on the elderly population:

- From 2000 to 2010, Ohioans aged 65 and older experienced a 163% increase in the number of fatal falls;
- On average, 3 older Ohioans suffered fatal falls each day in 2010;
- In 2010, there were 4.1 fall-related Emergency Department visits for every 100 Ohio older adults and nearly 10 fall-related hospitalizations for every 1,000 Ohio older adults;
- Fall-related Emergency Department visit and hospitalization rates increased 27 percent and 18 percent respectively from 2002 to 2010;
- 63% of hip fractures and 26% of traumatic brain injuries (TBIs) in 2009 in Ohio resulted from falls.

d. Other Special Populations

The injury epidemiology of a special population has not been identified.

Question 2: Describe the databases that are used to formulate the injury epidemiology profile (for example, population-based and clinical).

The relationship or lack of relationship between the following databases is outlined in the Trauma MIS section of this document (pg. 158).

Vital Statistics:

- Death Certificates are maintained by the ODH's Office of Vital Statistics;
- Health districts are required to transmit data monthly to the ODH Vital Records Section (ORC §3705.07).

Crash Outcome Data Evaluation System (CODES):

- The Ohio CODES Program is funded by the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA);
- It assesses the medical and financial outcomes of motor vehicle crashes in Ohio by linking data from traffic crash reports with other injury data sources, i.e. emergency medical services (EMS) runs, hospital inpatient and emergency department data, Ohio Trauma Registry data and death certificates;
- It is housed within the Center for Injury Research and Policy (CIRP) at Nationwide Children's Hospital.

Fatality Analysis Reports system (FARS):

- A nationwide census providing NHTSA, Congress and the American public yearly data regarding fatal injuries suffered in motor vehicle traffic crashes.

Hospital Discharge Data:

- Includes inpatient, outpatient and emergency department data;
- Hospital discharge records are collected and maintained by the Ohio Hospital Association (OHA);
- Enables member hospitals to run a variety of customized and standard reports for marketing, physician recruiting, business development and benchmarking purposes.

Ohio Trauma Registry (OTR):

- Includes the Trauma Acute Care Registry (TACR) and Trauma Rehabilitation Registry (TRR);
- Maintained by ODPS, Division of EMS, Office of Research and Analysis (ORA);
- Details provided in the Trauma MIS section of this document (p. 158).

The EMS Incident Reporting System (EMSIRS):

- An incident reporting system to collect information on the delivery of emergency medicine care in the state and the frequency of the delivery of care;
- The law requires all EMS agencies in the state to report any information the EMS Board deemed necessary for maintenance of the system;
- Maintained by ODPS, Division of EMS, Office of Research and Analysis (ORA);
- Details provided in the Trauma MIS section of this document.

Ohio Violent Death Reporting System (OVDRS):

- Established in 2009, is a reporting system that collects information on violent deaths, suicides, homicides, and unintentional firearm-related deaths;
- Data sources include: vital statistics data, coroner data from all 88 county coroners, state and local law enforcement data, Child Fatality Review data (if victim is under 18 years old);
- Links information from these data sources to create a comprehensive account of the incident as well as to identify violence trends, risk factors associated with violence and to develop intervention and prevention strategies;
- OVDRS is housed within the ODH and is funded through a cooperative agreement with the CDC and is part of the National Violent Death Reporting System (NVDRS).

Ohio Child Fatality Review (CFR):

- Established in 2000 by the Ohio General Assembly (HB 448) and is maintained by the Ohio Department of Health;
- Requires every county in Ohio to establish a CFR Board and to review all unexpected and unexplained deaths of children ages 17 and younger;
- CFR Boards are required to implement a data collection system for child death reviews. A national web-based information system for CFR is available for local boards to input their child death data. CFR boards are able to enter data on each child death reviewed on this secure internet site. CFR boards are then able to access reports and download their own data for analysis.

Ohio Behavioral Risk Factor Surveillance System (BRFSS):

- Maintained by ODH, this annual survey is conducted to identify Ohioan's health risk behaviors, to identify emerging health problems, and to develop, monitor and evaluate health programs;

- Funding to conduct the annual survey is provided by the CDC;
- The survey identifies high-risk health behaviors associated with injuries in Ohio.

Ohio Youth Risk Behavior Survey (YRBS):

- The survey is conducted every two years and is jointly sponsored by ODH, Ohio Department of Alcohol and Drug Addiction Services, and Ohio Department of Mental Health;
- The goal of the survey is to identify practices by young people that put their health at risk.

Ohio Traffic Crash Reports:

- The ODPS, Ohio State Highway Patrol, maintains complete crash reports and crash photos from crashes investigated by the Ohio State Highway Patrol;
- A report that examines the driving habits on Ohio's roads is published annually;
- Data is used by ODPS and local law enforcement agencies to help them determine and allocate resources to improve highway safety in Ohio.

Census of Fatal Occupational Injury (CFOI):

- This injury surveillance program sponsored by the U.S. Department of Labor, Bureau of Labor Statistics (BLS) and collects data on all workplace deaths due to injury in the United States;
- Ohio contributes data to the BLS where it is aggregated with data from all 50 states and used to establish and evaluate occupational safety programs and policies;
- Data sources include death certificates, workers' compensation reports, Occupational Safety and Health Administration (OSHA) reports, traffic crash records, and agricultural injury reports and media clippings;
- Funding for the CFOI program comes from the BLS with a 100 percent funding match requirement for the states.

Ohio Department of Health Information Warehouse:

- A database maintained by ODH that allows researchers to build data tables on birth, death and cancer data;
- State and county level data is available.

Web-based Injury Statistics Query and Reporting System (WISQARS):

- Customized reports of state and national injury-related data;
- Maintained by the CDC.

Wide-Ranging Online Data for Epidemiologic Research (WONDER):

- Online database for use by public health professionals and the public that gives access to a wide variety of public health information, i.e. mortality data;
- Maintained by the CDC.

National Poison Data System (NPDS):

- Maintained by the American Association of Poison Control Centers, NPDS contains information from the human poison exposure case phone calls taken by all 57 poison centers in the United States;
- Three poison centers exist in Ohio: Central Ohio Poison Center (Columbus), Cincinnati Drug and Poison Information Center and Northern Ohio Poison Center (Cleveland).

Statewide Automated Child Welfare Information System (SACWIS):

- Ohio Department of Job and Family Services.

Ohio Incident-based Reporting System (OIBRS):

- Ohio's version of the FBI's National Incident Based Reporting System;
- Voluntary crime reporting program in which Ohio law enforcement agencies can submit crime statistics directly to the state and federal government in an automated format.

Question 3: Have system epidemiology profile results (for example, mortality rates, distribution of mechanism, or intent) been compared with benchmark values? If so, please provide comparisons and origins of the benchmarks.

Injury data is submitted to a variety of national data sets and does allow for comparisons.

- Ohio submits annual data to [NHTSA](#) for inclusion in the FARS database. This data allows for comparison of the number of fatal motor vehicle traffic crashes in the United States.
- Ohio is one of 18 states to participate in CDC's NVDRS. This database examines the characteristics of violent deaths (homicides and suicides) in the participating states.
- Ohio submits mortality data to the CDC's National Vital Statistics System (NVSS).
- Ohio participates in the Bureau of Labor Statistics' [Census of Fatal Occupational Injuries](#) – data is combined with other state data and is used to establish and evaluate occupational safety programs.
- In the [Preventing Injuries in Ohio – A Resource for Policy Makers \(2012 Edition\)](#), comparisons are made to national rates using information from the CDC's WISQARS and WONDER datasets.
- ODH compared [child maltreatment fatality rates](#) of Ohio rates to national rates. The data source for this report was from the Healthy People 2010 and the Child Maltreatment Annual Reports: Reports from the States to the National Child Abuse and Neglect Data System.

Question 4: Describe how emerging injury control patterns (for example, from trend or surveillance data) were identified and acted on.

The OIPP used a data driven prioritization process to identify the five strategic priority areas of its [OIPP Strategic Plan 2011-2016](#). These priority areas include:

- Teen driving safety;
- Bicycle and wheeled sports helmets;
- Infant-sleep-related suffocation;
- Sports-related traumatic brain injury;
- Child restraint/booster seat law/review/revision.

Through its efforts, the OIPP has helped to effect policy change in the State of Ohio.

Data has been used to support grant applications to agencies that fund injury prevention programs. The following federal agencies provide funding to injury prevention programs in the state of Ohio: CDC, NHTSA, Substance Abuse and Mental Health Services Administration (SAMHSA) and Maternal and Child Health (MCH).

The VIPP has used data to develop its program initiatives and to identify specific populations within the state that have higher incidences of injury. The following are the three priority area identified by the VIPP and are the focus of their programming efforts.

Drug Overdose

- Prescription drug overdose and abuse was identified as a high priority by ODH due to increases in the number of drug overdose deaths. From 1999 to 2010, Ohio's death rate due to unintentional

drug overdose increased 372 percent. In Ohio, since 2007, there have been more deaths from drug overdose than from motor vehicle traffic crashes. The Prescription Drug Abuse Action Group (PDAAG) of the OIPP was created to focus specifically on decreasing the number of drug related deaths.

- The ODH launched the Prescription for Prevention – Stop the Epidemic. This is a comprehensive education and awareness campaign to combat the epidemic of prescription drug overdose and abuse.

Falls among Older Adults

- Data has been used by the ODH to show an increase in the number of falls of older Ohioans and that they suffer more serious injuries and are hospitalized at a higher rate.
- In November 2009, the Ohio Older Adult Falls Prevention Coalition was formed and a statewide partnership collaborated to develop the [Preventing Falls Among Older Adults 2010-2014 State Plan](#).
- The five-year plan is an approach to address falls among older adults to include: education/awareness, infrastructure, policy, interventions/risk assessment and monitoring trends, prevention, management, rehabilitation and long-term care.

Child Passenger Safety (CPS)

- Motor vehicle crash data demonstrated the need for child safety seats for all Ohioans. The Ohio Buckles Buckeyes Program provides child safety seats and booster seats to eligible low income families in all Ohio counties.

The following are examples of how injury data has been used in the state of Ohio to inform public policy:

Driver Texting Law (HB 99): Effective August 31, 2012

- To prohibit driving a vehicle while writing, sending or reading a text-based communication on a hand-held electronic wireless communications device and to establish the violation as a secondary traffic offense; to prohibit a person who is less than 18 years of age from using, in any manner, an electronic wireless communications device while driving, and to require driver education course to include instruction in the dangers of texting while driving.

Youth Concussion Law (HB 143). The bill has been sent to the Governor for signature

- Will require that steps be taken to educate parents, youth coaches and officials about symptoms of a concussion and that an athlete who shows symptoms of a concussion be immediately removed from a game. The youth will not be able to return to play unless cleared by a physician or licensed health care provider.

Suicide Awareness Training Law (HB 543). The bill has been sent to the Governor for signature

- To enact the “Jason Flatt Act” to require public schools to train staff in youth suicide awareness and prevention.

Pill Mills (HB 93)

- To establish and modify laws regarding the prevention of prescription drug abuse, development of information programs by the State Medical Board, and Medicaid coverage of prescription drugs.

Booster Seat Law: Effective October 7, 2009.

- Children in Ohio are required to use belt-positioning booster seats when they have outgrown their child safety seat (usually at 4 years old and 40 pounds) until they are 8 years old, unless they are at least 4 feet, 9 inches (57 inches) tall.

Question 5: Describe how ongoing and routine injury surveillance is completed and how results are shared with constituent groups.

Each of the individual datasets and surveillance systems referenced in this section maintain individual guidelines regarding inclusion/exclusion criteria of data, timeliness for data submission and release dates of data sets.

Many of the organizations which collect, analyze, and distribute injury surveillance data, then create fact sheets that are posted to websites, and distributed to listservs. These fact sheets are also used for public service announcements.

Organizations that analyze injury data, often share results through presentations to stakeholders. For example, the OIPP holds quarterly meetings at which members give presentations to highlight work being done in one of the priority areas. The following presentations, which are posted to the OIPP website, have been given at OIPP meetings:

- [Ohio's EMS Data Systems](#), presented by EMS, Office of Research & Analysis presented – August 18, 2011
- [2011 Youth Risk Behavior Surveillance Survey \(YRBSS\) Ohio's Students](#), presented by School & Adolescent Health Services, ODH – August 17, 2012

As a non-voting liaison of the Ohio Trauma Committee, the OIPP representative provides updates to the Ohio Trauma Committee on injury aspects related to the strategic plan.

In addition, data is provided to national injury surveillance agencies. For example, data is submitted to the CDC and NHTSA for inclusion in their multi-state projects, i.e. NVDRS, NVSS and FARS.

Indicators as a Tool for System Assessment

MTSPE Indicator B-300	MTPSE Indicator and Ohio Score (2008)	In Ohio Framework and if yes, goal #
Assurance to constituents that services necessary to achieve agreed-on goals are provided by encouraging actions of others (public or private), requiring action through regulation, or providing services directly.	33% of all potential 300 scores	Y

Indicators as a Tool for System Assessment

Question 1: Has a multidisciplinary stakeholder group participated in the scoring and consensus process associated with the BIS tool?

On March 12, 2008, the Ohio Trauma Committee hosted a consensus conference to evaluate the Ohio trauma system using the MTSPE/BIS (published by the Department of Health and Human Services in 2006) as the scoring tool. The process was facilitated by the Ohio Society of Trauma Nurse Leaders (OSTNL). Representation included: governmental agencies such as the Ohio Department of Public Safety (ODPS), Ohio Emergency Management Agency (EMA) and Department of Health (ODH); the Ohio State EMS Medical Director; Ohio Hospital Association (OHA); the Ohio Fire Chiefs Association; Ohio Ambulance and Medical Transportation Association; OSTNL; and Ohio Trauma Committee members, both from trauma and non-trauma centers. All assigned scores for each indicator shown below were attained through consensus of those present.

MTSPE - Ohio Scoresheet, March 12, 2008

		Max Points	Score	% of max score
100	Assessment - Regular systematic collection, assembly, analysis, and dissemination of information on the health of the community.	130	43	33%
101	There is a thorough description of the epidemiology of injury in the system jurisdiction using both population-based data and clinical databases	35	11	31%
102	There is an established trauma management information system (MIS) for ongoing injury surveillance and system performance assessment.	25	10	40%
103	A resource assessment for the trauma system has been completed and is regularly updated.	20	6	30%
104	An assessment of the trauma system's emergency preparedness has been completed including coordination with the public health, EMS system, and the emergency management agency	15	8	53%
105	The system assesses and monitors its value to its constituents in terms of cost-benefit analysis and societal investment.	35	8	23%
200	Policy Development - Promoting the use of scientific knowledge in decision making that includes building constituencies; identifying needs and setting priorities; legislative authority and funding to develop plans and policies to address needs; and ensuring the public's health and safety.	165	57	35%
201	Comprehensive State statutory authority and administrative rules support trauma system leaders and maintain trauma system infrastructure, planning, oversight, and future development.	20	6	30%
202	Trauma system leaders (lead agency, trauma center personnel, and other stakeholders) use a process to establish, maintain, and constantly evaluate and improve a comprehensive trauma system in cooperation with medical, professional, governmental, and citizen organizations.	20	9	45%
203	The State lead agency has a comprehensive written trauma system plan based on national guidelines. The plan integrates the trauma system with EMS, public health, emergency preparedness, and incident management. The written trauma system plan is developed in collaboration with community partners and stakeholders.	35	9	26%
204	Sufficient resources, including those both financial and infrastructure related, support system planning, implementation, and maintenance.	25	8	32%
205	Collected data are used to evaluate system performance and to develop public policy.	25	9	36%
206	Trauma system leaders, including a trauma-specific statewide multidisciplinary, multi-agency advisory committee, regularly review system performance reports.	10	5	50%

207	The lead agency informs and educates State, regional, and local constituencies and policy makers to foster collaboration and cooperation for system enhancement and injury control.	20	8	40%
208	The trauma, public health, and emergency preparedness systems are closely linked.	10	3	30%
300	Assurance - Assurance to constituents that services necessary to achieve agreed-on goals are provided by encouraging actions of others (public or private), requiring action through regulation, or providing services directly.	270	88	33%
301	The trauma management information system (MIS) is used to facilitate ongoing assessment and assurance of system performance and outcomes and provides a basis for continuously improving the trauma system including a cost-benefit analysis.	20	10	50%
302	The trauma system is supported by an EMS system that includes communications, medical oversight, prehospital triage, and transportation; the trauma system, EMS system, and public health agency are well integrated.	50	18	36%
303	Acute care facilities are integrated into a resource-efficient, inclusive network that meets required standards and that provides optimal care for all injured patients.	25	9	36%
304	The jurisdictional lead agency, in cooperation with other agencies and organizations, uses analytical tools to monitor the performance of population-based prevention and trauma care services.	10	3	30%
305	The lead agency ensures that its trauma system plan is integrated with, and complementary to, the comprehensive mass casualty plan for both natural and man-made incidents, including an all-hazards approach to planning and operations.	15	7	47%
306	The lead agency ensures that the trauma system demonstrates prevention and medical outreach activities within its defined service area.	15	3	20%
307	To maintain its State, regional, or local designation, each hospital will continually work to improve the trauma care as measured by patient outcomes	10	2	20%
308	The lead agency ensures that adequate rehabilitation facilities have been integrated into the trauma system and that these resources are made available to all populations requiring them.	10	3	30%
309	The financial aspects of the trauma systems are integrated into the overall performance improvement system to ensure ongoing "fine-tuning" and cost-effectiveness.	20	4	20%
310	The lead trauma authority ensures a competent workforce.	65	20	31%
311	The lead agency acts to protect the public welfare by enforcing various laws, rules, and regulations as they pertain to the trauma system.	30	9	30%
	Overall Total - Unadjusted baseline	565	188	33%
	Overall Total - Adjusted baseline	452	75	17%
	Total indicators given score of 1	68	60%	
	Total indicators given score of 2	24	21%	
	Total indicators given score of 3	14	12%	
	Total indicators given score of 4	5	4%	
	Total indicators given score of 5	2	2%	

The [attachment](#) (March 2008) provides detail on each of the 113 indicators.

Question 2: If the process has been completed, how were the findings used?

In February 2009, a workgroup of the Ohio Trauma Committee was established to begin the development of a strategic plan for Ohio's trauma system based on the results of the MTSPE BIS scoring assessment. Strategic plans from other states were obtained for the purpose of benchmarking in the area of content and format. Once written, the [Ohio Trauma Framework: 2010](#) document was distributed to stakeholders throughout the state for input. The [Ohio Trauma Framework: 2010](#) document was approved by the EMS Board in October 2010 and was incorporated into the [Ohio EMS 2015 Strategic Plan](#), and was approved by the EMS Board in February 2012. Detailed information on this process is outlined in the *Ohio Trauma Framework 2010* (pg. 11) and discussed further in the Trauma System Plan section of this document.

Question 3: Is there a date (year /month) set for a reassessment using the BIS tool to mark progress toward agree-on-goals or benchmarks?

This topic was discussed at the September 2012 Ohio Trauma Committee meeting. It was decided that the American College of Surgeons (ACS) Trauma Systems evaluation needed to occur before reassessment. Therefore, the reassessment date for using the BIS tool to mark trauma system progress is tentatively set for 2015.

Statutory Authority / Administrative Rules

Benchmark 201: Comprehensive state statutory authority and administrative rules support trauma system leaders and maintain trauma system infrastructure, planning, oversight, and future development.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-201.2) = The legislative authority states that all the trauma system components, emergency medical services (EMS), injury control, incident management, and planning documents work together for the effective implementation of the trauma system (infrastructure is in place).	3	N
(I-201.3) = Administrative rules and regulations direct the development of operational policies and procedures at the state, regional, and local levels.	1	Y Goal 1

Benchmark 311: The lead agency acts to protect the public welfare by enforcing various laws, rules and regulations as they pertain to the trauma system.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-311.4) = Laws, rules, and regulations are routinely reviewed and revised to continually strengthen and improve the trauma system.	4	N

Statutory Authority and Administrative Rules

Pertinent History:

With the passage of Am. Sub Senate Bill 98 of the 119th Ohio General Assembly (1992), responsibility was established in law (ORC §4765.06) for the creation of the Emergency Medical Services (EMS) Division and moved emergency medical services (EMS) from the Ohio Department of Education to the Ohio Department of Public Safety (ODPS) (OAC link: <http://codes.ohio.gov/oac/4765-4>; ORC link: <http://codes.ohio.gov/orc/4765>). In addition, the passage of SB 98 provided statutory authority for the establishment of an Emergency Medical Services Board (EMS Board), with the authority to oversee EMS and the certification and the training of EMS and fire personnel in Ohio. Additional trauma system-related actions required of the EMS Board from SB 98 as outlined in the [Ohio Legislative Service Commission Report: No. 148](#) included: establishment of a Trauma Care Advisory Group (TCAG – now Ohio Trauma Committee); formation of a trauma registry; formation of an EMS incident reporting system (EMSIRS); and the development of Regional Physician Advisory Boards (RPAB).

In the years following the passage of SB 98, there was significant debate among stakeholders concerning the structure and function of an organized state trauma system. Discussions led to the introduction of legislation (HB 681) during the 122nd Ohio General Assembly (1997-98). While the bill had several hearings, it was never passed by the legislature.

[Am. Sub. House Bill 138](#) of the 123rd Ohio General Assembly was signed into law in July 2000 and revised Chapters 3727 and 4765 of the Ohio Revised Code (ORC). This law established several elements of a statewide trauma system. As of November 3, 2002, only hospitals verified by the American College of Surgeons (ACS) can represent themselves as trauma centers. The legislation mandated that EMS and all hospitals develop protocols for the triage and treatment of seriously injured patients. HB 138 broadened the membership of the EMS Board and formally established the Ohio Trauma Committee to support the EMS Board in its work. Additional confidentiality protection was provided for the trauma registry data. The EMS / Trauma Grant Program was enhanced with an increase from 50% to 54% of collected seat belt fines being distributed to this fund. Finally, HB 138 called for [special studies](#) through ODPS and for two Commissions ([Injury Prevention Commission Report](#), and [Post Critical Care Commission Report](#)) through the Ohio Department of Health (ODH) to provide information for further development of the trauma system.

During initial trauma system development, it was determined that new trauma hospital development may be difficult due to conflicts in the state's definition of a trauma hospital, state triage rules, and criteria for ACS trauma center verification. A need for provisional trauma designation was identified. [Sub. Senate Bill 124](#) of the 124th Ohio General Assembly made several changes to chapters 3727 of the Ohio Revised Code (ORC §3727.09 - §3727.102 and chapters 4765). SB 124, with an effective date of November 2002, created a mechanism for a hospital to receive and treat trauma patients as a provisional trauma center before completing the ACS verification process. To attain provisional trauma center designation, a hospital must undergo a consultative or re-verification visit by the ACS. Status as a provisional trauma center is terminated if the hospital withdraws its application for verification, the ACS terminates or suspends the application, or if the hospital is not an ACS verified trauma center within 18 months after operating under provisional status (12 months if the hospital is being re-verified).

Chapter 4765 of the Ohio Revised Code (ORC) sets forth the laws that govern EMS and the EMS Board. Chapters 4765-1 to 4765-23 of the Ohio Administrative Code (OAC) are the rules that amplify and implement the EMS' statutory provisions of the ORC. ORC chapter 3727 sets forth the laws that are

pertinent to hospitals. Administrative rules are reviewed every five years to assess if they should be rescinded, amended, or continued without change.

Chapter 4765 of the Ohio Revised Code is located in Appendix A (pg. 184) of this document.

Question 1: Describe how the current statutes and regulations allow the state or region to:

a. Develop, plan and implement the trauma system.

The EMS Board has the statutory authority over trauma system development within the EMS phase of care through the ORC and / or OAC which authorizes:

- The governor to appoint the Ohio Trauma Committee to advise and assist the EMS Board in matters related to adult and pediatric trauma care and the establishment and operation of the Ohio Trauma Registry (OTR) (ORC §4765.04);
- The EMS Board to develop a subcommittee to advise and assist with the trauma registry (ORC §4765.04);
- The EMS Board to develop written protocols for the triage of adult and pediatric trauma patients (ORC §4765.40);
- The EMS Board to oversee EMS by:
 - Administering the accreditation and approval process for Ohio EMS training programs (ORC §4765.17);
 - Adopting rule criteria that each training program must meet to receive accreditation (ORC §4765.15);
 - Validating that applicants must pass a written and practical examination for certification to practice emergency medical services (ORC §4765.29);
 - Administering the application and certification process for EMS instructors, specifying by rule the education requirements (ORC §4765.22);
 - Requiring certificate holders to complete continuing EMS education requirements (ORC §4765.16);
- The EMS Board to distribute funds from the EMS / Trauma Grant Program (ORC §4765.07);
- The EMS Board to implement a statewide EMS plan during periods of disaster (ORC §4765.08) which works in accordance with the statewide emergency operations plan required under ORC §5505.22.

b. Monitor and enforce.

Statutory authority in the area of monitoring and enforcement exists only in the realm of pre-hospital care.

Directives within the ORC and / or the OAC call for:

- The EMS Board to divide the state geographically into regional physician advisory boards (RPAB) and to appoint regional physicians to each RPAB for the purpose of overseeing the delivery of adult and pediatric pre-hospital emergency services (ORC §4765.05);
 - The EMS Board is allowed to create regions or revise them as needed;
 - Chairs of each RBAP region meets at least 4 times annually with reporting responsibility to the state medical director;

- The RPABs have the right to determine pre-hospital protocols utilized by the EMS agency for which they are providing medical direction.
- Each EMS organization, along with their respective medical director, to implement ongoing peer review and quality assurance programs designed to improve the availability and quality of the emergency medical services it provides (ORC §4765.12);
- Managing EMS complaints and disciplinary actions, after investigation of potential misconduct (ORC §4765.33).

Recommendations from the 2011 National Highway Traffic Safety Administration ([NHTSA](#)) report include:

- EMS Board should re-evaluate the current map and functions of EMS regions in Ohio to determine if there can be improvements by updating roles and aligning with the State's Homeland Security regions or other functional models. Details on EMS / RPAB regions are outlined in the EMS section of this document (pg. 101).

c. Designate the lead agency.

The EMS Board functions as the principle trauma agency in Ohio having oversight of the care of injured adult and pediatric patients through the EMS phase. The EMS Board has no clear statutory authority once the injured patient arrives at the definitive destination. EMS Board responsibilities are limited to the pre-hospital phase of trauma care and are discussed in 1a above. Therefore, for the remainder of this PRQ, the term “EMS Board” will be interchangeable with the principle trauma agency.

Ohio law (ORC §3727.101) recognizes trauma centers as those verified by the ACS.

In 2002, the Director of the Ohio Department of Health (ODH) appointed a small workgroup to investigate various model centers in use across the nation for provisional designation of trauma. That workgroup considered the opportunity for provisional designation to be a short term solution to the timing issues arising through HB 138. A better, long term solution could be found if clinical criteria were added to the designation criteria. The workgroup recommended that the State of Ohio choose one of four models discussed in its [Provisional Designation Report](#). No action was taken to establish a lead agency for the trauma system or create a more robust process for designation of trauma centers.

d. Collect and protect confidential data.

Collection of data exists in statutory authority (ORC §4765.06) and authorizes:

- The EMS Board to establish an EMS incident reporting system (EMSIRS) to which all EMS organizations are required to submit information as determined by the EMS Board;
 - Non-emergency medical services organizations, private EMS organizations, mobile intensive care unit organizations (adult, neonatal and pediatric) and medical aircraft (helicopter and fixed wing) organizations are private-for-profit EMS organizations, which operate independent of EMS Division and, currently, are under the authority of the Ohio Medical Transportation Board (OMTB). These organizations are not required to report data to EMSIRS or OTR; however an unknown number of agencies do voluntarily submit information.

- The EMS Board to establish the OTR where health care facilities and public agencies designated by the EMS Board that possesses information regarding trauma care, and county coroners shall submit data;
 - ORC §4765.06 states that the OTR shall provide for the reporting of adult and pediatric trauma-related deaths, identification of adult and pediatric trauma patients, monitoring of adult and pediatric trauma patient care data, and determination of the total amount of uncompensated adult and pediatric trauma care provided annually by each facility that provides care to trauma victims.

Risk adjustment parameters were added with enactment of HB 138 in 2000. Protection of confidential data is specifically addressed in the statute (ORC §4765.06) as follows:

- Information submitted to the OTR that identifies or would tend to identify a specific recipient of emergency medical services or adult or pediatric trauma care shall not be made public;
- Information that identifies or would tend to identify a specific provider of emergency medical services or adult or pediatric care shall not be made public;
- The EMS Board has the authority to make public such information only on a risk adjusted basis.

The 2011 NHTSA report noted that Ohio was one of the few states that lacked authority to submit pre-hospital data to the National Emergency Medical Services Information System (NEMSIS) due to the risk adjustment law. In July 2012, an addition to ORC §4765.06 (G) expanded the Ohio law to allow the EMS Board to transmit non risk-adjusted data from EMSIRS to NEMSIS, pursuant to a written contract between the EMS Board and the federal agency that administers NEMSIS. At the time of this writing, pre-hospital data has not yet been submitted to the NEMSIS dataset. A comparable legislative amendment and subsequent contract has not been implemented to allow OTR data to be submitted to the National Trauma Data Bank (NTDB), therefore non-risk adjusted trauma data cannot be sent from the OTR.

Recommendations from [2011 NHTSA Report](#) include:

- The EMS Board should develop and present a proposal to the Legislature to consolidate the responsibilities of the OMTB within the Division of EMS, thus creating efficiencies, reducing duplication and confusion to the public and EMS providers. Of note, House Bill 35 of the 130th Ohio General Assembly was introduced on February 6, 2013 with language addressing the merging of these two boards.

e. Protect the confidentiality of the quality improvement process.

Protection regarding the confidentiality of quality improvement programs is limited to EMS organizations and is specifically addressed in statute (ORC §4765.12) as follows:

- Each EMS organization is required to implement ongoing peer review and quality assurance programs designed to improve the availability and quality of the EMS that it provides.
 - The form and content of the programs is determined by each EMS organization.
 - Information generated solely for use in a peer review or quality assurance program conducted on behalf of an EMS organization is not a public record.

Information is not evaluated outside of the realm of the individual EMS agency and not reported to the EMS Board.

ACS verified trauma centers in Ohio are required by ACS standards to participate in quality improvement programs within their institution. Provisionally designated trauma centers are recognized in Ohio only by their participation in preparation for ACS verification and, therefore, in the development of quality improvement programs that will satisfy ACS requirements. At the hospital level, statutes exist for protection within peer review and quality improvement activities. Patient confidentiality is maintained if pertinent information remains within the institution.

Question 2: Describe the process by which trauma system policies and procedures are developed or updated to manage the system including:

a. The adoption of standards of care.

For verified trauma centers, the standards set in the ACS's *Resources for Optimal Care of the Injured Patient: 2006* serves as the basis for the standards of care for trauma patients in Ohio.

ORC §4765.12 requires the EMS Board to develop and distribute guidelines for the care of trauma patients by EMS personnel. In January 2012, [pre-hospital guidelines for both adults and pediatrics](#) were updated and approved by the EMS Board, Medical Oversight Committee of the EMS Board and the RPAB chairs with subsequent posting on the ODPS website. These guidelines are not mandatory but meant to assist in the development of local protocols. Guidelines and procedures are updated as needed.

The initial [trauma triage rules](#) (OAC §4765-14) were established and approved by the EMS Board in February 2002. Criteria to evaluate whether an injured person qualifies as an adult or pediatric trauma victim were established, in conjunction with the definition of a trauma patient. Five exceptions to mandatory transport were identified in the OAC and repeated in the ORC: (1) It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an appropriate trauma center; (2) It is unsafe or medically inappropriate to transport the victim directly to an appropriate trauma center due to adverse weather or ground conditions or excessive transport time; (3) Transporting the victim to an appropriate trauma center would cause a shortage of local emergency medical service resources; (4) No appropriate trauma center is able to receive and provide trauma care to the victim without undue delay; (5) Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than 18 years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient (ORC §4765.40).

These trauma triage rules, considered baseline requirements, were distributed to all RPABs for either adoption or amendment. Each RPAB region's trauma triage rules require approval by the EMS Board indicating that the rules meet or exceeded baseline standards. The EMS Board reviews the trauma triage rules every three years for appropriateness. RBAP regions review their trauma triage guidelines every three years with submission to the EMS Board if an amendment is required (OAC §4765-3-04). In addition, following an Ohio Trauma Committee ad hoc workgroup report, which evaluated geriatric data, additions were incorporated into the baseline trauma triage rules in December 2008, specific for the geriatric population.

b. Designation or verification of trauma centers.

Verification of trauma centers is a voluntary process by the hospital. ORC legislatively defines the term trauma center as either: (1) any hospital that is verified by the ACS as an adult or pediatric trauma center; (2) any hospital that is operating as an adult or pediatric trauma center under provisional status pursuant to ORC §3727. SB 124 created a mechanism for a hospital to operate as a provisional trauma center before completing ACS verification. To attain provisional trauma center designation, a hospital must undergo a consultative or re-verification visit by the ACS. Based on the report from this visit, a hospital can attain provisional trauma center status after completing the following tasks: (1) the hospital's chief medical officer and chief executive officer certify in writing to the hospital's governing board that the hospital is committed and able to provide trauma care consistent with the level of verification being sought; (2) the hospital's governing board adopts a resolution stating that the hospital is committed and able to provide trauma care consistent with the level being sought; and (3) the hospital's governing board approves a written plan and timetable for obtaining the level of verification being sought, including provisions for correcting any deficiencies identified during the ACS review. Status as a provisional trauma center is terminated if the hospital withdraws its application for verification, the ACS terminates or suspends the application, or if the hospital is not an ACS verified trauma center within 18 months after operating under provisional status (12 months if the hospital is being re-verified).

All hospitals must notify the Director of ODH of any changes in their trauma center status (ORC §3727.101-102). This would include achievement or loss of provisional trauma center status and achievement, loss, or change in their level of trauma center verification. The Director may request a copy of the hospital's ACS report and timetable for correcting any identified deficiencies. While these documents are confidential, they can be used in any action brought by the Director against the trauma center or a person that authorized, approved, or created the original documents and the information in them. There is no statutory authority for the ODH to administer a provisional designation system. There is also no funding to support activities related to provisional designation.

c. Direct patient flow on the basis of designation.

The state triage protocols adopted under ORC §4765.40 requires trauma patients to be transported to an adult or pediatric trauma center that is able to provide appropriate adult or pediatric trauma care, but does not require a trauma patient to be transported to a specific category of trauma center (i.e. level I, II, III, pediatric). Five exceptions to this rule exist (ORC §4765.40):

- It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an adult or pediatric trauma center;
- It is unsafe or medically inappropriate to transport the victim directly to an adult or pediatric trauma center due to adverse weather or ground conditions or excessive transport time;
- Transporting the victim to an adult or pediatric trauma center would cause a shortage of local emergency medical service resources;
- No appropriate adult or pediatric trauma center is able to receive and provide adult or pediatric trauma care to the trauma victim without undue delay; and
- Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than eighteen years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient.

The EMS Board and the Ohio Trauma Committee maintain a website of verified and provisional trauma centers (http://ems.ohio.gov/ems_trauma.stm). Whether individual EMS runs are transporting patients to appropriate trauma centers, given the current posted website, is not being monitored by the EMS Board or the Ohio Trauma Committee.

d. Data collection.

The statute (ORC §4765.11) directs the EMS Board to establish an Ohio trauma registry and an EMS incident reporting system. Any entity, hospital or EMS organization, that fails to submit data and information to the data systems, as required under ORC §4765.06 will be ineligible to participate in the EMS / Trauma Grants Program, as outlined in OAC §4765-4. Information on data collection systems is discussed in the Trauma MIS section of this document (pg. 158).

For the Ohio Trauma Registry (OTR), the administrative code (OAC §4765-4) requires data collection and submission of information from all hospitals that provide care for injured patients, both ACS verified and provisional trauma centers, and non-trauma verified acute care hospitals. A minimal list of trauma registry data points are written in the ORC. An expanded list of data elements is currently approved and will be included in the Trauma MIS section (pg. 158) of this document. For the EMS incident reporting system, the administrative code (OAC §4765-4) requires each EMS organization to submit a minimal number of data elements as specified by the EMS Board. For both the OTR and the EMS Incident Reporting System (EMSIRS), submission deadlines, the authority to grant extensions and failure-to-report guidelines are also included within the OAC.

e. System evaluation.

No statutory authority exists specifically in regards to trauma system evaluation for the state of Ohio or regions within Ohio and, therefore, there is minimal monitoring or analysis of the requirements defined by law.

In 2011, a workgroup of constituents developed a template for evaluating trauma system development, dividing the evaluation into three aspects: structure, process and outcome. This template was approved by the Ohio Trauma Committee in December 2011. The [Ohio Metrics Scorecard](#) was developed by expert opinion and has not been validated. To date, the Ohio Metrics Scorecard is not being utilized due to multiple limitations stemming from the OTR. For example, two of those limitations are: lack of EMS and trauma registry integration, and non-inclusive registry dataset. At the current time, there are no future plans to operationalize or use this scorecard.

Question 3: Within the context of statutes and regulation, describe how injury prevention, EMS, public health, the needs of special populations, and emergency management are integrated or coordinated within the trauma system:

a. Injury Prevention.

Statutory law states that the EMS Board, under the ODPS, has the statutory authority to establish an injury prevention program (ORC §4765.10) but at the time of this writing, has not done so.

The ODH also has statutory authority for injury prevention within Ohio (OAC§ 3701-2). SB 138 required the ODH to form a commission on the prevention of injury, with particular emphasis on the

pediatric and geriatric populations in Ohio. In October 2001, commission members from across the state first gathered to discuss the status of injury and prevention efforts in Ohio. They developed a strategy and over the next two years, convened regularly to produce a consensus-based report. The result of the commission's work is a comprehensive report examining the current status of injuries in Ohio with recommendations for future action. The [Injury Prevention Commission Report](#), completed in 2003 is attached.

As statutory authority defines trauma centers in Ohio by ACS verification requirements, verified trauma centers are required by ACS to participate in injury prevention activities. Level I and II verified trauma centers are required to employ a dedicated full time equivalent (FTE) to the process.

b. EMS.

As previously mentioned, most statutory authority for trauma care resides within the confines of the EMS system. Therefore, a strong legal relationship exists between trauma systems and the EMS Division.

c. Public Health.

In addition to the public health impact of injury prevention and disaster management, the following are additional legislative aspects that impact trauma system development:

Sub. House Bill 448 of the 123rd Ohio General Assembly mandated Child Fatality Review (CFR) Boards in each of Ohio's counties (or regions) to review the deaths of children under eighteen years of age. In addition, this statutory authority mandates an [Annual CFR report](#) by September 30th with distribution to the governor, the speaker of the Ohio House of Representatives, the president of the Ohio Senate, and the minority leaders of the Ohio House of Representatives and Ohio Senates (OAC §3701-67).

Secondly, the legal records collected in the ODH, Division of Vital Statistics are the data source for many important statistical measures used in public health. These indicators track Ohio's health and are used locally for planning and community analysis. Two data sources under the auspices of the Bureau of Vital Statistics which are related to the trauma system include: 1) Death Certificates (OAC §3701-5), and 2) Ohio hospital inpatient discharge and emergency room records, which are collected and maintained by the Ohio Hospital Association (OHA) from information provided by members hospitals. Lastly, although not mandated in statutory authority, ODH is in the process of coordinating the development of a state health improvement plan (SHIP)([draft of SHIP priority related to injury](#)). This activity is required for ODH to achieve accreditation (tentative for 2013) and extends beyond ODH to involve any and all entities that have a stake in improving "health" in Ohio. Injury and Violence Prevention is included as one component / priority within this plan.

d. Special Needs Population.

Some aspects of pediatric trauma care written into statutory authority, is specifically related to the need for pediatric specific trauma triage criteria (ORC §4765.40). In addition, children are the focus

of special requirements for the Emergency Medical Services for Children (EMS-C) grant from HRSA and as such, receive national attention with current national priorities. A committee within the EMS Board works in conjunction with the EMS Division on this aspect of care.

Before 2008, the elderly were not mentioned specifically in Ohio rule or regulation other than being generically included within the adult population. In Ohio Trauma Committee discussions, it was agreed that the elderly have worse outcomes than younger adults with the same or similar injuries yet are subjected to the same triage criteria. At that time, age was simply a “consideration.” Based on research, a task force was formed to find the evidence needed to create geriatric triage criteria. A member of the Ohio Trauma Committee chaired the task force to develop recommendations for geriatric trauma triage criteria. Recommendations included:

- Trauma patients =>70 years should be defined as geriatric trauma and triaged for evaluation to a trauma center if they meet the following criteria:
 - GCS < 15 in the presence of known or suspected traumatic brain injury;
 - Systolic BP < 100 mmHg;
 - Multiple body regions injured;
 - Fall from any height with evidence of traumatic brain injury;
 - Pedestrian struck by motor vehicle;
 - Known or suspected proximal long bone fracture sustained in a motor vehicle crash.

The Ohio Trauma Committee’s recommendations regarding revision of the trauma triage criteria was accepted by the EMS Board, passed through the administrative rules process and implemented on December 29, 2008. OAC §1765-14 now includes the definition of the geriatric trauma patient and baseline geriatric trauma triage rules. When state trauma triage protocols are amended to include criteria that do not appear in a region’s protocols, such amendments are automatically applied to the region’s protocols.

Goal #10 of the *Ohio Trauma Framework: 2010* specifically addresses individuals with functional needs within the state of Ohio. See System Leadership (pg. 37) and Trauma System Plan (pg. 74) sections of this document for more in-depth information on *Ohio Trauma Framework: 2010*. A member of the Ohio Trauma Committee (current victim advocate position and previous Liaison from the Governor’s Council on people with Disabilities from 2011-12) is chairing this innovative workgroup. As meetings for this workgroup only began in June 2012, no recommendations or statutory rules / regulations have yet emerged related to individuals with functional needs.

e. **Emergency Management.**

Ohio’s primary emergency management statute, Chapter 55, authorized the State Emergency Management Agency (EMA) and countywide emergency management agencies to undertake specified activities and provides for mutual aid agreements as well as temporary seats of government for state and local governments. The statute established the EMA within the ODPS. An executive director, appointed with the concurrence of the governor coordinates all activities of all agencies for emergency management, maintains liaison with similar agencies of other states and of the federal government, and cooperates with those agencies. The executive director is authorized to: develop a statewide emergency operations plan; participate in federal programs; accept grants from and enter into cooperative agreements or contractual arrangements with, any federal, state, or local department agency or any other person or body politic (ORC §5502.22).

System Leadership

Benchmark 202: Trauma system leaders (lead agency, trauma center personnel, and other stakeholders) use a process to establish, maintain, and constantly evaluate and improve a comprehensive trauma system in cooperation with medical, professional, governmental, and other citizen organizations.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-202.1) = The lead agency demonstrates that it can bring organizations together to implement and maintain a comprehensive trauma system.	2	Yes Goal 1
(I-202.2) = The lead agency has developed and implemented a trauma-specific statewide multidisciplinary, multi-agency advisory committee to provide overall guidance to trauma system planning and implementation strategies. The committee meets regularly and is instrumental in providing guidance to the lead agency.	5	No
(I-202.3) = A clearly defined and easily understood structure is in place for the trauma system decision-making process.	1	Yes Goal 1
(I-202.4) = Trauma system leaders have adopted and used goals and time-specific, quantifiable, and measurable objectives for the trauma system.	1	No

Benchmark 205: Collected data are used to evaluate system performance and to develop public policy.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-205.1) = Collected data are used for strategic and budgetary planning.	3	Y Goal 8
(I-205.2) = Collected data from a variety of sources are used to review the appropriateness of trauma system policies and procedures. Note: The format of the reports in this and other sections may be written, Web-based, or other electronic media.	1	N
(I-205.3) = The trauma management information system is used to assess system performance, to measure system compliance with applicable standards, and to allocate trauma system resources to areas of need or to acquire new resources.	2	N
(I-205.4) = Injury prevention programs use trauma management information system data to develop intervention strategies.	2	Y Goal 2
(I-205.5) = Education for trauma system participants is developed based on a review and evaluation of trauma management information system data.	1	Y Goal 9

Benchmark 206: Trauma system leaders, including a trauma-specific statewide multidisciplinary, multi-agency advisory committee, regularly review system performance reports.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-206.1) = Trauma data reports are generated by the trauma system no less than once per year and are disseminated to trauma system leaders and stakeholders to evaluate and improve system performance effectiveness.	2	N
(I-206.2) = The trauma-specific statewide multidisciplinary, multi-agency advisory committee regularly reviews annotated trauma system data reports and system compliance information to monitor trauma system performance and to determine the need for system modifications.	3	N

Benchmark 207: The lead agency informs and educates state, regional, and local constituencies and policy makers to foster collaboration and cooperation for system enhancement and injury control.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-207.1) = The lead agency ensures communications, collaboration, and cooperation between state, regional, and local systems.	2	Y Goal 1
(I-207.2) = The trauma system leaders (lead agency, advisory committees, and others) inform and educate constituencies and policy makers through community development activities, targeted media messaging, and active collaborations aimed at injury prevention and trauma system development.	2	N
(I-207.3) = The trauma system leaders (lead agency, trauma-specific statewide multidisciplinary, multi-agency advisory committee, and others) mobilize community partners in identifying the injury problem throughout the state and in building coalitions of personnel to design systems that can reduce the burden of injury.	3	N
(I-207.4) = The trauma system public information and education plan exists that heightens public awareness of trauma as a disease, the need for a trauma care system, and the prevention of injury.	1	N

System Leadership

Pertinent History:

Ohio has been fortunate to have strong grassroots leadership as a driving force behind the development of a state-wide trauma system, with state meetings beginning in 1993. Refer to [Historical Timeline of Trauma System Development](#) and also included as Appendix B (pg. 235) of this document. Initially, trauma system development was perceived within the context of numerous American College of Surgeons (ACS) verified trauma centers within the state. After many years, this grassroots leadership was largely responsible for the passage of Am. Sub. House Bill 138 in the 123rd General Assembly (2000), with enactment in 2002, which provided a foundation for trauma system development. HB 138 established several elements for a statewide trauma system, one of which was establishing the Emergency Medical Services Board (EMS Board) as the principle trauma agency. In addition, HB 138 broadened the membership of the EMS Board and formalized the development of an advisory trauma committee under the auspices of the EMS Board.

The EMS Board and Emergency Medical Services (EMS) Division within the Ohio Department of Public Safety (ODPS) jointly oversee the provision of fire services and EMS in the state of Ohio. The EMS Board Mission states: “The State Board of EMS is dedicated to saving lives and minimizing disability to Ohio’s citizens and visitors by developing and continually enhancing a statewide, comprehensive, systematic response to injury, illness and fire, primarily through education, training, certification and strategic planning.” EMS Board membership includes emergency and pediatric physicians, a trauma surgeon, nurses, educator, hospital administrators, fire chiefs and emergency medical services (EMS) personnel. See Emergency Medical Services (pg. 101) section of this document for details on EMS Board membership. The EMS Board, an official body of the state government, has members which are governor appointed from nominations submitted by EMS stakeholder groups and must have background experience in EMS or trauma care.

The EMS Division serves as the administrative arm of the EMS Board, to support the EMS Board in their actions and to assist with implementation of the mission statement and strategic plan. The Executive Director of the EMS Division serves as the Chief Executive Officer of the EMS Board with this position reporting to both the EMS Board chair and the Director of ODPS.

From various EMS Board minutes and discussion with members, ambiguity exists regarding the role of the EMS Board as the principle / lead trauma agency. Despite this variability in perception, the EMS Board has informed the Ohio Trauma Committee that the EMS Board currently serves as the principle trauma agency in Ohio (February 2011 EMS Board retreat minutes). The EMS Board’s authority is over pre-hospital care while no state agency has statutory authority over trauma hospitals and the rehabilitation of trauma patients. However, injury-related activities do occur through other state agencies and private organizations.

Question 1: How does the lead agency bring constituency groups together to review and monitor the trauma system throughout each phase of care?

All meetings of the EMS Board and the Ohio Trauma Committee are open to the public except for consideration of specific personnel activities when the EMS Board adjourns to go into Executive Session. The EMS Board meeting announcements and [minutes](#) are available on the ODPS website.

For the Ohio Trauma Committee and subsequent workgroups under the Ohio Trauma Committee, announcements and minutes are inconsistently posted on the ODPS website. At the writing of this PRQ (February 2013), the most current [Ohio Trauma Committee minutes](#) posted were March 2012. Trauma-related agendas and supporting documents are rarely available to stakeholders in a timely manner.

Stakeholder meetings, such as that held for development of the Model Trauma System Planning and Evaluation (MTSPE) process in 2008, were broadly advertised and comments from members of workgroups entertained.

Development Process for *Ohio EMS 2015 Strategic Plan*

The EMS Board, as the principle trauma agency, does not have a comprehensive mechanism for reviewing and monitoring the trauma system through each phase of care. The EMS Board has a focus on the initial phase of care (i.e. pre-hospital) and a limited focus on the remainder of the trauma system. As mentioned in the Statutory Authority and Administrative Rules section (pg. 27), the EMS Board has no statutory authority beyond the EMS phase of care.

The main trauma-related constituency group facilitated by the EMS Board is the Ohio Trauma Committee which meets every other month in Columbus, Ohio. From 2000 to 2008, the focus of the Ohio Trauma Committee, as an advisory committee, centered on areas that were legislatively allowed relevant to the pre-hospital care, such as trauma triage rules and the trauma registry. During those years, attempts were made to initiate the MTPSE process; however, these attempts were stalled due to re-direction by the EMS Board. In 2008, a series of events came together to assist the Ohio Trauma Committee in moving trauma system development beyond the EMS phase of care.

In March 2008, members of the Ohio Society of Nurse Leaders (OSTNL) facilitated a day-long session to complete the [MTSPE assessment tool](#). The purpose was two-fold: 1) to proactively and strategically position Ohio if federal funds for trauma system development ever became available, and 2) to assist the Ohio Trauma Committee and EMS Board in furthering trauma care in Ohio. Following the reporting of the results to the Ohio Trauma Committee and EMS Board, a workgroup consisting of nurses, physicians, EMS providers and representatives of trauma and non-trauma hospitals, worked for over a year to develop a draft of a trauma system plan (i.e. *Ohio Trauma Framework: 2010*). Additional details of the [Ohio Trauma Framework: 2010](#) are provided later within this section and in the Trauma System Plan (pg. 74) section of this document.

In order to address the various obstacles regarding implementation of a trauma system plan, an ad hoc subcommittee was established by the EMS Board in April 2010. This subcommittee, the Trauma Visionary Committee (TVC) consisted of five Ohio Trauma Committee members, plus five EMS Board members, along with two adjunct individuals, who were tasked with moving the trauma system plan into action.

In December 2010, the EMS Board completed a Strength / Weakness / Opportunity / Threat (SWOT) analysis, which assisted in the development of an EMS strategic plan. Another impetus that fostered progression of the trauma system plan was the most recent recommendations from the National Highway Transportation Safety Administration ([NHTSA; Feb 2011](#)). This provided additional support for continual development of EMS and trauma systems in Ohio.

In January 2012, the EMS Board adopted the [Ohio EMS 2015 Strategic Plan](#). The Mission of the Strategic Plan is: to provide a comprehensive emergency medical services (EMS) system to ensure that persons incurring medical and trauma emergencies receive prompt and appropriate emergency medical care from properly trained and certified personnel. The entire EMS system will be data-driven and medically directed with clearly defined, and publicly available, responsibilities, authorities, and accountabilities. The State EMS system will help assure consistent, quality, local emergency care as well as a regionalized, accountable emergency care system.

The *Ohio EMS 2015 Strategic Plan* consists of the following 11 overall goals:

Goal 1: Regulation and Policy

- Seek comprehensive enabling legislation, and develop operational regulations, policies and procedures to provide an effective state-wide system of emergency medical and trauma care.

Goal 2: Resource Management

- Develop a method to identify, categorize, and coordinate resources necessary for establishment and operation of regionalized, accountable EMS and trauma systems.

Goal 3: Human Resource and Education

- Ensure the EMS system has essential trained and certified/licensed persons to perform required tasks. Provide a comprehensive statewide plan for assuring a stable EMS workforce including consistent EMS training and recruitment/retention programs with effective local, regional and state support.

Goal 4: Transportation

- Provide for a safe, reliable, and coordinated EMS transportation system, which incorporates regionalized, accountable systems of emergency care and which provides for the systematic delivery of patients to the most appropriate specialty care facilities.

Goal 5: Facilities

- Ensure the seriously injured (or ill) patient is delivered in a timely manner to the closest appropriate facility, through a statewide and medically accountable system, including protocols and medical direction.

Goal 6: Communications

- Develop an effective communications system for EMS operations and provide the means by which emergency resources can be accessed, mobilized, managed, and coordinated.

Goal 7: Public Information and Education

- Develop a public awareness and education program about the EMS system, that addresses the components and capabilities of an EMS system; the public's role in the system; the public's ability to access the system; what to do in an emergency (e.g., bystander care training); and prevention issues (e.g., alcohol or other drugs, occupant protection, speeding, motorcycle and bicycle safety).

Goal 8: Medical Direction

- Develop an EMS system in which physicians are involved in all aspects of patient care, through planning, protocols, quality improvement programs and licensing/discipline.

Goal 9: Trauma Systems

- Develop and maintain a fully functional trauma system to provide a high quality, effective patient care system. By vote of the EMS Board at its August 2011 meeting, the goals established in "A Framework for Improving Ohio's Trauma System" are incorporated into this document.

- **Trauma Goal 1: Leadership** – Have a viable, active state lead agency with authority, responsibility and resources to plan, implement and evaluate an inclusive trauma system for Ohio.
- **Trauma Goal 2: Injury Prevention** – Have a state trauma system that is an active partner in a state coordinated system for the reduction of injury-related morbidity and mortality.
- **Trauma Goal 3: Emergency/Disaster Preparedness** – Have a trauma system prepared to respond to emergency and disaster situations in coordination with state disaster plans.
- **Trauma Goal 4: Pre-hospital Care** – Evaluate and maintain guidelines specific to the transport of trauma patients that result in timely and safe delivery to trauma care.
- **Trauma Goal 5: Definitive Care** – Acute Care Hospitals and Trauma Centers – Establish a statewide network of trauma centers, meeting minimum state standards for operation and provision of quality trauma care, in coordination with all other trauma system participants.
- **Trauma Goal 6: Definitive Care – Rehabilitation** – Establish rehabilitation centers as active participants in Ohio’s trauma system, resulting in coordinated post-acute care for trauma victims.
- **Trauma Goal 7: Evaluation, Quality Management & Performance Improvement** – Establish statewide and regional system evaluation, quality management, and performance improvement process.
- **Trauma Goal 8: Trauma System Registry Infrastructure** – Evaluate and maintain an accurate and accessible injury data system, including a trauma registry, to support trauma system evaluation, performance improvement, public health planning, injury prevention, and outcomes research.
- **Trauma Goal 9: Professional Education and Public Information** – Integrate trauma education and public information into all aspects of the trauma system.
- **Trauma Goal 10: People With Functional Needs** – Ensure that special needs and high-risk populations are identified and their specific needs accommodated.

Goal 10: Evaluation

- Implement a comprehensive evaluation program to effectively assess and to improve a statewide EMS system.

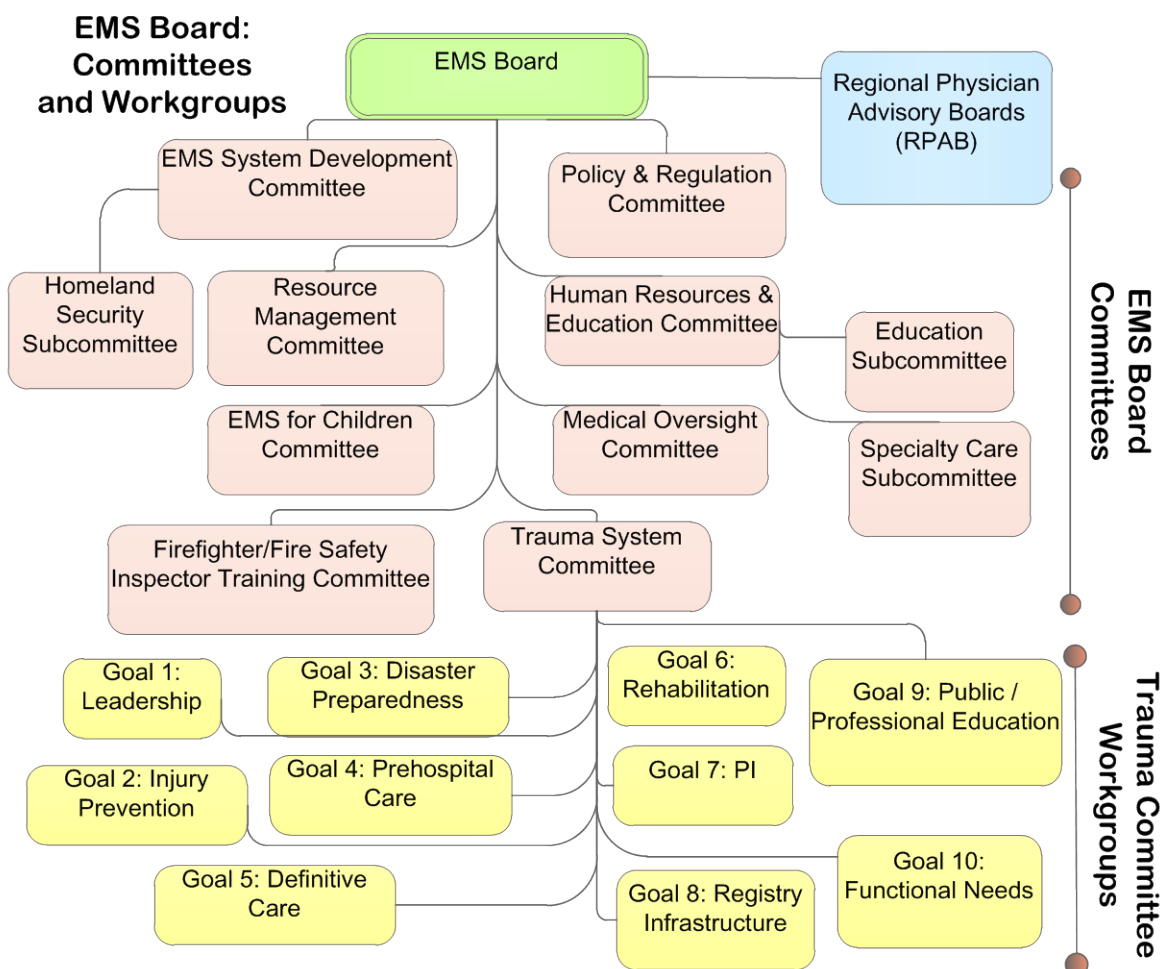
Goal 11: Preparedness

- Building upon the day-to-day capabilities of the EMS system, ensure that EMS resources are effectively and appropriately dispatched and pre-hospital triage, treatment, transport, tracking of patients and documentation of care appropriate for the incident is provided, while maintaining the capabilities of the EMS system for continued operations.

Structure to Support Strategic Plan Implementation

With the advent of the *Ohio EMS 2015 Strategic Plan* in January 2012, all committees of the EMS Board, except the Ohio Trauma Committee which is legislatively mandated, were permanently disbanded. This provided the opportunity to re-organize the EMS Board committee structure, making the new committees parallel with the goals of the new strategic plan. The *Ohio EMS 2015 Strategic Plan* was the document which guided the following new committee structure.

The following organizational chart was created based on interviews by the PRQ author(s) from December 2012.



Responsibilities of each EMS Board committee and their relation to trauma are outlined below:

Committee	Chair (EMS Board Member)	Responsibilities	
		Trauma-Related	Non-trauma related / general EMS
EMS System Development	Vacant; TBD	Database oversight of Trauma Registry and EMS Incident Reporting System;	Transportation (Goal 4); communications (Goal 6); evaluation (Goal 10); preparedness (Goal 11)
Policy and Regulations	Mr. James Davis	Legislative issues for trauma system development	Legislative initiatives for EMS system development; administrative rules; position statement; policy-related issues

Resource Management	Mr. Daryl McNutt	Trauma / EMS Grants	Resource management (Goal 2); public information and education (Goal 7);
Human Resources and Education	Ms. Pamela Bradshaw		Human resources & education; recruitment and retention; certification; accreditation and training issues (Goal 3)
Medical Oversight	Dr. Brian Springer		Facilities (Goal 5); medical direction; scope of practice issues; research (Goal 8)
Trauma Committee	Dr. Jonathon Saxe	Trauma system implementation (Goal 9)	
EMS-Children	Dr. Wendy Pomerantz	Collaborate with trauma workgroups on EMS-C related areas	Implementation of performance measures as established by federal EMS-C; collaborate with other committees on EMS-C related areas
Firefighter and Fire Safety Inspector Training	Mr. Jim Steele		Provide advice and counsel to the Executive Director on Firefighter and Fire Safety Inspector training and certification issues

Other Trauma Constituents

Beside the Ohio Trauma Committee, the EMS Board brings other constituency groups together to move the trauma system forward.

1. Regional Physician Advisory Boards (RPAB)

While not trauma-specific, Am. Sub Senate Bill 98 of the 119th General Assembly established the concept of Regional Physician Advisory Boards (RPAB) in 1992. The EMS Board divided the state geographically into 10 RPAB regions and appointed regional physicians for the purpose of overseeing the delivery of adult and pediatric pre-hospital emergency medical services. (ORC §4765.05) The State Medical Director provides RPAB updates at the EMS Board meetings.

Responsibility of the RPABs (OAC §4765-3-04) includes:

- May develop and recommend written medical protocols for EMS providers;
- Assist in developing and maintaining appropriate EMS medical services in region;
- Assist in the maintenance of information regarding all EMS providers in region, including medical directors;
- Assist in identification of EMS problems in region;
- Facilitate mutual aid agreements;
- Assist all EMS organizations in region in procuring services of a medical director;
- Review triage protocols for adult, pediatric and geriatric trauma.

RPAB productivity and membership varies per region with some being active while 1 RPAB has no members. The main composition of the RPABs is emergency physicians. There is no formal relationship between the RPABs and the Ohio Trauma Committee, except through liaison with the State Medical Director for EMS. Most recent regional RPAB minutes available on the ODPS website were from 2008. Attempts to obtain more recent minutes from the EMS Division were unsuccessful.

The State Medical Director summarizes RPAB activity at the EMS Board meetings and Ohio Trauma Committee.

The EMS Board has statutory authority to create its own RPAB regions or revise them as needed (ORC §4765.05). The February 2011 NHTSA report noted that RPABs utilize the configuration of the EMS regions, which is geographically different than Homeland Security regions. This was noted to not be ideal and NHTSA recommended the EMS Board revise the current map and functions of the EMS / RPAB regions. The EMS Board approved (Feb 2012) the revision of RPAB regions to align with Homeland Security; however, as of this date, no action has occurred.

2. Homeland Security Subcommittee

Another constituent of the EMS Board is the Homeland Security Subcommittee which is under the auspices of the EMS System Development Committee. The EMS Board has a designated EMS Board member leading this committee and collaborates with the Ohio Department of Health (ODH), the Ohio Hospital Association (OHA) and the Division of Homeland Security within the Ohio Department of Public Safety on disaster preparedness at the state level.

3. Emergency Medical Services – Children (EMS-C)

The Emergency Medical Services - Children (EMS-C) committee has statutory authority within the EMS Board. EMS-C is a federally funded initiative designed to improve emergency care for children. The EMS Board includes a designated position for a pediatric physician who chairs the EMS-C committee of the EMS Board and serves as an advocate for pediatric issues. Goals of the EMS-C program include:

- Improve pediatric medical direction – online and offline;
- Improve pediatric pre-hospital equipment carried;
- Establish emergency department categorization system for pediatrics;
- Increase number of hospitals with written transfer agreements and guidelines which include pediatrics;
- Improve degree of permanence of EMS-C program in Ohio;
- Improve state disaster planning for children's needs;
- Improve data-driven decision-making for pediatric emergencies.

To date, there is no formal integration between the EMS-C committee and Ohio Trauma Committee.

4. Regional Trauma Systems

Regional trauma systems in Ohio have developed without statutory authority or formal relationship to either the EMS Board or the Ohio Trauma Committee. In addition, the regional systems have no structured method of interaction with each other. Regional trauma systems are most frequently established on the basis of historical referral patterns, of need, and of grassroots efforts within a geographical area. Of the 178 hospitals currently listed within the Ohio Trauma Registry (OTR), 44% (N=77) have no regional affiliation. The following chart outlines the six regions with numbers of reporting trauma centers, provisional centers and non-trauma centers. Also included within this chart is the synopsis for those hospitals that do not have a working relationship with a trauma region.

Information within chart list below is current as of December 2012 and provided by the ODPS.

Regions	Total # of Hospitals	Trauma Centers							Non-Trauma Centers
		TOTAL # Trauma Centers	Adult - Level 1	Adult - Level 2	Adult - Level 3	Peds - Level 1	Peds - Level 2	Provisional	
All Ohio	N=178	N=46 N=43 verified N=3 provisional	N=11	N=9	N=18	N=3	N=3*	N=3	N=133
Central Ohio Trauma System (COTS)	N=27	N=7	2	2	2	1			N=20
Northeast Ohio Regional Trauma Network (NOTRN)	N=11	N=6	2	1	2		1		N=5
Northern Ohio Trauma System (NOTS)	N=11	N=3	1*	2			1*		N=8
Northwest Ohio Regional Trauma Network (NOTR)	N=18	N=7	2	1	4				N=11
Southeast Ohio Regional Trauma Systems (SORT)	N=14	N=5	1	0	1		1	1 (level 2) 1 (level 3)	N=9
Tri-State Taruma Coalition (TSTC)	N=20	N=4	1		2	1			N=16
No Regional Involvement	N=77	N=14	2	3	7	1		1 (level 3)	N=63

* One hospital is verified as both an adult and pediatric trauma center

On the ODPS website, both provisional and verified trauma centers are listed for [Ohio](#). For more detailed information on regional trauma systems in Ohio, refer to section Coalition Building and Community Support (pg. 58) within this document.

5. Other trauma-related organizations

There are trauma-related organizations within the state that have no relationship to the principle trauma agency. Some of these organizations have an informal relationship to the Ohio Trauma Committee but not the EMS Board (examples: Ohio Chapter of the ACS Committee on Trauma, OSTNL, and OHA). The Ohio Trauma Committee is a public meeting and therefore is open to the public. Representatives of these organizations are often present either serving in another role established in the ORC (See question #2. below) or a public member. Input from the public is solicited, although only official Ohio Trauma Committee members may vote. Members of trauma related organizations without official representation on the Ohio Trauma Committee frequently participate in the work of subcommittees

There are trauma related agencies and organizations with only sporadic interaction with the EMS Board and/or the Ohio Trauma Committee. Examples of these include organizations that participated on the two Trauma Commissions convened by the Ohio Department of Health in 2003; most notably on the Post-Critical Trauma Care Commission. Other examples include: The

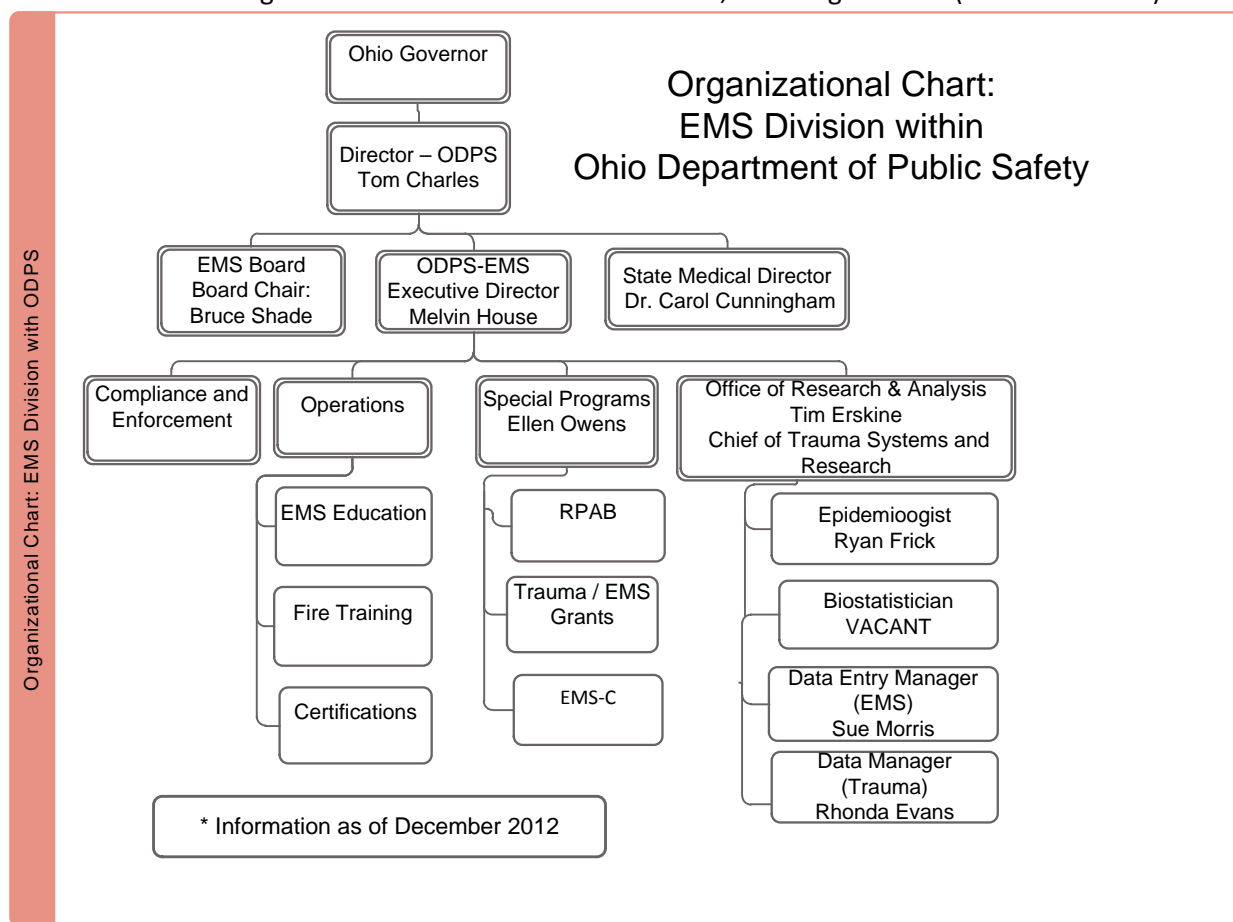
Rehabilitative Services Commission of Ohio, the Ohio Department of Job and Family Services and the Ohio Department of Mental Health.

Question 2: Describe the composition, responsibilities, and activities of the multidisciplinary trauma system advisory committee(s) and the working relationship(s) with the trauma lead agency and the EMS lead agency, if they are different.

Composition

The Ohio Trauma Committee is the advisory body to the EMS Board on trauma issues. The Ohio Trauma Committee has no legal authority to operationalize components of trauma system without EMS Board approval / direction. The Office of Research and Analysis (ORA) provides staff support for daily operation of EMS Board. According to various committee and workgroup chairs, the Ohio Trauma Committee and trauma-related workgroups have limited ORA staff support which significantly inhibits forward progress.

Listed below is the organizational chart for the EMS Division, including the ORA (December 2012):



The authority for the Ohio Trauma Committee, established in November 2000, is identified in ORC §4765.04. The Ohio Trauma Committee membership consists of the following 25 voting members:

- (1) A physician who is certified by the American board of surgery or American osteopathic board of surgery and actively practices general trauma surgery;
- (2) A physician who is certified by the American board of surgeon or the American osteopathic board of surgeon and actively practices orthopedic trauma surgery;
- (3) A physician who is certified by the American board of neurological surgeons or the American osteopathic board of surgery and actively practices neurosurgery on trauma victims;
- (4) A physician who is certified by the American board of surgeons or American osteopathic board of surgeons and actively specializes in treating burn victims;
- (5) A dentist who is certified by the American board of oral and maxillofacial surgery and actively practices oral and maxillofacial surgery;
- (6) A physician who is certified by the American board of physical medicine and rehabilitation or American osteopathic board of rehabilitation medicine and actively provides rehabilitative care to trauma victims;
- (7) A physician who is certified by the American board of surgery or American osteopathic board of surgery with special qualifications in pediatric surgery and actively practices pediatric trauma surgery;
- (8) A physician who is certified by the American board of emergency medicine or American osteopathic board of emergency medicine, actively practices emergency medicine and is actively involved in emergency medical services;
- (9) A physician who is certified by the American board of pediatrics, American osteopathic board of pediatrics, or American board of emergency medicine, is sub-boarded in pediatric emergency medicine, actively practices pediatric emergency medicine, and is actively involved in emergency medical services;
- (10) A physician who is certified by the American board of surgery, American osteopathic board of surgery, or American board of emergency medicine and is the chief medical officer of an air medical organization;
- (11) A coroner or medical examiner;
- (12) A registered nurse who actively practices trauma nursing at an adult or pediatric trauma center;
- (13) A registered nurse who actively practices emergency nursing and is actively involved in emergency medical services;
- (14) The chief trauma registrar of an adult or pediatric trauma center
- (15) The administrator of an adult or pediatric trauma center;
- (16) The administrator of a hospital that is not a trauma center and actively provides emergency care to adult or pediatric trauma patients;
- (17) The operator of an ambulance company that actively provides trauma care to emergency patients;
- (18) The chief of a fire department that actively provides trauma care to emergency patients;
- (19) An EMT or paramedic who is certified and actively provides trauma care to emergency patients;
- (20) A person who actively advocates for trauma victims;
- (21) A physician or nurse who has substantial administrative responsibility for trauma care provided in or by an adult or pediatric trauma center;
- (22) Three representatives of hospitals that are not trauma centers and actively provide emergency care to trauma patients.

Ohio Trauma Committee: Participation Compliance for each Seat							
(Seat # described above)	Attendance by Seat / Year						Attendance / Seat (2007-12) – Avg.
	2007	2008	2009	2010	2011	2012	
Ambulance Owner (17)	50%	50%	80%	17%	0%	33%	44%
Burn Surgeon (4)	50%	83%	40%	50%	60%	50%	53%
Chief Air Medical Officer (10)	83%	67%	60%	100%	100%	67%	79%
Coroner (11)	0%	0%	0%	0%	0%	0%	0%
Emergency Medicine MD (8)	0%	33%	0%	40%	0%	17%	15%
Emergency Nurse (13)	83%	50%	80%	100%	60%	67%	73%
EMS Provider (19)	100%	67%	100%	83%	80%	17%	74%
Fire Chief (18)	50%	50%	80%	83%	80%	100%	74%
Neurosurgeon (3)	100%	100%	80%	83%	80%	100%	91%
Non Trauma Center Admin (16)	17%	67%	80%	100%	60%	50%	50%
Non Trauma Center Rep (22)	100%	100%	100%	67%	20%	0%	65%
Non Trauma Center Rep (22)	83%	33%	0%	0%	0%	67%	32%
Non Trauma Center Rep (22)	0%	0%	0%	0%	0%	83%	15%
Oral/maxillofacial Surgeon (5)	33%	83%	80%	100%	40%	67%	68%
Orthopedic Surgeon (2)	0%	67%	80%	50%	40%	33%	44%
Pediatric ED Physician (9)	67%	100%	80%	100%	40%	33%	70%
Pediatric Trauma Surgeon (7)	100%	83%	100%	100%	80%	83%	91%
Rehabilitation Physician (6)	67%	67%	60%	67%	100%	83%	74%
RN/MD Trauma Center Admin (21)	100%	100%	100%	100%	100%	100%	100%
Trauma Center Admin (15)	50%	67%	80%	67%	80%	67%	68%
Trauma Nurse (12)	100%	100%	60%	83%	100%	100%	88%
Trauma Registrar (14)	67%	83%	60%	100%	60%	100%	79%
Trauma Surgeon (1)	33%	33%	100%	67%	40%	83%	59%
Victim Advocate	100%	67%	60%	100%	0%	33%	62%

Ohio Trauma Committee members are appointed by the Executive Director of the EMS Division from one of the three nominating organizations. Leadership structure of the Ohio Trauma Committee consists of a chair-person and vice-chairperson from among its members. Meetings are held in Columbus every other month. There is no statutory limit on the number of terms an appointee may serve. Attendance requirement is greater than 60% over 2 year time period. Attendance synopsis of each nominated position since 2007 is listed in chart above.

Responsibilities of Ohio Trauma Committee

The statutory role of the Ohio Trauma Committee is to advise and assist the EMS Board in matters related to adult and pediatric trauma care and the establishment and operation of the state trauma registry (ORC §4765.04). The EMS Board has the final authority on trauma-related decisions; however, this statutory authority only extends through the EMS phase of care and to data issues specifically related to the Ohio Trauma Registry (OTR). As noted in the EMS Board minutes of February, 2011 (p.19) regarding trauma regulatory authority and scope, “This Board’s authority stops when the ambulance hits the hospital parking lot”.

Activities of Ohio Trauma Committee

As outline in response to Question #1, the Ohio Trauma Committee completed the MTSPE, thus leading to the development of a trauma-specific strategic plan (2009 through February 2010), now referred to as the *Ohio Trauma Framework: 2010* (i.e. goal # 9 of the *Ohio EMS 2015 Strategic Plan*).

The *Ohio Trauma Framework: 2010* is currently divided into the following 10 major trauma goals:

- Trauma Goal 1: Leadership
- Trauma Goal 2: Injury prevention
- Trauma Goal 3: Emergency / Disaster Preparedness Plan
- Trauma Goal 4: Pre-hospital Care
- Trauma Goal 5: Definitive Care – Acute Care Hospitals and Trauma Centers
- Trauma Goal 6: Definitive Care – Rehabilitation
- Trauma Goal 7: Evaluation, Quality Management & Performance Improvement
- Trauma Goal 8: Trauma Registry Infrastructure
- Trauma Goal 9: Professional Education and Public Information
- Trauma Goal 10: People with Functional Needs.

Eight workgroups have emerged, with two of the above trauma goals (Injury Prevention, Emergency / Disaster Preparedness Plan) already demonstrating strong committee work within ODH and Ohio Hospital Association (OHA).

Approval of the *Ohio Trauma Framework: 2010* by the EMS Board occurred in February 2010. Most stakeholders vested in trauma system development realize that the Trauma Framework is a critical step for trauma system development in Ohio. Continual revisions and expansions of this document are anticipated. However, it must be noted that with this document, Ohio trauma leadership is venturing into new territory. With the development of trauma workgroups within the *Ohio EMS 2015 Strategic Plan*, these are new domains that have previously been outside the purview of the EMS Board. It is yet unknown if implementation of these strategies, under the direction of the EMS Board with recommendations from the Ohio Trauma Committee and with the limited statutory authority, will be allowed across all system components. Without statutory authority, the trauma framework plan is fragile and at risk of elimination by the EMS Board.

a. Identify pediatric representatives on the multidisciplinary trauma system advisory committee and any pediatric advisory groups that provide input into trauma system development.

As required in statute (ORC §4765.04), the following two physicians, representing pediatrics, serve as members of the Ohio Trauma Committee:

- A physician who is board-certified in surgery with special qualifications in pediatric surgery and actively practices;
- A physician who is board-certified in pediatric emergency medicine and actively practices.

One of the committees under the auspices of the EMS Board is the EMS-C committee, which is chaired by the pediatric emergency medicine EMS Board representative. No Ohio Trauma Committee members are a part of that EMS-C committee.

No formal pediatric trauma committee exists. Informal pediatric input includes nurse representatives from various pediatric trauma centers across Ohio (N=6), who frequently participate on committees, subcommittees and attend Ohio Trauma Committee meetings. It was noted in 2012 that the special

population of pediatrics had no clear “home” within the *Ohio Trauma Framework: 2010* and that a pediatric liaison relationship needed to be established. Therefore, as mentioned above, the EMS-C committee has been asked to provide representatives to each of the trauma workgroups, in order to assure that pediatric-related issues are addressed within each trauma goal.

b. Describe the process of involving experts in, and advocates for, special populations and how they help drive regional trauma system development.

Addressing functional needs of Ohioans was included as one strategic goal within the Trauma Framework. Currently, the victim advocate position of the Ohio Trauma Committee is also a member of the Governor’s Council on People with Disabilities and chairs Goal # 10 (i.e. People with Functional needs). Preliminary discussions within the Ohio Trauma Committee have begun to define what constitutes a “special population” and / or what defines a patient with “functional needs”.

All ACS verified trauma centers in Ohio are required to have injury prevention and education programs. The state of Ohio has 46 verified or provisional trauma centers, of which 6 are ACS pediatric verified (3-level I, 3-level 2). Many of these trauma centers, both adult and pediatric verified centers, have programs that impact special populations, including:

- Child passenger safety, including booster seats;
- Teen driving initiatives;
- Faith based prevention program for Hispanic and African American populations;
- Fall prevention for the elderly;
- Bike helmet programs for children.

ACS verified trauma centers are allowed to choose their own priorities for injury prevention but are encouraged to base their efforts on their data and special populations they serve. Thus, through these programs, the needs of some special populations are addressed; although not in a united, state-wide effort.

The ODH is an advocate for special populations within the context of injury prevention. Outlined in the Prevention and Outreach section (pg. 90) of this document, the ODH promoted a variety of injury prevention programs to both children and the elderly. ODH also is required to address the needs of special populations, including children, in its bioterrorism-related grants from the Federal Government (such as the Ohio Poison Control Bioterrorism Preparedness, the Regional Hospital Coordination Program and the Statewide Healthcare Preparedness Coordination and Response Programs).

One program for special needs stands out in the state of Ohio. Capt. William Piwtorak, the Special Needs Administrator for Liberty Township Fire Department in Delaware, Ohio, developed a web-based special-needs registry for the county that he serves. This program is innovative, cost effective and addresses an at-risk population that is vulnerable during emergency and disaster situations. This program designed for the special needs population in the community is being used as a model by some EMS personnel across the state of Ohio ([Delaware County program](#)).

c. Describe how the multidisciplinary advisory committee is involved in trauma system performance evaluation (for example, review of system performance reports).

In December 2011, the Ohio Trauma Committee approved the format of the metrics scorecard which was developed by the TVC. The prime objective of the Ohio Metrics Scorecard is to evaluate the overall effectiveness of the trauma system and to facilitate future evolution of Ohio's trauma system. Consensus was obtained by the TVC members that the following characteristics were considered the essential parameters of a scorecard for system evaluation:

- Data is easily ascertained by either registry data or survey;
- Data is objective, reliable and sensitive to variation;
- Data is evaluative of system;
- Outcome results should be of interest to both the public and policy makers;
- Performance measures must evaluate one of three aspects: 1) structure, 2) process, or 3) outcome.

Ohio Metrics Scorecard template is listed below.

Ohio Trauma System Scorecard: (timeframe)

	Ohio Trauma Care Delivery		Goals			2013 July -Dec		2014 Jan- June		2014 July- Dec		2015 Jan- June
Category	Measure		2013 Goal	Long Term Goal								
Structure	Access											
	% of Ohio population which live within 60 minutes by ground transport to a Level I, II or III Trauma Center	↑										
	% of Ohio population which live in non-metro area within 60 minutes by ground transport to trauma center	↑										
	% of Ohio population which live within 60 minutes by ground transport to an accredited burn treatment facility	↑										
	% of Ohio population which live within 60 minutes by ground transport to a pediatric trauma center	↑										
	% of Ohio population with access to enhanced 911	↑										
	Transport Availability											
	% of trauma patients where inter-facility transport wait time for air transport is less than 30 minutes	↑										
	% of trauma patients where inter-facility transport wait time for ground transport is less than 30 minutes	↑										

	Reporting of Data									
	% of hospitals with compliance of timely reporting of state trauma data	↑								
	% of rehabilitation facilities with compliance of timely reporting of rehabilitation data	↑								
	% of EMS agencies with compliance of timely reporting of EMS run data	↑								
	Prevention									
	% of safety belt usage for all motor vehicle related deaths	↑								
	% of safety belt usage for injured patients in a motorized vehicle crash	↑								
	% of safety helmet usage for all motorcycle deaths	↑								
	% of car seat / booster usage for children 8 years or younger involved in a motor vehicle related crash	↑								
	% of helmet usage for all bicycle deaths									
	Coroner									
	% of injury deaths that undergo that underwent an autopsy	↑								
	% of injury deaths that undergo a complete autopsy	↑								
	% of in-hospital injury deaths which were eligible and donated any type of organ	↑								
	Finance									
	% of uncompensated care (yearly)	↓								
	Total cost of care for injured patients in Ohio (yearly)									
	Hospital cost of care for injured patients in Ohio (yearly)									
	HRSA Model Trauma System									
Process	% of indicators 3 and greater	↑								
	Triage									

[illegible]

Mortality												
% overall mortality rate	↓											
% of injured patients who die in a trauma center between 4 and 24 hours after the time of injury	↓											
% injured patients who die in an acute care hospital between 4 and 24 hours after the time of injury	↓											
% of pediatric patients that die in a non-pediatric trauma center	↓											
% of admitted patients that die at an acute care hospital (exclude DNR)	↓											
% of patients who die with a probability of survival using ICISS of > 0.50	↓											
% of patients who live with a possibility of survival using ICISS of < 0.50	↑											
% patients that die within 2 hours of reaching a trauma center	↓											
% patients that die within 2 hours of reaching an acute care hospital	↓											
Disability												
% of patients discharged from a certified rehab center to a long term care facility.	↓											
Currently meets goal												
Goal is 75% met												
Goal is < 75% met												

The concept of this scorecard is to identify areas of largest need, so that additional analysis can be performed of the measure along with specific actions and re-measurement. To date, no Ohio Metric Scorecard reports, using Ohio Trauma Registry (OTR) data, have been generated. In addition, accountability for utilizing this metric system has not been addressed or assigned to any of the newly revised trauma workgroups. OTR limitations, such as limited inclusion criteria and inability to probabilistically link databases continue as issues that have hindered implementation of this evaluation tool. To date, this tool has not been operationalized and there are no plans in place for future integration.

A second example of system evaluation with subsequent change in practice was the development of geriatric specific triage criteria. After review of literature and analysis of data, any criterion which demonstrated a statistically significant increase in elderly mortality risk was included in the proposed criteria. As a result, the following criteria were added to the geriatric-specific criteria (2008) in Ohio:

- GCS < 15 in the presence of known or suspected traumatic brain injury;
- Systolic BP < 100 mmHg;
- Multiple body regions injured;
- Fall from any height with evidence of traumatic brain injury;
- Pedestrian struck by motor vehicle;
- Known or suspected proximal long bone fracture sustained in a motor vehicle crash.

To date, no post implementation study or evaluation of criteria has been completed. However, an article was published on this topic by Dr. Howard Werman, who was the lead author in a peer-review journal.

Thirdly, following approval of the *Ohio EMS 2015 Strategic Plan* and overall restructuring of committees, a multidisciplinary workgroup was established in June 2012 to address the Trauma Goal # 7: Evaluation, Quality Management & Performance Improvement. The workgroup is in the early stage of developments, but is tasked with establishing a statewide and regional system for the trauma performance improvement process.

Question 3: Provide examples of how the lead agency and trauma system leadership (for example, trauma centers, trauma medical director, nurse coordinator, trauma administrator and other stakeholders) inform and educate policy makers, elected officials, community groups, and others from the trauma system, about its strengths, and its improvement opportunities.

Historically, the grassroots initiative in the 1990's had a strong media / newspaper component. For all involved, this was considered a major component in obtaining legislative input and the eventual passage of HB 138. With the passage of HB 138 in 2000 and funded by ODPS, the EMS Board was tasked with producing seven special reports on a variety of topics related to EMS and Trauma. Seven special reports addressed the following issues:

1. The status and needs of EMS and adult /pediatric trauma care provided between Ohio and other jurisdictions. – Nationwide Children's Hospital, formally Columbus Children's Hospital (Awarded \$185,371)
2. Methods to improve specialized care provided by EMS organizations to pediatric / geriatric trauma victims (Riverside Hospital – Awarded \$65,366)
3. The feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. (St. Vincent Mercy – Awarded \$461,442)
4. Methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner. (Central Ohio Trauma System & Ohio Coroner's Association – Awarded \$87,500)
5. Methods to increase ATLS, BTLS and PTLT training among appropriate health care providers, particularly in rural areas of the state. (Ohio, COT – Awarded \$49,320)
6. The roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in this state, and methods to enhance those roles. (Hospital Council of Northwest Ohio – Awarded \$64,500)
7. The causes and impact of trauma on minority populations in this state and methods to improve EMS and trauma care for those populations. (Nationwide Children's Hospital, formally Columbus Children's Hospital – \$49,545)

A 2-page synopsis of each of the [seven special studies](#) was presented to the governor and the 125th General Assembly. Besides the 7 special studies, two additional commissions ([Injury Prevention Commission Report](#) & [Post Critical Care Commission Report](#), one on injury prevention and the other on rehabilitation, were mandated by HB 138. The injury prevention commission promoted the development of an injury prevention section (i.e. OIPP) within ODH.

The newly revised Policy & Regulation committee of the EMS Board (April 2012) has the ability to inform and educate policy makers, along with elected officials on aspects of trauma and EMS. This committee is to seek legislative opportunities, and to develop operational regulations, policies and procedures which will provide an effective state-wide system of emergency medical and trauma care. The committee is led by an EMS Board member.

The legislative liaisons of involved state agencies can and do advance trauma system initiatives with the Ohio General Assembly so long as they are in keeping with those of the Governor's Office. Each organization or individual within the state can independently contact elected officials on pertinent issues. As part of the intended political process, such access has hindered and at other times promoted the development of the Ohio trauma system.

Other than these examples listed above, there is minimal interaction and no formal infrastructure to inform and educate policy makers, elected officials and those outside the Ohio Trauma Committee. Some communication is conducted informally through the ODPS website; however, the website is considered difficult to navigate by many, without regular updates and is not comprehensive.

Question 4: Describe the process to expand effective trauma leadership within the trauma system (for example, succession planning, leadership courses, and workshops), including the lead agency and trauma centers.

No formal process has been developed at the state level to expand effective trauma leadership within the trauma system. Ohio Society of Trauma Nurse Leaders (OSTNL) has sponsored the TOPIC Course (from Society of Trauma Nurses), American Trauma Society (ATS) Trauma Coordinator Course and AIS Coding class for trauma registrars. The recent economic recession in Ohio and across the nation has impeded investment in the trauma system by restricting the ability of state agencies to recruit needed personnel and to fund needed grant programs.

Question 5: Describe the process by which lead agency staff would identify changes in system performance?

The lead agency staff does not have a process to identify changes in system performance.

Question 6: Describe how the multidisciplinary advisory committee is involved in trauma system performance evaluation.

See Question 2.B.C above for answer to this question.

Coalition Building / Community Support

Benchmark-207: The lead agency informs and educates state, regional, and local constituencies and policy makers to foster collaboration and cooperation for system enhancement and injury control.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-207.1) = The lead agency ensures communication, collaboration, and cooperation between state, regional, and local systems.	2	Y Goal 1
(I-207.2) = The trauma system leaders (lead agency, advisory committees, and others) inform and educate constituencies and policy makers through community development activities, targeted media messaging, and active collaborations aimed at injury prevention and trauma system development.	2	N
(I-207.3) = The trauma system leaders (lead agency, trauma-specific statewide multidisciplinary, multi-agency advisory committee, and others) mobilize community partners in identifying the injury problem throughout the state and in building coalitions of personnel to design systems that can reduce the burden of injury.	3	N
(I-207.4) = The trauma system public information and education plan exists that heightens public awareness of trauma as a disease, the need for a trauma care system, and the prevention of injury.	1	N

Coalition Building and Community Support

Pertinent History:

Term Definitions:

- Constituents = all citizens of Ohio
- Key Constituents = health care professionals, health care administrators, pre-hospital care providers, health insurers and payers, data experts, consumers and advocates, policy makers and media representatives
- Stakeholders = key constituents with a particular interest in the trauma system or any part of it
- Coalition = organization that meets for a designated purpose related to trauma care in Ohio; the agendas of these coalitions are not defined by the Ohio Trauma Committee nor are they limited by the scope of work of the Ohio Trauma Committee

Trauma and EMS constituents have been involved in a variety of multidisciplinary task forces and workgroups over the [last 20 years](#). As a result of Substitute House Bill 138 of the 123rd General Assembly, formalization of the Ohio Trauma Committee brought representatives from various organizations together for the purpose of promoting trauma care in Ohio. In 2012, the development of the *Ohio EMS 2015 Strategic Plan*, which incorporated the *Ohio Trauma Framework: 2010* promoted the expansion of workgroups and increased the number of participating constituents.

Other coalition efforts have developed based on the common interests of groups and the identification of existing organizational structures that allow for networking. A strong injury prevention coalition, led by the Ohio Injury Prevention Partnership (OIPP) and staffed by the Ohio Department of Health (ODH) pulls its membership from across the state. The Ohio Hospital Association (OHA) maintains a liaison relationship with the Ohio Trauma Committee at each of its meetings. It has active representation on various subcommittees that report to the Ohio Trauma Committee. Trauma program managers and trauma registrars have each developed coalitions (i.e. Ohio Society of Trauma Nurse Leaders (OSTNL) and Alliance of Ohio Trauma Registrars (AOTR)) which meet every other month. The state also enjoys an active chapter of the American College of Surgeons (ACS) Committee on Trauma. Each of these coalitions has played, and continues to play, a part in the development of the trauma system in Ohio through their attendance at meetings and willingness to undertake activities which the EMS Board or Ohio Trauma Committee may not be able to initiate or sustain by itself. An example of such an activity is the convening of the stakeholders group by the OSTNL to complete the Model Trauma System Planning and Evaluation (MTSPE).

Question 1: What is the status of the trauma system's coalition (For example, what is the status of recruiting members and building an active coalition? Does the coalition need new energy? Who is not currently involved but should be part of your coalition?)?

While not formally called a coalition, Ohio trauma leaders have worked for more than two decades to develop a trauma constituency interested in advancing trauma system development. Some success has been demonstrated; yet there remain many opportunities for continual improvement.

Currently in Ohio, coalitions, organizations/agencies and individuals frequently contribute to system development and refinement at two levels: at the state level through the Ohio Trauma Committee and, at a local level through the regional systems.

Ohio Trauma Committee

The extent of stakeholders' participation has varied over time depending on the issue facing the system(s). In the 1990's, various multidisciplinary groups collaborated on strategies to promote policy development and the passage of trauma legislation. After legislation was enacted in 2000, the trauma coalition membership was formally limited to members/organizations within the confines of the Ohio Trauma Committee. Non-members of the Ohio Trauma Committee informally participated by attending meetings and contributing in discussions. With the introduction of the *Ohio Trauma Framework: 2010* and the development of 10 workgroups, new opportunities have emerged for recruiting new members within trauma workgroups at the state level.

Ohio continues to strive to develop a more comprehensive trauma constituency. The function of the Ohio Trauma Committee has some coalition building factors, yet this has not been the primary direction of the committee. At the Ohio Trauma Committee or EMS Board level, there have been no discussions regarding who may be missing from the coalition. The Ohio Trauma Committee membership is written into statute with specific nominating organizations and specific representation which offers no room for variation. Meetings of the Ohio Trauma Committee are open to the public, yet few stakeholders / constituents outside of the committee attend these meetings. However, with the evolution of the workgroup structure, stakeholders / constituents should have increased ability to contribute to the development of the trauma system even if they do not have an appointed seat on the Ohio Trauma Committee.

The inability to move trauma system development forward over the past 5-8 years has disheartened or even dissuaded participation. Some constituents, who have voluntarily invested time and energy into the process, have moved on to other endeavors. Conversely, many Ohio Trauma Committee members have demonstrated amazing longevity in their voluntary state roles. Examples include physician (i.e. neurosurgery, rehabilitation, oral facial, orthopedic, emergency medicine and surgery), nursing, and hospital trauma program administrator participation which have been extraordinary considering the fact that much of the committee's emphasis over the past 10 years has been only through the EMS phase of care. See System Leadership section (pg. 37) for Ohio Trauma Committee participation rates. Of note, 11 of the 24 appointed seats have had an attendance rate of 70% or greater over the life of the Ohio Trauma Committee.

As the steering of Ohio's trauma system is based on volunteerism, it is deemed essential that trauma system development progress in an expeditious manner. Even though progress has moved slowly from the passage of SB 138 in 2000 to present time, there is some evidence of recent engagement in the trauma workgroups. Nonetheless, many opportunities continue to exist to enhance the Ohio Trauma Committee and therefore, strengthen and further develop its work. Member suggestions include the following: 1) increased integration and communication with EMS Board and other trauma-related committees / organizations in Ohio (i.e. EMS-C, Homeland Security, OIPP, etc.), 2) improved and formalized flow of trauma-related information, and 3) increased accountability and authority related to trauma system issues.

Regional Trauma Systems

Regional trauma systems have developed around the metropolitan areas of Ohio, based on historical transport patterns to major hospitals providing multi-disciplinary care. Certain sections of the state have not developed consistent referral patterns with any one hospital entity or they may have relationships with multiple major hospitals. These areas that do have regional systems are not officially and legislatively recognized by the state system. No flow of information is directed to the regional trauma

systems. Conversely, the regional systems rarely communicate their needs and expectations to the state system. Therefore, this lack of integration leads to duplication of efforts and overall disconnection of state and local priorities. When asked, regional trauma system leadership has minimal to no connection with colleagues in other regional systems. Numerous opportunities exist for weaving together regional trauma systems and the state trauma system. Additional detailed information on regional systems appears later within this section.

a. What is the role of the coalition members (constituents and stakeholders) in promoting trauma system development?

Ohio Trauma Committee

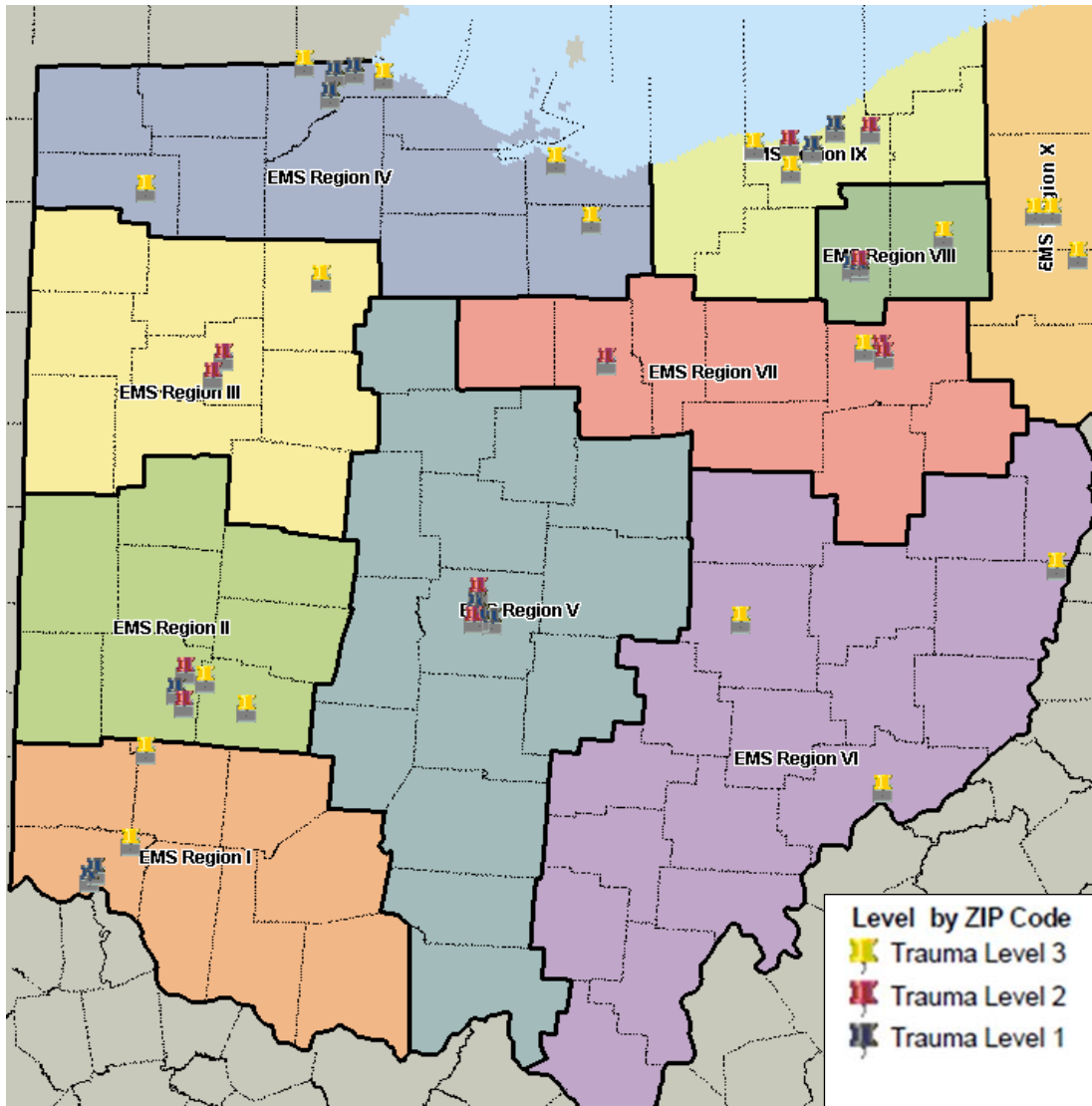
Representatives of at least 25 Ohio stakeholders comprise the Ohio Trauma Committee, which are at the core of promoting trauma system development as noted on page 22 of SB 138. With the initial draft of the *Ohio Trauma Framework: 2010*, the Trauma Visionary Committee (TVC) was formed with the specific purpose of implementing the trauma strategic plan. After the *Ohio Trauma Framework: 2010* plan was incorporated into the *Ohio EMS 2015 Strategic Plan* and the 10 trauma workgroups were developed, the purpose of this committee changed to focus on promotion and enhancement of the trauma system in Ohio. Officially, the TVC has morphed into assuming responsibility for the Leadership Component (Goal #1) of the [Ohio Trauma Framework: 2010](#). However, this workgroup has not met since August 2012.

As of April, 2012, the Ohio Trauma Committee is responsible for implementation of the 10 trauma goals. The progress of the ten workgroups is toward the designated objectives and measures of success. Ohio Trauma Committee members lead eight of the ten workgroups. Progress and reporting of these workgroups now constitute a significant portion of the Ohio Trauma Committee agenda.

Over the years, many organizations have provided much time and energy without compensation to further the development of the state-wide trauma system. The OSTNL has assumed responsibility for leading trauma goal #9 of education, which includes both the public and the medical community. The Trauma Registry Advisory Subcommittee (TRAS) is currently establishing a process where larger verified trauma centers would reach out to smaller facilities (trauma centers and non-trauma centers) to help develop expertise in the area of data collection (component of Trauma Goal #8). The Ohio Injury Prevention Partnership (OIPP) is incorporating Trauma Goal #2 aspects into their existing injury prevention initiative. Lastly, OHA provides leadership for disaster preparedness which is Trauma Goal #3 of the *Ohio Trauma Framework: 2010*.

Regional Trauma Systems

Regional trauma systems effectively promote trauma system development by increased participation of individuals within the region. In Ohio, EMS regions and regional trauma systems are not synonymous terms, each covering different territory. The map below summarizes the 10 EMS Regions with the ACS verified Ohio trauma centers and provisional centers.



Six regional trauma systems currently exist in Ohio, different than the 10 EMS regions listed in the map above. Each regional system has a different structure, composition, level of involvement and goals. Each regional trauma system has provided a synopsis which includes: 1) current organization and infrastructure, and 2) historical timeline. ODPS provided a list of participating hospitals within each of the regions and a map was developed for each region and included within the synopsis. All six regions have included both trauma centers and acute care facilities. This regionalization enables hospitals to meet state requirements to submit injury data to the OTR in a timely manner.

The six regional trauma systems along with pertinent information are listed below.

Central Ohio Trauma System (COTS)

- [COTS synopsis;](#)
- <http://goodhealthcolumbus.org/cots/>

Northeast Ohio Regional Trauma Network (NORTN)

- [NORTN synopsis](#)
- <http://arha.technologynow.com/ProgramsServices/NortheasternOhioRegionalTraumaNetwork.aspx>

Northwest Ohio Regional Trauma Registry (NORTR)

- [NORTR Synopsis](#)
- <http://www.hcno.org/disaster-trauma/nortr.html>

Northern Ohio Trauma System (NOTS)

- [NOTS synopsis](#)
- <http://www.northernohiotraumasystem.com/about/>

Southwest Ohio Regional Trauma System (SORTS)

- [SORTS synopsis](#)
- <http://www.gdaha.org/member-services-reports/committees/southwest-ohio-regional-trauma-system-committee>

Tri-State Trauma Coalition (TSTC)

- [TSTC synopsis](#)
- <http://www.gchc.org/disaster-trauma/trauma/registry/>

Of note, the regional trauma systems do not encompass all areas and / or hospitals within Ohio. Some hospitals are not members of a regional system even while physically located in that territory. Regional system development in Ohio is not established by legislative authority. Instead, it is developed by geography, outreach and hospital networks.

b. What is the method and frequency for communication with coalition members?

Communication continues to be a challenge and a major barrier within Ohio for coalition building and overall system development.

Trauma-related meeting dates, along with time and location are listed on the ODPS website calendar. The staff of the Office of Research and Analysis (ORA) within the EMS Division electronically distributes a notice along with attachments and previous minutes 1-3 days prior to the Ohio Trauma Committee meeting to committee members and those individuals that have expressed interest. As of January 2013, the most recent posting of the [Ohio Trauma Committee meeting minutes](#) is March 2012. Ohio Trauma Committee attachments and agendas are not made publically available on the ODPS website. Lastly, no structured mechanism is in place to consistently inform trauma constituents of new protocols or changes within the system.

The ODPS website is located at <http://ems.ohio.gov/index.stm>. Trauma-related information, minutes and reference material is sporadic, incomplete and not in one area for reference. For this document, much of the information was not available per the website. Upon request of the Ohio Trauma Committee (summer 2012), EMS Division staff developed a site where workgroups could have their meeting minutes / information posted, specifically for the purpose of cross reference and

team development. Currently, the website lacks reference materials in which to engage individuals and promote coalition development.

Lastly, [Ohio's Sunshine Law](#), directly effects trauma-related communication and productivity within Ohio. The Ohio Sunshine Law has 2 components: 1) the Open Meeting Law and 2) the Public Records Law. In very general terms, the Open Meeting Law requires all meetings of a public body to be open to the public at all times. As a note, the Ohio Revised Code (ORC) defines the term "meeting" as "any prearranged discussion of the public business of the public body by a majority of its members". Therefore, according to ODPS legal staff, this law is pertinent not only to the Ohio Trauma Committee but also to all workgroups tasked with implementing the *Ohio Trauma Framework: 2010*. Understanding that this law is designed to promote transparency, it unintentionally delays decision-making as it requires face-to-face meetings without the benefits of telecommunications. Coalition building across the state for trauma-related activities is therefore affected by the nature of this law.

Lastly, the OIPP of ODH electronically communicates on a weekly basis to members interested in injury prevention. This comprehensive [electronic communication tool](#), which is distributed weekly, outlines injury prevention articles / links and activities on the regional, state and national level. In addition, it outlines Ohio legislative updates specific to injury prevention. This electronic system can easily be forwarded to pertinent individuals when a specific topic arises. Specific information on the OIPP is available per their website at <http://www.healthyohiprogram.org/vipp/oipp/oipp.aspx>. A similar communication system would be a great benefit to trauma system communication and development.

Question 2: Describe how the trauma system leadership mobilizes community partners to improve the trauma system through effective communication and collaboration.

As described above and in other sections of this document, the EMS Division has the responsibility of serving as the core for trauma system development and regulation. The ORA provided the following list of various organizations that have some association with trauma system development:

- Alliance of Ohio Trauma Registrars
- Brain Injury Association of Ohio
- Governor's Council on People with Disabilities
- Health Forum of Ohio
- Ohio Ambulance & Medical Transportation Association
- Ohio Association of Critical Care Transport
- Ohio Association of Professional Firefighters
- Ohio Chapter of the American Academy of Pediatrics
- Ohio Chapter of the American College of Emergency Physicians
- Ohio Chapter of the American College of Surgeons
- Ohio Children's Hospital Association
- Ohio Dental Association
- Ohio Fire Chiefs' Association
- Ohio Hospital Association
- Ohio Nurses Association
- Ohio Orthopedic Society
- Ohio Osteopathic Association

- Ohio Society of Physical Medicine & Rehabilitation
- Ohio Society of Trauma Nurse Coordinators
- Ohio State Coroners' Association
- Ohio State Council Emergency Nurses Association
- Ohio State Medical Association
- Ohio State Neurological Society
- Central Ohio Trauma System
- EMS for Children (Ohio and national)
- Governors' Highway Safety Association
- National Association of State EMS Officials
- National EMS Information System
- National EMSC Data Analysis Resource Center
- National Highway Traffic Safety Administration, Office of EMS
- National Trauma Data Bank
- Northeastern Ohio Regional Trauma Network
- Northern Ohio Trauma System
- Northwest Ohio Regional Trauma Registry
- Ohio Department of Health
- Ohio Injury Prevention Partnership
- Ohio State Fire Marshal
- Ohio Strategic Transportation Safety Plan Committee
- Ohio Traffic Records Coordinating Committee
- Ohio Traffic Safety Office
- Southern Ohio Regional Trauma System
- Tristate Trauma Coalition

No structured program or method of communication is currently utilized to mobilize these community partners into a collaborative effort.

a. How has the community been approached to identify injury control concerns?

As outlined in the Prevention and Outreach section (pg. 90) and throughout this entire document, the OIPP has taken the lead on injury control concerns and prevention issues in Ohio. They have worked diligently to maintain a unified focus on injury prevention and to utilize data which focuses on the needs of Ohio. There is a frequent call out to the community that anyone who is interested can participate. The OIPP have sought guidance from a variety of participants in an effort to coordinate and facilitate injury prevention efforts carried out by many state and local partners. These collaborative efforts have clearly advanced the cause of injury prevention, even during a time of minimal funding.

Data has served as a foundation for the OIPP, as a significant portion of their injury prevention efforts are based on epidemiology and the public health model. The OIPP collaborates with various trauma programs, since all verified trauma centers are required by the ACS to participate in injury prevention efforts / programs. Their website is strong and provides vital, easily accessible information, which makes them valuable to the community.

b. What key problems has the community identified?

According to the Ohio Trauma Committee, no community issues to date have been brought forward to the Ohio Trauma Committee in an organized manner for resolution.

c. How do stakeholders bring system challenges or deficiencies to the attention of the lead agency?

No formal system is established for stakeholders to bring trauma-related issues, whether system challenges or outright deficiencies, to the Ohio Trauma Committee. EMS issues recognized in the community are usually directed to the EMS Board.

Lead Agency and Human Resources

Benchmark 201: Comprehensive state statutory authority and administrative rules support trauma system leaders and maintain trauma system infrastructure, planning, oversight and future development.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-201.1) = The legislative authority (statutes and regulations) plans, develops, implements, manages, and evaluates the trauma system and its component parts, including identification of the lead agency and the designation of trauma facilities.	1	Y Goal 1
(I-201.4) = The lead agency has adopted clearly defined trauma system standards (e.g., facility standards, triage and transfer guidelines, and data collection standards) and has sufficient legal authority to ensure and enforce compliance.	1	Y Goal 1

Benchmark 204: Sufficient resources, including financial and infrastructure related, support system planning, implementation, and maintenance.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-204.1) = The trauma system plan clearly identifies the human resources and equipment necessary to develop, implement, and manage the trauma program, both clinically and administratively.	1	Y Goal 1
(I-204.2) = Financial resources exist that support the planning, implementation, ongoing management of the administrative and clinical care components of the trauma system.	1	Y Goal 1
(I-204.3) = Designated funding for trauma system infrastructure support (lead agency) is legislatively appropriated. Note: Although nomenclature concerning designated, appropriated, and general funds varies between jurisdictions, the intent of this indicator is to demonstrate long-term, stable funding for trauma system development, management, evaluation, and improvement.	4	N
(I-204.4) = Operational budgets (system administration and operations, facilities administration and operations, and EMS administration and operations) are aligned with the trauma system plan and priorities. Examples: Full-Time Equivalents (FTEs) per population to support the infrastructure; costs to improve the communication system.	1	Y Goal 1
(I-204.5) = The trauma system plan includes identification of additional resources (both manpower and equipment) necessary to respond to mass casualty incidents.	1	Y Goal 1

Lead Agency and Human Resources within the Lead Agency

Pertinent History:

The EMS Board became the principle trauma agency for trauma system development when legislators assigned authority for the pre-hospital component of the Ohio Trauma System to the EMS Board by statute in 2000 (ORC §4765.04). The Trauma Committee which is an advisory body, reports to the EMS Board, but no agency authority over definitive trauma care or rehabilitation exists. Prior to enactment of Am, Sub. HB 138, multiple strategies and actions were attempted to promote trauma system legislation. Attached is a [timeline](#) which outlines the historical perspective of various significant events within Ohio trauma system development.

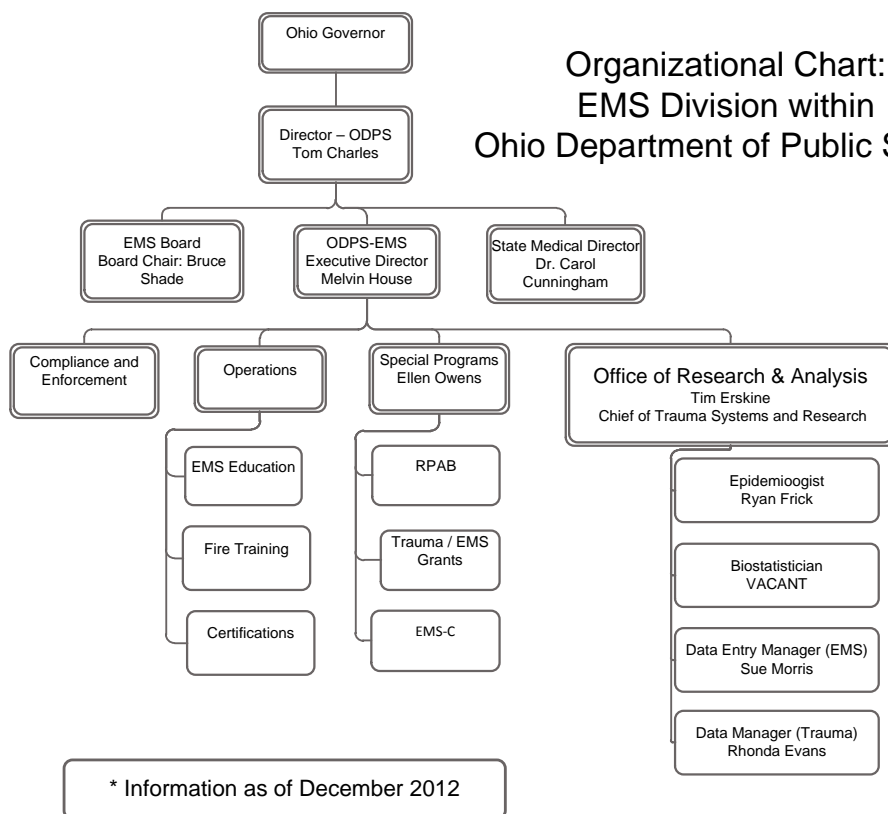
Question 1: Describe the number, position title, and percentage of full-time equivalency of all personnel within the lead agency or contract personnel who have roles or responsibilities to the trauma program.

Melvin House, Executive Director of the Emergency Medical Services (EMS) Division since June 2012, also serves as the chief executive officer of the EMS Board and works in collaboration with the EMS Board chair (voluntary, non-paid position). In the past 3 years, 3 Executive Directors have provided leadership and direction for the EMS Division and the staff within the Office of Research and Analysis (ORA). As a result of this frequent change in leadership and program direction, many trauma-related projects have had delayed implementation.

The ORA is administratively located within the Ohio Department of Public Safety (ODPS), specifically within the EMS Division. The ODPS is responsible for public safety through the following divisions: Bureau of Motor Vehicles, Emergency Management Agency, Emergency Medical Services, Homeland Security, Ohio State Highway Patrol, Investigative Unit and Office of Criminal Justice Services.

The organizational structure of ODPS and the ORA within the Ohio Executive Branch is as follows:

Organizational Chart: EMS Division within Ohio Department of Public Safety



The ORA staff is responsible for the execution of statutory responsibilities identified in ORC §4765, that relate to support of the trauma system. These responsibilities include Ohio Trauma Registry (OTR) (data management and reporting along with risk adjustment for all three modules: Trauma Acute Care Registry (TACR), Trauma Rehabilitation Registry (TRR) and Emergency Medical Services Incident Reporting System (EMSIRS), regional trauma triage guidelines and administrative support for committees (EMS Board, Ohio Trauma Committee, Trauma Registry Advisory Committee (TRAS), etc.).

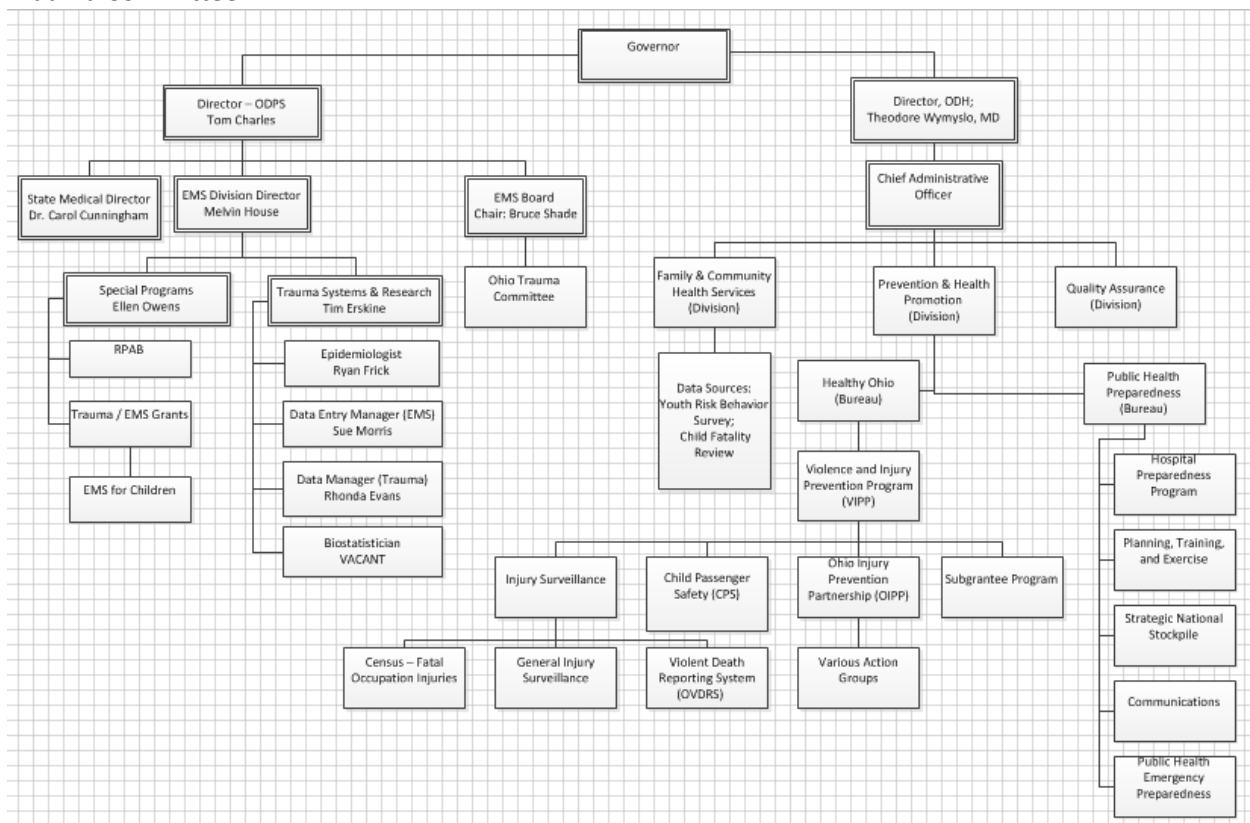
Currently, there are 5.0 trauma-related FTEs within the ORA, as outlined in the staffing diagram above. Historically, only 2.0 FTEs were allocated for trauma system development within ODPS. In August 2010, Nancie Bechtel RN, Executive Director of the Central Ohio Trauma System (COTS) and Co-chair of Trauma Registry Advisory Subcommittee (TRAS) developed a [white paper](#) outlining the need for additional FTEs for proper management and analysis of trauma registry data. With no action on the white paper by the EMS Board, concerned Ohio stakeholders approached legislative representative with this information, with the subsequent result of an additional 3.0 FTEs being allocated in 2010 to ODPS for trauma system development.

The following individuals are within the ORA. Tim Erskine, EMT-P is the [Chief of Trauma Systems and Research](#). The position is a 1.0 FTE with oversight responsibilities of 4 FTEs. Initially hired as the Trauma Data Manager in 2001, Mr. Erskine assumed his current position in January 2007. According to Mr. Erskine, 40% of the job is related to trauma, while the remaining 60% centers on injury data and research.

The following list of employees report to the Chief of Trauma Systems and Research:

- Ryan Frick, MPH, [Epidemiologist](#) (1.0 FTE); employed since 2012;
- [Biostatistician](#) position (1.0 FTE) – vacant; tentative posting scheduled for early 2013;
- Sue Morris, [Data Program Manager](#) (1.0 FTE) for EMSIRS; employed since March 2004;
- Rhonda Evans, [Trauma Data Manager](#) (1.0 FTE) for Trauma Registry; employed since January 2012.

The following organizational chart outlines the relationship between agencies within the Ohio Executive Branch that have trauma related areas of responsibility (ODH, ODPS) and the EMS Board and the Ohio Trauma Committee.



Question 2: Identify other personnel resources that support the trauma program activities of the lead agency (for example, epidemiology support from other units within the health department and public health interns).

There are other individuals within EMS Division that perform activities that support the lead trauma agency and trauma-related activities. A grants administrator (TBD; vacant due to retirement in Dec 2012) provides staff support for the Human Resource Committee which has oversight into the distribution of the EMS / Trauma grants (OAC §4765-5). Joe Stack, an ODPS staff member administratively supports the EMS-C program while the leadership of the Regional Physician Advisory Board (RPAB) is within the responsibilities of the state medical director (OAC §4765-3-02). Carol Cunningham, MD is the [State Medical Director](#) which supports both EMS and trauma-related issues. The job description for the state medical director is outlined in ORC §4765.03.

Question 3: Describe the adequacy of personnel resources available to the lead agency to sustain trauma program assessment, policy development, and assurance activities.

Before 2010, support for the lead trauma agency (LTA) and Ohio Trauma Committee consisted of 2 - 1.0 FTEs (Chief of Trauma Systems & Research and Trauma Data Manager). Initially, the limited number of personnel allowed only emphasis on the first phase (EMS) of trauma system development and the trauma registry. Eventually, with the lack of forward progress and the constant justification of understaffing, Ohio trauma system stakeholders successfully advocated for additional personnel. In 2010, an additional 3.0 FTEs were added to support the committee and both the EMS and trauma data registries. Currently 1 position is open, with the job description revised in 2013 to become a biostatistician position. However, even with the currently hired 4.0 FTEs, most of the energy spent on trauma-related tasks continues with an EMS focus. In addition, according to the Chief of Trauma Systems and Research, staff members are unable to lead or coordinate any committee, subcommittee or workgroup but are allowed to participate and take minutes. The current personnel have limited interaction with entities outside of the EMS boundaries, leading to a limited scope for trauma system development.

a. Identify impediments or barriers that hinder system development.

While progress has been slow over the years, there continues to be many opportunities for continued growth. In the state of Ohio, this progress depends on volunteer stakeholders that are dedicated to trauma system development. However, trauma-related efforts at the state level have been limited by authority constraints, structure, funding and staffing.

Authority constraints

In Ohio, no statutory authority exists over the entire trauma continuum of care. For more than a decade, the majority of actions have focused on the EMS component and the trauma registry, both of which are dictated by legislation. After the EMS phase of care or more specifically, when the patient reaches the hospital, the lead trauma agency has no authoritative responsibility over patient care, both acute care and rehabilitation. All initiatives after the EMS phase of care only exist within the context of a voluntary system of hospitals becoming ACS verified. Consequently, there is minimal integration of Ohio hospitals (i.e. clinical hospital care, performance improvement, outcome measures, etc.) with the EMS Board and the state trauma system.

Another authority constraint centers on the fact that regionalization has never been incorporated into Ohio legislation. Regional trauma systems do not have official representation or a seat on the Ohio Trauma Committee or EMS Board. Regional trauma systems, which vary greatly in their level of sophistication and action, operate independently. Some regions concentrate solely on trauma registry support, while others have added regional education and / or performance improvement to their repertoire. One regional trauma system has evolved into a complex program that has incorporated many aspects of trauma system development into their organizational structure. None of the regions interact in any formal capacity and there is no formal networking between the regional administrators. Then there is a distinct portion of Ohio that has no regional representation. More in-depth analysis of regional trauma systems provided within the Coalition Building and Community Support section (pg. 58) of this document.

The lead trauma agency is not explicitly defined within Ohio trauma legislation. While the EMS Board supports trauma, it clearly has many other areas of priority, such as EMS education, training

certification and disciplinary issues for fire / EMS personnel which are required by law. With all these other responsibilities, trauma is not a focus or a priority of the EMS Board. Even upon writing this document, a lack of consensus exists from EMS Board members on who is the lead trauma agency in the state of Ohio (i.e. EMS Board vs. Ohio Trauma Committee).

Structure

In reality, the Ohio Trauma Committee is an advisory committee and has minimal power in developing and implementing changes to the Ohio trauma system. Significant Ohio Trauma Committee actions require approval by the lead trauma agency, which is the EMS Board. Historically, trauma-related issues must be related to the EMS system or the trauma registry, with other issues not allowed by statutory authority. Interestingly, with the development of the *Ohio EMS 2015 Strategic Plan* and various trauma-related workgroups, the domain now extends beyond the EMS phase. It is unknown how much can actually be accomplished by these workgroups without statutory authority support.

Many silos exist within the various state agencies, which is a structural issue that hinders trauma system development. Injury prevention exists within the domain of the ODH. Trauma exists by statutory law within the ODPS. Ohio Hospital Association (OHA) has a Trauma Committee. Many voluntary groups exist, such as Ohio Society of Trauma Nurse Leaders (OSTNL), Alliance of Ohio Trauma Registrars (AOTR) and the Ohio chapter of the American College of Surgeons (ACS) Committee on Trauma. All of these committees exist and many have different views and direction related to trauma system development. Another example of the existence of silos is that resources, such as electronic data information, are frequently not optimally utilized between the various organizations. Currently, trauma-related data sources exist in various organizations, each independent and not linked together for optimal resource utilization.

Funding / Staffing

Funding issues continue to be a barrier to the development of the trauma system. The economic recession, with the subsequent stress on the state to decrease the budget, also hindered forward progress. According to the Chief of Trauma Systems and Research and at the time of writing this document, no budget exists for trauma system development within the ODPS. Consequently, most trauma-related actions or projects are met with lack of budget rationale as the reason for lack of forward progress.

Comprehensive trauma data is essential for many aspects of trauma system development. Many variables have hindered progress in Ohio with the following examples. A non-commercial trauma registry, developed by ODPS has been used since the inception of the registry. The EMS Division's Information Technology section is responsible for upgrading the registry to accommodate national data dictionary changes. Currently, the OTR is operating on the 2004 Ohio Trauma Data Dictionary (version 3), as the 2009, 2010 and 2012 data dictionary versions have not yet been reprogrammed at the state level. Even as many of the verified trauma centers have upgraded / revised their data collection, according to NTDB standards, they are unable to submit this revised data to the state. The elimination of the 48-hour rule for the registry is a positive step toward a comprehensive dataset. However, this recommendation was approved in July 2010 but to date; hospitals are unable to comply as the state database has not been reprogrammed to accept this additional data. At the time of writing, the purchase of a commercial trauma registry which has been pending since 2010, has been announced but is not yet operational.

In order to comply with trauma system evaluation, linkage of all 3 modules of the trauma database is essential. Probabilistic linkage software package and education was completed in 2004. To date, this technology has not been implemented by EMS Division staff. Impact of over-triage and under-triage to Ohio hospitals has been mandated by statutory authority since 2002; however, trauma registry changes (i.e. removal of the 48-hour rule) have not been implemented in order to accomplish this task. Validation of trauma data, especially in the acute care and rehabilitation sections has not been instituted. Lastly, in order for the Ohio trauma system to advance to the next level, confidentiality issues related to peer-review and system quality improvement will need to be addressed. Overall, the state holds a rich potential of EMS and trauma data that has not yet been validated and not fully transformed into useful information for guiding further policy development.

Trauma System Plan

Benchmark 203: The state lead agency has a comprehensive written trauma system plan based on national guidelines. The plan integrates the trauma system with EMS, public health, emergency preparedness and incident management. The written trauma system plan is developed in collaboration with community partners and stakeholders.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #	
(I-203.4) = The trauma system plan clearly describes the system design (including the components necessary to have an integrated and inclusive trauma system) and is used to guide system implementation and management. For example, the plan includes references to regulatory standards and documents and includes methods of data collection and analysis.	1	Yes	Goal 1

Trauma System Plan

Question 1: Describe the process for the development or revision of the trauma system plan.

In November 2007, the Ohio Society of Trauma Nurse Leaders (OSTNL) met to develop an assessment process for Ohio using the Model Trauma System Planning and Evaluation (MTSPE) / Benchmark, Indicators and Scoring (BIS) tools. At that time, the goal was to assess Ohio's current trauma system for strengths and weaknesses, as well as potential opportunities and threats for future development (SWOT analysis). A day-long retreat in March 2008, facilitated by OSTNL, led a wide range of Ohio stakeholders through the process of scoring Ohio's trauma system. More in-depth analysis is provided in the *Indicators as a Tool for System Assessment* section (pg. 22).

Following this analysis, the Ohio Trauma Committee organized a dedicated ad-hoc subcommittee (Trauma System Planning Subcommittee) whose purpose was to reorganize information gained from the MTSPE retreat into a functional trauma system plan. This committee was comprised of physicians, nurses, and hospital executives who began meeting in February 2009. During development of the new framework, trauma system plans from other states with advanced trauma systems were reviewed and incorporated as appropriate.

As a result of their evaluation, the Trauma System Planning Subcommittee produced a summary document: *A Framework for Improving Ohio's Trauma System* or often referred to as the [Ohio Trauma Framework: 2010](#). This document was approved by the EMS Board in October 2010 and includes the following key sections:

- Trauma system vision, values and goals;
- Trauma system introduction, including a broad history of trauma system development in Ohio;
- Trauma facts and system accomplishments;
- Summary of work leading to plan development;
- Trauma system plan.

The following key components of an integrated state trauma system were developed as goals within the Framework:

Trauma Goal 1: Leadership – Have a viable, active state lead agency with authority, responsibility and resources to plan, implement and evaluate an inclusive trauma system for Ohio.

Trauma Goal 2: Injury Prevention – Have a state trauma system that is an active partner in a state coordinated system for the reduction of injury-related morbidity and mortality.

Trauma Goal 3: Emergency/Disaster Preparedness – Have a trauma system prepared to respond to emergency and disaster situations in coordination with state disaster plans.

Trauma Goal 4: Pre-hospital Care – Evaluate and maintain guidelines specific to the transport of trauma patients that result in timely and safe delivery to trauma care.

Trauma Goal 5: Definitive Care – Acute Care Hospitals and Trauma Centers – Establish a statewide network of trauma centers, meeting minimum state standards for operation and provision of quality trauma care, in coordination with all other trauma system participants.

Trauma Goal 6: Definitive Care – Rehabilitation – Establish rehabilitation centers as active participants in Ohio’s trauma system, resulting in coordinated post-acute care for trauma victims.

Trauma Goal 7: Evaluation, Quality Management & Performance Improvement – Establish statewide and regional system evaluation, quality management, and performance improvement process.

Trauma Goal 8: Trauma System Registry Infrastructure – Evaluate and maintain an accurate and accessible injury data system, including a trauma registry, to support trauma system evaluation, performance improvement, public health planning, injury prevention, and outcomes research.

Trauma Goal 9: Professional Education and Public Information – Integrate trauma education and public information into all aspects of the trauma system.

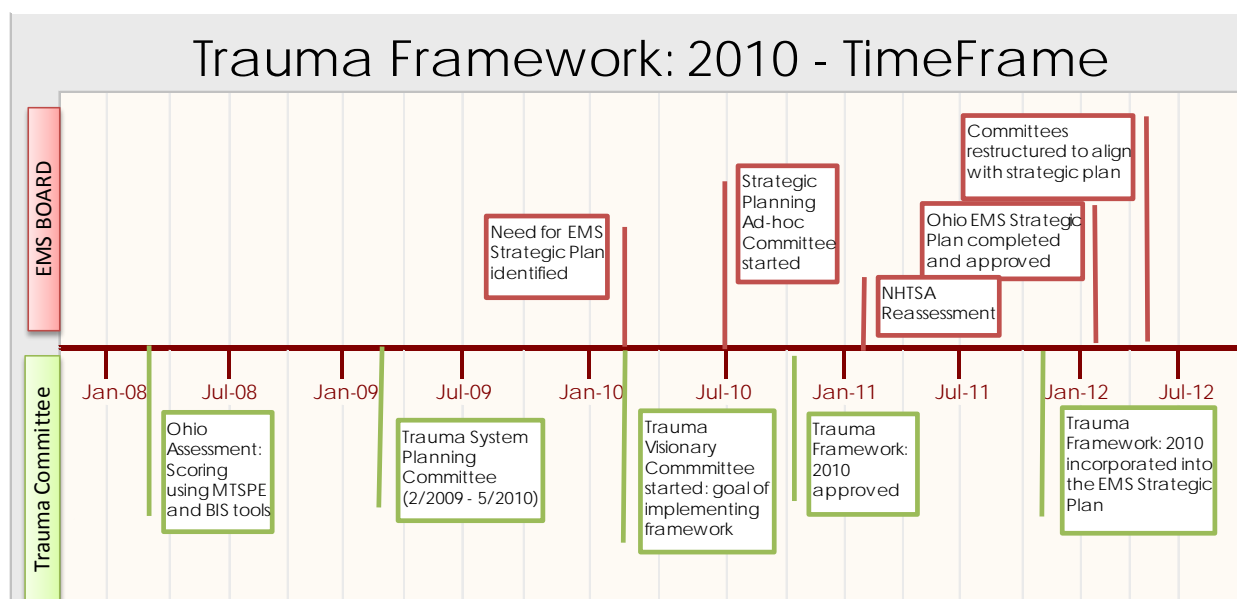
Trauma Goal 10: People with Functional Needs – Ensure that special needs and high-risk populations are identified and their specific needs accommodated.

Concurrent to development of the *Ohio Trauma Framework: 2010*, three additional activities directly affected the forward progress of the trauma system plan. In June 2010, the EMS Board developed a committee, the Trauma Visionary Committee (TVC), to specifically address issues related to implementation of the trauma plan. The TVC membership consisted of 5 EMS Board members, 5 Ohio Trauma Committee members and 2 ad-hoc members.

In February 2011, a National Highway Traffic Safety Administration (NHTSA) Tactical Team Re-assessment occurred, with the purpose of evaluating the state of EMS in Ohio and measure ongoing progress since the previous assessment (November 2001). This NHTSA report also validated weakness within the Ohio trauma system.

The last factor in the development of trauma system plan was the identified need for an EMS Board Strategic Plan. Consequently, an EMS Board Strategic Planning Ad-hoc Committee was established for development of long-term and short-term goals, based on the NHTSA report and mainly related to EMS issues. At that time, the Ohio Trauma Committee intervened and recommended the inclusion of the Ohio Trauma Framework: 2010 into the strategic plan.

Synopsis of trauma system plan development outlined below and developed by the PRQ authors in order to clarify order and timeframe of development.



Between 2009 and 2010, emphasis continued to be placed on trauma system development from a variety of sources. The Trauma System Planning Subcommittee quickly realized work on the trauma framework could continue indefinitely so as to develop a perfect plan. Therefore, in 2011, the Trauma System Plan Subcommittee acknowledged that the *Ohio Trauma Framework: 2010* was not in final / perfect form, had incomplete sections (i.e. Timeframe, Leadership, Partnership and Funding) and Measures of Success were not as succinct and defined as originally anticipated. However, the framework was developed as a guide with the purpose of being a dynamic and changeable document as progress continued. Therefore, the Ohio Trauma Committee chose to move forward in the best interest of increased integration with the EMS Board concepts and strategic plan.

Accordingly, in January 2012, the entire *Ohio Trauma Framework: 2010* document was incorporated as one of 11 strategic goals of the *Ohio EMS 2015 Strategic Plan* which was approved by the EMS Board. At that time, all committees of the EMS Board, except for the Ohio Trauma Committee which was legislatively mandated, were permanently disbanded. This provided the opportunity to re-organize the EMS Board Committee structure, making the committees parallel with the goals of the newly

implemented *Ohio EMS 2015 Strategic Plan* and allowing for improved utilization of EMS Division staff. As appropriate as this action was, the re-organization process resulted in a slowing of progress for many months in order to assign new chairs and allow for a learning curve for multiple new participants.

In the spring of 2012, the *Ohio Trauma Framework: 2010* section of the *Ohio EMS 2015 Strategic Plan* was subdivided into the following 10 trauma specific goals /workgroups with leadership of each workgroup determined. All of the workgroups report to the Ohio Trauma Committee and subsequently, to the EMS Board.

Trauma Goal 1:	Leadership – Steve Steinberg, MD
Trauma Goal 2:	Injury Prevention – Ohio Injury Prevention Partnership; ODH
Trauma Goal 3:	Emergency/Disaster Preparedness Plan – Carol Jacobson, OHA
Trauma Goal 4:	Pre-hospital Care - John Ross
Trauma Goal 5:	Definitive Care: Acute Care Hospitals and Trauma Centers – Michael Winthrop
Trauma Goal 6:	Definitive Care: Rehabilitation – Greg Nemunaitis MD
Trauma Goal 7:	Evaluation, Quality Management & PI–Nancie Bechtel RN
Trauma Goal 8:	Trauma System Registry Infrastructure – Deb Myers RN
Trauma Goal 9:	Professional Education and Public Information – Kathy Haley RN
Trauma Goal 10:	People with Functional Needs – Kitty Hevener

As these workgroups were only established in the spring of 2012, teamwork and accomplishments from these groups are only beginning. Many of the actions and measures of success within these goals are based on the continuum of trauma care, which extend from initial injury through rehabilitation. Historically in the area of Ohio trauma system development, statutory authority and influence from the EMS Board has only extended through the EMS phase of care and to the trauma registry. Concern exists among trauma leadership on whether future actions can be implemented, especially when these initiatives overstep the EMS boundary established by statutory authority.

a. Include the role of advisory and stakeholder groups in the process.

Throughout the history of trauma system development in Ohio, stakeholders have played a crucial role. Without Ohio's active constituents, the system would not exist as it is today. ODPS is required to conduct open meetings and obtain public input on decisions. At the March 2008 retreat (MTSPE evaluation), stakeholders from across the state were invited to attend. Attendance at this meeting included: Ohio Trauma Committee members (19 of 25), Ohio Trauma Committee liaisons (EMS Board, ODH), the State EMS Medical Director, ODPS staff (Public Information Officer, Chief Trauma Systems and Research, Legal Counsel, and Trauma Data Analyst). Additional stakeholders included: ODH representing the Injury Prevention Program, the Ohio Emergency Management Agency, the Ohio Fire Chiefs Association, the Ohio Hospital Association, the Ohio Ambulance and Medical Transportation Association and the OSTNL. As this was a consensus conference, input was obtained from all participants.

Once the *Ohio Trauma Framework: 2010* was drafted, a system of open forums and comments were solicited (July 2010) from the various stakeholders who had previously participated. These comments and suggestions were reviewed by the committee and incorporated into the document as appropriate.

Additional dialogue with constituents is anticipated in the future with the continual development of the trauma system plan in Ohio. Information that is obtained from this consultative visit by the ACS will be an additional and crucial tool that will also be used to guide future direction and interaction with stakeholders.

Question 2: Is there ongoing assessment of trauma resources and asset allocation within the system?

To date, no assessment of trauma resources and asset allocation within the trauma system has occurred in the state of Ohio. The EMS Board may have some concept on EMS resources that are needed, specifically based on the Priority 1 grant applications; however, details are currently not available for this document. The ultimate goal would be to develop a statewide repository of information that could be maintained on an ongoing basis and would be used within strategic planning.

Within Trauma Goal #1 of the *Ohio Trauma Framework: 2010*, one of the strategies is that a formal assessment of the needs of the various constituencies (i.e. media, public officials, general public, insurance providers and medical community) will be completed. More specifically, this workgroup has the responsibility of developing a needs assessment of the trauma system. Initial information related to the PRQ from the ACS report will provide some information on trauma resources and asset allocation; however this aspect will fall incomplete of a providing a comprehensive needs assessment.

Trauma Goal #3 of the *Ohio Trauma Framework: 2010* specifically address the state's ability to respond to disasters whether natural or man-made. Currently, at the state level, the Ohio Emergency Management Agency (EMA) manages all disaster related events and the ODH manages public health emergencies with both of these agencies working closely together. In 2010, each region in the state conducted an assessment of items available in the regional cache to place in a statewide database. The regional coordinators have the ability to request items to be shared between regions during an event. Annually, hospitals and county Emergency Management conduct a Hazard Vulnerability Assessment (HVA). The information gathered from the assessments is combined into a Regional Healthcare HVA. Purchasing decisions as well as gaps in planning can be identified based on the results. None of these assessments are legislated.

Beginning in March 2007, and at least once every two years thereafter, all verified trauma centers in Ohio confidentially provide information to ODH describing their preparedness and capacity to respond to disasters, mass casualties, and bioterrorism (ORC §3701.072; OAC §3701-3-16). Submitted information includes: the population of the region, a copy of existing emergency response plans, a copy of the plan that documents management when the capacity of center is exceeded, evidence of participation in disaster exercises, and the surge capacity process. In addition, trauma centers must submit on dates specified by ODH Director: number of registered beds; number of staffed beds ; number of critical care beds by category including adult, pediatric, and neonatal intensive care beds; minimum and maximum number of staffed critical care beds by category including adult, pediatric, and neonatal intensive care beds; number of operating room beds; minimum and maximum number of staffed operating room beds; minimum and maximum number of staffed emergency department beds ; the number of ambulatory and non-ambulatory patients that can be decontaminated per hour; minimum and maximum number of staffed burn beds; number of mechanical ventilation devices on site; and number of staffed negative air flow rooms available for the entire hospital and the emergency department. This collection of information may not be required within statutory authority in the near future.

Question 3: Describe the process used to determine trauma system standards and trauma system policies.

In Ohio, trauma system “standards” consist of five sections of trauma system rules that have been adopted by the ODPS. These sections include: 1) EMS committee / subcommittee structure, 2) pre-hospital Regional Physician Advisory Board (RPAB), 3) the registry system, 4) trauma triage criteria and 5) ACS verification as criteria for determining trauma hospitals.

Committee / subcommittee structure centers on the hierarchy for committee development and the authority structure of who makes decisions regarding trauma care. A second section centers on the RPAB, which is a regional advisory board consisting of physicians who specialize in EMS care and the subsequent structure, responsibilities and authority. RBAP regions review their trauma triage guidelines every three years with submission to the EMS Board if an amendment is required. One example of revision is the development of the geriatric triage component which led to revisions in the trauma triage rules in 2008. A third section centers on the registry information, specifically required reporting, risk adjustment, submission of data and failure to report. In addition, the Trauma Registry Advisory Committee (TRAS; revised to Workgroup #8) monitors national standards / trends related to trauma registry data collection and recommends changes. Trauma triage rules outline definition and determination of a trauma patient. The EMS Board reviews the trauma triage rules every three years for appropriateness. Lastly, verification by the ACS is mandated for a hospital to be considered a trauma center in Ohio.

The EMS Board is statutorily created and is authorized to promulgate rules. It continues to be responsible for the promulgation of rules and regulations pertaining to the development of the EMS and trauma system. As with all state rules, these are written in conjunction with the regulated community and any member of the public who provides input. The process involves review by the Joint Committee on Agency Rule Review (JCARR), a bicameral legislative body. New administrative rules can only be developed within the five areas which are allowed by statutory authority (i.e. EMS Board / trauma committee structure, RBAP, the trauma registry system and trauma triage protocols).

Ohio’s trauma system has few written policies and those that exist, focus on trauma registry reporting. According to the Chief of Trauma Systems and Research, no policies exist on the specifics of patient care or system development.

Regional Standards

As each regional trauma system is unique with different areas of focus and goals, variability exists on the development of regional trauma standards. These standards are voluntary and not supported by statutes. None of these trauma standards are recognized by the state trauma system.

Central Ohio Trauma System ([COTS](#)) has assumed leadership in trauma system standards and trauma system policies development. However, this influence is only pertinent for the central Ohio region. Assuming that policies are defined as a set of principles, rules and guidelines, COTS provides a forum for stakeholders to discuss system wide issues related to patient care to establish regional processes that are signed off by hospital CEOs, trauma surgeons, fire chiefs and health commissioners that directly improve the trauma and emergency services provided to patients in that region. Examples of this include the Emergency Patient Transport Plan and EMS patient destinations at Multiple-Casualty & Mass-Casualty Trauma Scenes. Special needs are addressed in the same manner and have resulted in plans such as the Central Region Burn Surge Disaster Plan, Pre-hospital Therapeutic Hypothermia for

Sudden Cardiac Arrest Victims, and regional EMS guidelines for activation of the Surgical Emergency Response Team.

Areas of emphasis for the Tri-State Trauma Coalition (TSTC), the regional system in the Cincinnati area, are in the areas of trauma registry education and disaster preparedness.

The Northern Ohio Trauma System (NOTS) which only began in January, 2010, involves hospitals affiliated with MetroHealth system. Goals for the NOTS include trauma registry, regional protocol development and education. The NOTS Protocol Committee is working toward standardization of care between the 3 trauma centers within the NOTS system with a blunt splenic protocol recently completed. Future projects include standardizing clinical protocols.

Southern Ohio Trauma System (SORTS), a committee within the Greater Dayton Area Hospital Association, has primary focus on trauma registry and reviewing select cases for performance improvement purposes. To date, no regional protocols are noted on their website.

The major areas of focus for Northeast Ohio Regional Trauma Network (NORTN), which represents the Akron region, are trauma registry, injury prevention and education. Protocols and standard development is not a part of their regional system.

Northwest Ohio Regional Trauma Network (NORTR), which began in 1999 and represents the northwest Ohio region, has a focus on data / trauma registry. Protocols and policies produced from that region are related to the operations of the trauma registry such as data submission deadlines, and late data.

a. How are they reviewed and evaluated?

Current trauma / EMS rules are reviewed by ODPS every five years to assess if they should be rescinded, amended, or continued without change. Evaluating the trauma system standards is much more difficult without a specific process identified and limited to only the EMS aspect of care.

b. What standards and policies exist for special populations, including rural and frontier regions.

Ohio trauma triage guidelines, established by expert opinion, exist for the geriatric and pediatric population. These guidelines serve as a baseline for regional trauma triage and can be escalated if requested by the region and approved by the EMS Board. [Pre-hospital pediatric standards of care](#) exist with most recent revision in January 2012. These [trauma triage guidelines](#) are not mandatory but meant to assist in the development of local protocols.

Ohio does not have any "frontier" regions as determined by census definitions, but there are certainly "rural" areas, most notably Appalachia and the northwest section of Ohio. See <http://www.oache.org/about/appohio.php> for a map developed by the Ohio Appalachian Regional Commission. The EMS Pinpoints (attachment from EMS section (pg. 101) of this document) shows the existence of EMS units throughout both Appalachian counties and northwest Ohio. At this time, specific standards and policies for the Appalachian community do not exist.

c. **How are specialized needs addressed, including burns, spinal cord injury, traumatic brain injury, and re-implantation?**

The state of Ohio does not have a statewide plan for traumatic brain injury (TBI), spinal cord injury (SCI) or re-implantation. Each hospital has its own policy to address patient care once received by EMS.

Under the trauma legislation (HB 138) burn patients are to be taken to appropriate burn care facilities. The America Burn Association (ABA), in conjunction with the ACS, performs verification of burn centers. Currently, in Ohio, there are 6 ABA verified burn centers, plus 2 non-verified centers. There is a state burn disaster plan, developed by Ohio Hospital Association (OHA). Transfer agreements between verified burns centers are a part of the disaster plan. The 6 ABA verified burn centers are located in Akron, Cleveland, Columbus and Cincinnati.



System Integration

Benchmark 203: The state lead agency has a comprehensive written trauma system plan based on national guidelines. The plan integrates the trauma system with EMS, public health, emergency preparedness, and incident management. The written trauma system plan is developed in collaboration with community partners and stakeholders.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-203.7) = The trauma system plan has established clearly defined methods of integrating the trauma system plan with the EMS, emergency, and public health preparedness plans.	1	Y Goal 1

Benchmark 208: The trauma, public health, and emergency preparedness systems are closely linked.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-208.1) = The trauma system and the public health system have established linkages, including programs with an emphasis on population-based public health surveillance and evaluation for acute and chronic traumatic injury and injury prevention.	2	Y Goal 2
(I-208.2) = The incident management and trauma systems have formal established linkages for system integration and operational management.	1	N

System Integration

Question 1: What is the trauma system's collaboration and integration with EMS, public health, and emergency management?

The Ohio trauma system is well integrated into public safety and EMS, as it structurally exists within the Ohio Department of Public Safety (ODPS). The EMS Board is the principle trauma agency and, as such, is responsible for promoting trauma care within the EMS phase. Integration is strong within public safety and continues into the area of disaster preparedness at the state level.

The Ohio Department of Health (ODH) espouses a strong public health approach to injury prevention as it works to reduce the burden of injury throughout the entire state. The ODH utilizes data to determine highest needs in the state and provides various strategies to achieve documented goals. See Injury Epidemiology section (pg. 9) of the document for further details and [Burden of Injury in Ohio: 2000 - 2010](#) publication. The trauma system exists in a sister public agency; however, there is some integration between the two organizations. An ORA staff member participates on Data Action Group within the OIPP. In addition, an injury prevention representative from ODH functions as a liaison to the Ohio Trauma Committee and provides injury updates, as needed.

At the state level, there is no mechanism for interaction and coordination of the current regional trauma systems. Some regional trauma systems integrate with community health programs and mobilize various community partnerships; however, such interaction is inconsistent among the regions and without integration at the state level.

a. Prevention programs

Application of injury prevention activities is sporadic across the state. The OIPP seeks to involve a broad membership; however not all trauma centers or acute care hospitals participate. Trauma centers are required to participate in injury prevention activities and education, but can choose to develop their own programs or utilize programs already developed at the state or national level. The ODH developed a variety of programs for trauma centers, health departments, pre-hospital personnel and any citizen of Ohio who requires injury prevention information. ODH has encouraged and directed building of these programs on public health principles such as collaboration, needs assessment and implementation of best practice (<http://www.healthyohioprogram.org/vipp/oipp/oipp.aspx>).

Local EMS can and do undertake injury prevention activities. Reports of these activities are anecdotal and no known statewide tabulation of them exists.

b. Mental health

There has been no formalized statewide integration between trauma systems and the mental health services in Ohio. Integration with mental health in Ohio remains a need. Again, as the system grows, this connection remains an opportunity for system enhancement.

c. Social services

There has been minimal integration at the state level between trauma systems and social services, except in the area of the Child Fatality Review (CFR), which is housed within ODH. An increased relationship with social services would benefit the larger picture of trauma system development.

Issues of child abuse and domestic violence are being addressed at the annual Association of Ohio EMS meeting in 2013. However, it is unknown how EMS interacts with either social services or police, nor how they fit into mandatory reporting laws.

d. Law enforcement

There has been minimal integration between trauma services and law enforcement at the state level in Ohio, except in the area of highway safety patrol and efforts to decrease unsafe driving practices.

e. Child protective services

This has not been an area of emphasis except in limited injury prevention efforts and the CFR. Opportunities for future integration at the state and local level remain.

f. Public safety (such as, fire, lifeguard, mountain rescue, and ski patrol)?

Public safety and the trauma systems are both housed with the ODPS. It is assumed that collaboration and integration exists between the divisions; however, there are no indications from the Ohio Trauma Committee minutes that this occurs. Public safety representatives, within the profession of fire and / or EMS, hold a seat on the EMS Board and such, are voting members.

Financing

Benchmark 204: Sufficient resources, including financial and infrastructure related, support system planning, implementation, and maintenance.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-204.2) = Financial resources exist that support the planning, implementation, and ongoing management of the administrative and clinical care components of the trauma system.	1	Y Goal 1
(I-204.3) = Designated funding for trauma system infrastructure support (lead agency) is legislatively appropriated. Note: Although nomenclature concerning designated, appropriated, and general funds varies between jurisdictions, the intent of this indicator is to demonstrate long-term, stable funding for trauma system development, management, evaluation and improvement.	4	N
(I-204.4) = Operational budgets (system administration and operations, facilities administration and operations, and EMS administration and operations) are aligned with the trauma system plan and priorities. (Ex. FTE's per population to support the infrastructure; costs to improve the communication system).	1	Y Goal 1

Benchmark 309: The financial aspects of the trauma systems are integrated into the overall performance improvement system to ensure ongoing fine-tuning and cost-effectiveness.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-309.1) = Cost data are collected and provided to the trauma system registry for each major component including prevention, prehospital, acute care, all-hazards response planning, and rehabilitation.	1	Y Goal 8
(I-309.2) = Collection and reimbursement data are submitted by each agency or institution on at least an annual basis. Common definitions exist for collection and reimbursement data and are submitted by each agency.	1	Y Goal 8
(I-309.3) = Cost, charge, collection, and reimbursement data are aggregated with other data sources including insurers and data system costs and are included in annual trauma system reports. Note: "Outside" financial data means costs that may not routinely be captured in trauma center or registry data, for example, transportation, communications, training, infrastructure, and the overall cost of readiness.	1	Y Goal 8

(I-309.4) = Financial data are combined with other cost, outcome, or surrogate measures, for example, years of potential life (YPLL), quality-adjusted life years (QALY), and disability-adjusted life years (DALY); length of stay, length of ICU stay, number of ventilator days; and others, to estimate and track true system costs and cost-benefits.	1	Y	Goal 7
--	---	---	--------

Financing

Pertinent History:

Historically, the EMS / Trauma fund was expanded with enactment of Sub. Senate Bill 138 of the 123rd Ohio General Assembly (2000) and is used solely to support the EMS / Trauma Grant Program. The EMS / Trauma fund is supported by Ohio seat belt fines. Goals of the EMS / Trauma fund includes: 1) enhance EMS service in Ohio by providing funding for training and equipment to under-supported EMS organizations in Ohio; and 2) fund trauma research in Ohio. Distributed yearly, the EMS Board has the right to establish priorities in the types of grant project eligible for funding and to determine the portion of grant funds that will be allocated for one or more of the priorities listed in ORC §4765.06. New legislation, House Bill 128 of the 129th Ohio General Assembly, created two additional funding priorities (Priority 5 and Priority 6) for the Ohio EMS / Trauma Grant Program. See Research section (pg. 176) of this document for details.

Multiple discussions have occurred in various venues regarding the long term funding source of seatbelt fines. With the overall increase in seatbelt compliance and a decrease in seatbelt fines, there is concern on the stability of that funding source. According to the *Ohio EMS 2015 Strategic Plan* and various EMS Board minutes, there is a high priority for the Emergency Medical (EMS) Division of ODPS and the EMS Board is to establish a stable and on-going funding source.

Question 1: How does the lead agency track and analyze internal trauma system finances?

Chief of Trauma Systems and Research provided the following information of “NA” to all aspects of Question 1 (including (a), (b) and (c)).

a. How does the advisory committee participate in the financial review process?

NA

b. How frequently are trauma system financial reports published?

NA

c. Which financial data are reported (lead agency data, health facility data, or both)?

NA

Question 2: What is the lead agency’s budget for the trauma system?

Chief of Trauma Systems and Research reports the state trauma budget and operations budget is zero. A request was made to the Executive Director EMS Division for additional budget information; however, information was not provided. At the time of the submission of this document, no other publicly available information on financing was identified.

According to the Chief of Trauma Systems and Research, occasional grants, including NHTSA Highway Safety Grants and the federal trauma system development grants were obtained until 2005. However, these funds were delegated for special projects not operational programs.

Question 3: What is the source of funding available to support the development, operations, and management of the trauma system (for example, general funds, dedicated funds)?

Once again, the Chief of Trauma Systems and Research noted that this answer should be reported as “NA” as there is no funding source for the management of the Ohio trauma systems.

Question 4: What financial incentives and disincentives exist to encourage trauma center participation in the trauma system?

There are no financial incentives or disincentives in the state of Ohio to encourage trauma center participation in the trauma system. The only financial disincentives are those that are incurred by each trauma center to run the on-going trauma program and to undergo the every three-year ACS review. Some regional trauma systems have fees for participation.

a. Specifically include arrangement for uncompensated and undercompensated care.

Am. Sub. Senate Bill 98 of the 119th Ohio General Assembly (1992) stated that total amount of uncompensated adult and pediatric trauma care provided annually by each facility that provides care to trauma victims should be included in data collection. Trauma registry data has not been able to provide comprehensive data on the topic of uncompensated care. Therefore, there is no special mechanism for uncompensated care in Ohio at this time.

Prevention and Outreach

Benchmark 207: The lead agency informs and educates state, regional, and local constituencies and policy makers to foster collaboration and cooperation for system enhancement and injury control.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-207.2) = The trauma system leaders (lead agency, advisory committees, and others) inform and educate constituencies and policy makers through community development activities, targeted media messaging, and active collaborations aimed at injury prevention and trauma system development.	2	Y Goal 1

Benchmark 304: The jurisdictional lead agency, in cooperation with other agencies and organizations, uses analytic tools to monitor the performance of population-based prevention and trauma care services.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-304.1) = The lead agency, along with partner organizations, prepared annual reports on the status of injury prevention and trauma care in state, regional, or local areas. Note: Annual reports may be distributed electronically rather than, or in addition to, printed copies.	1	Y Goal 1

Benchmark 306: The lead agency ensures that the trauma system demonstrates prevention and medical outreach activities within its defined service area.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-306.2) = The trauma system is active within its jurisdiction in the evaluation of community-based activities and injury prevention and response programs.	1	Y Goal 2
(I-306.3) = The effect or impact of outreach program (medical and community training / support and prevention activities) is evaluated as part of a system performance improvement process. (Note: "Evaluation" implies both informal evaluation processes and more structured research.)	1	Y Goal 7

Prevention and Outreach

Pertinent History:

In November 2000, Amended Substitute House Bill 138 of the 123rd General Assembly authorized a statewide trauma system. Section 5 of that legislation required the Ohio Department of Health (ODH) to form a multi-disciplinary commission on the prevention of injury with particular emphasis on the pediatric and geriatric populations in Ohio. Following its deliberations, the Commission released its [Injury Prevention Commission Report](#) detailing the status of injury in Ohio and recommending future prevention activities. The report examined motor vehicle traffic crashes, falls, drowning and intentional injuries, including suicide, homicide and family violence. The consensus-based process used by the commission members to develop this report led to the identification of common, overarching themes. These themes provided the foundation for the core recommendations of this report and include.

Theme 1: Injuries are costly. Injury prevention saves lives and money.

Recommendations: A) Seek creative and collaborative solutions for funding injury prevention activities. B) Provide state funding that adequately addresses injury – a leading cause of morbidity and mortality in Ohio.

Theme 2: Improved injury surveillance efforts and program evaluation are needed.

Recommendations: A) Improve injury surveillance efforts. B) Promote the use of injury prevention guidelines and evaluation measures that are based upon current evidence-based research and literature.

Theme 3: Improved statewide coordination of programs is needed.

Recommendations: A) Continue to develop leadership and infrastructure to identify, promote, and respond to injury prevention needs at the state and local level. B) Coordinate and link EMS, trauma care and public health agencies with other injury prevention programs at the national, state and local levels to increase collaboration. C) Promote the use of community prevention programs – that are multifaceted, evidenced-based and use effective evaluation by public health agencies, trauma centers, emergency medical services and other programs.

Theme 4: Injuries disproportionately affect those living in poverty and the young and the old.

Recommendations: A) Promote injury prevention programs that focus on populations most at risk based on injury surveillance. Children and older adults living in poverty should be high priority.

Theme 5 : Alcohol use is an important risk factor for injury.

Recommendation: A) Fund and support initiatives that address prevention of alcohol and other drug related injuries. These initiatives should include education, legislation, coalition building, and screening and intervention by health care professionals.

Theme 6: Legislation can be an effective strategy for preventing injuries.

Recommendation: A) Enact or strengthen state and local legislation and policies which lead to the prevention of injuries.

In 2001, ODH also participated in a State and Territorial Injury Prevention Directors' Association (STIPDA) State Technical Assessment Team (STAT). The visit resulted in a recommendation for injury prevention

infrastructure within ODH. Since that time, there has been focused effort and growth toward increasing the internal capacity of ODH relative to injury prevention.

The Violence and Injury Prevention Program (VIPP) at the ODH is housed within the Bureau for Health Promotion and Risk Reduction in the Office of Healthy Ohio. The overall objective of the VIPP is to develop a comprehensive injury prevention program for the State of Ohio. Program objectives include:

- To coordinate surveillance systems that collect injury data.
- To assess the burden of injuries and violence and communicate that information for the purpose of action.
- To promote evidence-based, injury prevention interventions for at-risk populations.
- To coordinate and collaborate with partners in building program infrastructure.
- To encourage the adoption of evidence-based policies and programs that lead to the prevention of injury and violence.
- To provide technical support and training as needed.

In addition, in 2007, resulting from recommendations in the Report from the Ohio Commission on the Prevention of Injury, the Ohio Injury Prevention Partnership (OIPP) was created to review and analyze Ohio's injury data to determine injury priority areas. The OIPP represents a group of professionals encompassing a broad range of agencies and organizations concerned with addressing the prevention of injury. The OIPP is coordinated by the ODH with funds from the CDC. They advise and assist ODH and ODH's VIPP with establishing priorities and future direction regarding injury and violence prevention activities and policies in Ohio.

In 2010, ODH began the process of developing a state health assessment and state health improvement plan (SHIP). This is a statewide health plan conducted in collaboration with a wide-range of stakeholders and partners. Injury is one of the 10 priority areas selected for the SHIP. The goal of the injury priority is to promote public awareness, policy, programs and data that demonstrate that injury and violence are preventable. The OIPP's Leadership Team has been tasked with providing additional input regarding the injury priority area and has developed a [draft of strategies](#) to be implemented.

Question 1: List organizations dedicated to injury prevention within the region and the issues they address (for example, MADD, SADD, SafeKids Worldwide, Injury Free Coalition for Kids, American Trauma Society, university-based control programs).

Local Health Department Injury Prevention Programs	Primary Focus/Injury Prevention Activities
Allen County Health Department	Family Violence Prevention Team
Ashtabula County Health Department	Senior Driving Safety
Athens City/County Health Department	Sexual Assault Prevention Program, Child Abuse Prevention
Belmont County Board of Health	Child Passenger Safety Program
Brown County Health Department	School & Playground Safety Inspections
Carroll County General Health District	SafeKids Chapter, Ohio Buckles Buckeyes - Child Passenger Safety Program, sponsored by Carroll County HD & ODH
Champaign County Health District	Child Passenger Safety Program

Clermont County General Health District	Senior Safety Program funded by ODH (Fall Prevention), Safe Communities
Columbus Public Health	Child Injury Prevention, SafeKids
Columbiana County Health Department	Child Passenger Safety Program - Ohio Buckles Buckeyes
Crawford County General Health District	Child Passenger Safety Program - Ohio Buckles Buckeyes
Cuyahoga County Board of Health	Safe Routes to School - ODOT, Youth Risk Behavior Survey, Motorcycle safety
Darke County General Health District	Healthy Homes Healthy Environment Program
Delaware County General Health District	Fall Prevention, SafeKids, Child Passenger Safety, Bicycle Safety, Safe Communities
Erie County Health Department	Healthy Homes
Fairfield County	SafeKids, Water safety, Bicycle Safety, Pedestrian Safety, ATV safety, Youth Injury Prevention Project, Child Passenger Safety
Franklin County	SafeKids Chapter, Ohio Buckles Buckeyes, Child Passenger Safety
Franklin County Child Fatality Review	Child Injury Prevention
Fulton County	Child Passenger Safety, Bicycle Safety, Water Safety, Fire Safety, Poison Prevention, Halloween Safety
Greene County	Healthy Lifestyles Coalition, Safe Communities
Hamilton County	Fall prevention
Hancock County	Child Passenger Safety - Ohio Buckles Buckeyes
Henry County	Child Passenger Safety
Hocking County	Child Passenger Safety
Huron County	Child Passenger Safety, Child Injury Prevention, SafeKids, CDC Injury Prevention
Jefferson County	SafeKids - Child Passenger Safety
Lake County	Suicide Prevention, Child passenger Safety
Lawrence County	Child Passenger Safety
Licking County	Child Passenger Safety, Safe Communities
Lorain County	Child Abuse Prevention, Youth Drug & Alcohol Use Prevention
Lucas County	SafeKids - Bicycle Safety, Child Passenger Safety, Burn and Fire Prevention, Poison Prevention
Madison County	Child Passenger Safety - Ohio Buckles Buckeyes
Marietta City Health Department	SafeKids
Marion County	Creating Healthy Communities Coalition
Medina County	Child Passenger Safety
Mercer County	Child Passenger Safety

Miami County	Child Passenger Safety
Monroe County	Child Passenger Safety - Ohio Buckles Buckeyes
Morrow County	Child Passenger Safety - Ohio Buckles Buckeyes, Safety Communities
Noble County	Child Passenger Safety - Ohio Buckles Buckeyes
Perry County	Child Passenger Safety - Ohio Buckles Buckeyes
Preble County	Child Passenger Safety, Safe Communities, Child Abuse Prevention
Putnam County	Child Passenger Safety - Ohio Buckles Buckeyes
Richland County	Child Passenger Safety, Safe Communities, Teen Driver Safety, Summer Safety
Ross County	Safe Communities
Shelby County	Child Passenger Safety - Ohio Buckles Buckeyes, Bicycle Safety
Stark County	Shaken Baby Syndrome Program, SafeKids
Trumbull County	Child Passenger Safety
Tuscarawas County	Family Safety, SafeKids
Union County	Bicycle Safety, Pedestrian Safety, Motor Vehicle Safety, Child Passenger Safety, Sports Safety
Van Wert County	Child Passenger Safety - Ohio Buckles Buckeyes
Vinton County	Child Passenger Safety
Williams County	Child Passenger Safety - Ohio Buckles Buckeyes, Safe Communities
Wood County	Child Abuse Prevention
Trauma Centers Programs	Primary Focus/Injury Prevention Activities
Akron City Hospital	Bicycle Safety, Sports Safety
Akron Children's Hospital	SafeKids, Child Passenger Safety, Sports Injury Prevention Programs, Child Sexual Abuse Prevention
Akron General Medical Center	Injury Prevention Programs - not specified
Aultman Hospital	Injury Prevention Programs - not specified
Cincinnati Children's Hospital Medical Center	SafeKids, Child Passenger Safety, Bicycle, Home Safety, Teen Driving, Suicide Prevention
Dayton Children's Hospital	SafeKids, Child Passenger Safety, Bicycle Safety, Safe on Saturday, Sports Safety, Playground Safety
Fairview Hospital	Sports Injury Prevention
Grant Medical Center	Older Adult Fall Prevention, Driving Safety, Teen Driving, Violence Prevention
Hillcrest Hospital	Sports Injury Prevention
Kettering Medical Center	Injury Prevention Program - not specified
Lima Memorial Hospital	Injury Prevention Program - not specified

Med Central Health System - Mansfield	Motor Vehicle Safety, Fire Safety & Burns, Bicycle Safety, Toy Safety, Water Safety, Sports Safety, Fall Prevention, Firearms Safety
Mercy Medical Center - Canton	Sports Injury Prevention
Mercy St. Vincent Medical Center	Injury Prevention Program - not specified
MetroHealth Medical Center	Teen Driving, Motor Vehicle Safety
Miami Valley Hospital	Teen Driving, Drug & Alcohol Prevention, Violence Prevention
Mount Carmel West	Sports Injury Prevention
Nationwide Children's Hospital	Child Passenger Safety, Bicycle Safety, Sports Injury Prevention Programs
Ohio State University Medical Center	Fall Prevention
ProMedica Toledo Hospital	Injury Prevention Program - not specified
Rainbow Babies & Children Hospital	SafeKids, Child Passenger Safety, Bicycle, Skiing Helmets, Poison Outreach, Safe Communities, Safe Sitter, Pedestrian safety
Riverside Methodist Hospital	Injury Prevention Programs - not specified
St. Elizabeth Health Center	Injury Prevention for the Elderly, Violence Prevention, Firearm Safety, Drinking & Driving Prevention
St. Rita's Medical Center	Motorcycle Safety, Adult Health and Fall Prevention, Child Passenger Safety, Water Safety, Brain Injury Prevention for Athletes, Bicycle Safety
Toledo Children's Hospital	SafeKids, Child Passenger Safety, Bicycle, Pedestrian, Fire, Burn and Home Safety
University of Cincinnati Medical Center	Injury Prevention Program - not specified
University of Toledo Medical Center	Sports Injury Prevention Programs
Ohio Government Injury Prevention Programs	Primary Focus/Injury Prevention Activities
Ohio Department of Health	Violence and Injury Prevention Program, Child Passenger Safety (Ohio Buckles Buckeyes), Sexual Assault and Domestic Violence Prevention Program
Ohio Department of Aging	Older Adult Fall Prevention
Ohio Department of Job and Family Services	Child Abuse Prevention
Ohio Department of Mental Health	Suicide Prevention
Ohio Department of Transportation	Pedestrian Safety, Bicycle Safety, Safe Routes to School, Motor Vehicle Safety
Ohio State Patrol	Motor vehicle safety
Ohio Department of Public Safety	SafeKids
Injury Prevention Programs	Primary Focus/Injury Prevention Activities
SafeKids USA	Unintentional Injury Prevention
Catholic Charities	Family Violence

Drug and Poison Information Center	Poison and Substance Abuse Prevention
MADD	Drunk Driving Prevention
Action Ohio	Sexual Assault Prevention
Ohio Alliance to End Sexual Violence	Sexual Assault Prevention
SAPP	Sexual Assault Prevention
Compass Sexual Assault Education Prevention and Support	Sexual Assault Prevention
Ohio Domestic Violence Network	Domestic Violence
Ohio Children's Trust Fund	Child Abuse Prevention
Family and Child Abuse Prevention Center	Child Abuse Prevention
COCA (Council on Child Abuse)	Child Abuse Prevention
Domestic Violence and Child Advocacy Center	Child Abuse Prevention
The HealthPath Foundation of Ohio	Family Violence Prevention
Nord Center, Kidz First Children's Advocacy Center	Sexual Abuse Prevention
OSU Youth Violence Prevention Advisory Board (YVPAB)	Youth Violence Prevention
Ohio Violence Prevention Academy	Violence Prevention
Community Refugee and Immigration Services	Child Abuse Prevention for Immigrants
Older Adults Falls Prevention Coalition	Older Adult Fall Prevention
Fall Prevention Task Force	Senior Adult Fall Prevention
Kettering Behavioral Hospital	Suicide Prevention
OSU Campus Suicide Prevention Program (REACH)	Suicide Prevention
Suicide Prevention Education Alliance (SPEA)	Suicide Prevention
Franklin County Suicide Prevention Coalition	Suicide Prevention
Suicide Prevention Center (Dayton)	Suicide Prevention
Ohio Suicide Prevention Foundation	Suicide Prevention
Red Flags	Suicide Prevention
Mental Health America of Southwest Ohio	Suicide Prevention
Mental Health America of Franklin County	Suicide Prevention
Mental Health America of Licking County	Suicide Prevention
Mental Health America of Summit County	Suicide Prevention
Mental Health America of Union County	Suicide Prevention
Mental Health America of Miami County	Suicide Prevention
Prescription Drug Abuse Action Group (OIPP)	Drug Abuse Prevention
Rape Prevention Program (OIPP)	Rape Prevention
Drowning Prevention (OIPP)	Drowning Prevention
Ohio Adolescent Health Partnership	Injury Prevention
ThinkFirst Injury Prevention Program	Injury Prevention

Ohio Valley Center for Brain Injury Prevention and Rehabilitation (Wexner Medical Center)	Brain Injury Prevention
Brain Injury Association of Ohio	Brain Injury Prevention
AAA of Ohio	Teen Driving Safety
Ohio Teen Driver Coalition	Teen Driving Safety
Ohio AAP	Child Injury

Question 2: Describe how the trauma lead agency has funded and coordinated system-wide injury prevention or outreach activities.

The principle trauma agency (Ohio EMS Board) is not responsible for state-wide injury prevention initiatives. ODH's VIPP is responsible for coordination and implementation of injury prevention efforts throughout the state. See response to Question 2c for a description of the sources of VIPP funding.

As described in the Research Section (pg. 176) of this document, the Ohio EMS / Trauma Grant Program was created as a way to improve and enhance EMS and trauma patient care in the State of Ohio by providing research grant funds to eligible applicants. The Third Priority provides grants to entities that 1) research the cause, nature and effects of traumatic injuries; 2) educate the public about injury prevention; and 3) implement, test and evaluate injury prevention strategies.

The following are examples of Third Priority Grants that have been funded through the Ohio EMS Trauma Grant Program:

2008-2009 Injury Prevention Research Grants

- *Functional Outcomes after Geriatric Spinal Column Injuries*-St. Elizabeth's Trauma Services in collaboration with the Trauma Research Department and Rehabilitation Services, Youngstown, Ohio
- *Effect of Pre-hospital Therapeutic Hypothermia on Neurologic Outcome Following Sudden Cardiac Arrest* - The Ohio State University Medical Center, Columbus, Ohio
- *Increasing Motor Vehicle Restraint in the Hispanic Community: An Evaluation of a Train-the Trainer Approach in Churches* - Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio
- *The Effect of Delay in Transfer to Advanced Trauma Center Care on Trauma Patient Outcome in Ohio* - Center for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, Columbus, Ohio
- *MRSA Colonization in EMS Personnel and Equipment as a Risk Factor for Secondary Injury in Ohio Trauma Patients* - The Ohio State University Research Foundation, Columbus, Ohio

2009 - 2010 Injury Prevention Research Grants

- *Injury Among Older Adults in Ohio* – Center for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, Columbus, Ohio
- *Teen Drivers Distracted by Handheld Digital Devices* - Toledo Children's Hospital, Toledo, Ohio
- *Prospective Evaluation of the Effect of Driving Simulation on Motor Vehicle Safety in Adolescents* - Injury Prevention Center of Greater Dayton, Miami Valley Hospital, Dayton, OH

2010 – 2011 Injury Prevention Research Grants

- *Factors Affecting Motor Vehicle Crashes in Ohio* – Center for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, Columbus, Ohio

2011 – 2012 Injury Prevention Grants

- No reports posted to the website

a. Which injuries (including pediatric injuries) have been identified and prioritized for intervention strategies?

The following Injury priority areas have been identified by the VIPP:

- child/youth injury;
- drug overdose ;
- falls among older adults.

The following are examples of programs being implemented by the VIPP to address these issues:

- Ohio Buckles Buckeyes (OBB) is a child passenger safety (CPS) program that provides child safety seats and booster seats to eligible low income families in all 88 Ohio counties.
- Prescription for Prevention: Stop the Epidemic is a comprehensive education and awareness campaign to combat the epidemic of prescription drug misuse, abuse and overdose.
- Local injury prevention grants through the CDC's Preventive Health and Health Services Block Grant (PHHSBG) provides more than \$600,000 annually to 9 local programs targeting injury. The following agencies received funding during the 2010-2013 grant cycle:

Agency	Focus Area	Target Population
Clermont County General Health District Senior Safety Program	Falls Among Older Adults	Age 65 and older
Delaware County General Health District	Falls Among Older Adults	Age 65 and older
Fairfield Department of Health	Unintentional Child/Youth Injury (Pedestrian and Bicycle Safety)	Children and youth
Hamilton County General Health District Fall Prevention Task Force	Falls Among Older Adults	Age 65 and older
Toledo Children's Hospital	Unintentional Child/Youth Injury (Pedestrian and Bicycle Safety)	Children and Youth
Public Health of Dayton and Montgomery County	Unintentional Prescription Drug Poisoning	Ages 35-54
Portsmouth City Health Department	Unintentional Prescription Drug Poisoning	Ages 35-54
Stark County Health Department	Unintentional Child/Youth Injury (Sports-related Injury among Youth)	Children and youth
Union County Health Department	Unintentional Child/Youth Injury (Sports-related Injury among Youth)	Children and youth

The OIPP has identified the following injury priority areas in its 2009-2012 Injury Plan:

1. **Traumatic Brain Injury (TBI) in Children and Youth**
2. **Prescription drug poisoning** – Due to the increase in drug overdose deaths, the ODH's VIPP created a subgroup, the Prescription Drug Abuse Action Group (PDAAG) to focus specifically on the epidemic of drug deaths in Ohio. The PDAAG is working to examine statewide data and produce materials to raise awareness about this issue.
3. **Motor vehicle traffic and pedestrian injury**
4. **Falls Among Older Adults** – Since falls disproportionately impact older Ohioans, the VIPP created The Ohio Older Adult Falls Prevention Coalition to focus specifically on falls among older adults. This Coalition released a [2010-2014 State Plan](#) and works with the Ohio Department of Aging and Health to observe Falls Prevention Awareness Day.
5. **Firearm related violence**

b. Identify any dedicated lead agency or other agency staff member (full- or part-time) responsible for injury prevention outreach and coordination for the trauma system.

As detailed above, ODH's VIPP is the primary agency responsible for injury prevention outreach and coordination.

c. What is the source of funding?

VIPP receives funding from the following sources:

- **CDC Preventive Health and Health Services Block Grant (PHHSBG)** - Federal funding for nine community-based Injury Prevention projects. See response to Question 2a for a list of these programs. Future funding is uncertain. If the PHHSBG is not reinstated by Congress, there will be no additional funding for these local injury prevention projects outside of child passenger safety.
- **CDC National Center for Injury Prevention and Control (NCIPC) – Core Injury Grant** – funds the OIPP/action groups and injury surveillance efforts.
- **CDC NCIPC – National Violent Death Reporting System (NVDRS) Grant** – funds the Ohio Violent Death Reporting System (OVDRS)
- **ODPS, Traffic Safety Office** – funds the Occupant Protection Regional Coordinators Program
- **State Highway Safety Fund** – Fines from child safety seat violations funds Ohio Buckles Buckeyes, the child safety seat program for low income families.
- **Department of Labor, Bureau of Labor Statistics** – Census of Fatal Occupational Injury (CFOI) – funds work-related injury fatality surveillance
- **General Revenue Fund** – from the state budget, provides the VIPP with a small amount of funding to cover program expenses that aren't fully covered by federal grants and provides required matching funds for CFOI.

Question 3: Explain the evaluation process for injury prevention projects that are conducted by the lead agency, trauma facilities, or other community-based organizations.

At the state level, the VIPP conducts surveillance activities and monitors fatal and non-fatal injury rates overtime. Each program/initiative is evaluated using specific measureable objectives that are related to the individual injury priority area they address. They also assess injury surveillance rates and risk factor information (e.g., bicycle helmet use, infant sleep position, etc.) and collect process evaluation data to assess how well state efforts are functioning over a period of time. The VIPP tracks the membership attrition and recruitment efforts of the OIPP.

Program outcomes across local injury prevention programs vary considerably.

a. Identify any gaps in injury prevention efforts for population groups in the state.

Current gaps in injury prevention efforts are largely due to a lack of adequate funding. For example, youth violence prevention efforts for males have not been developed, interventions are lacking to address statewide falls among older adults, and child injury prevention interventions for low income families are not sufficient. Since injury prevention efforts for the general populous are so under-funded, there is very little capacity to address these specialized populations.

Emergency Medical Services

Benchmark 302: The trauma system is supported by an EMS system that includes communications, medical oversight, pre-hospital triage, and transportation; the trauma system, EMS system, and public health agency are well integrated.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-302.1) = There is well-defined trauma system medical oversight integrating the specialty needs of the trauma system with the medical oversight for the overall EMS system. Note: The EMS system medical director and the trauma medical director may be the same person.	2	Y Goal 4
(I-302.2) = There is a clearly defined, cooperative, and ongoing relationship between the trauma specialty physician leaders (e.g., trauma medical director within each trauma center) and the EMS system medical director.	3	Y Goal 4
(I-302.3) = There is clear-cut legal authority and responsibility for the EMS system medical director including the authority to adopt protocols, to implement a performance improvement system, to restrict the practice of pre-hospital care providers, and to generally ensure medical appropriateness of the EMS system.	2	Y Goal 1
(I-302.4) = The trauma system medical director is actively involved with the development, implementation, and ongoing evaluation of system dispatch protocols to ensure they are congruent with the trauma system design. These protocols include, but are not limited to, which resources to dispatch, for example ALS vs. BLS, air-ground coordination, early notification of trauma care facilities, pre-arrival instructions, and other procedures necessary to ensure that resources dispatched are consistent with the needs of injured patients.	1	Y Goal 4
(I-302.5) = The retrospective medical oversight of the EMS system for trauma triage, communications, treatment, and transport is closely coordinated with the established performance improvement processes of the trauma system.	1	Y Goal 4
(I-302.7) = There is a universal access number for citizens to access the EMS / trauma system, with dispatch of appropriate medical resources. There is a central communication system for the EMS / trauma system to ensure field-to-facility bidirectional communications, inter-facility dialogue and all-hazards response communications among all system participants.	1	Y Goal 1
(I-302.8) = There are sufficient and well-coordinated transportation resources to ensure EMS providers arrive at the	1	Y Goal 4

scene promptly and expeditiously transport the patient to the correct hospital by the correct transportation mode.

Benchmark 310: The lead trauma authority ensures a competent workforce.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-310.1) = In cooperation with the pre-hospital certification and licensure authority, set guidelines for pre-hospital personnel for initial and ongoing trauma training, including trauma-specific courses and courses that are readily available throughout the state	5	Y Goal 4,9
(I-310.2) = In cooperation with the pre-hospital certification and licensure authority, ensure that pre-hospital personnel who routinely provide care to trauma patients have a current trauma training certificate, for example, PHTLS, BTLs, and others, or that trauma training needs are driven by the performance improvement process.	4	N Goal 9
(I-310.9) = Conduct at least one multidisciplinary trauma conference annually that encourages system and team approaches to trauma care.	1	N

Benchmark 311: The lead agency acts to protect the public welfare by enforcing various laws, rules, and regulations as they pertain to the trauma system.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-311.6) = Incentives are provided to individual agencies and institutions to see state or nationally recognized accreditation in areas that will contribute to overall improvement across the trauma system, for ex. Commission on Accreditation of Ambulance Services (CAAS) for pre-hospital agencies, Council on Allied Health Education Accreditation (CAHEA) for training programs, and ACS verification for trauma facilities.	1	Y Goal 1

Emergency Medical Services

Pertinent History:

A vital public service, the Emergency Medical Services (EMS) Division of the Ohio Department of Public Safety (ODPS) provides oversight for all emergency medical services provided to the citizens in the State of Ohio. Am. Sub. Senate Bill 98 of the 119th Ohio General Assembly (1992) established in law (ORC §4765.06) the EMS Division and moved EMS from the Ohio Department of Education to ODPS. In addition, the passage of SB 98 provided statutory authority for the establishment of an Emergency Medical Services Board (EMS Board), with the authority to oversee EMS and the certification and the training of EMS and fire personnel in Ohio (ORC §4765.1).

The EMS Board is comprised of twenty members nominated by a diverse group of entities representing all parts of EMS and fire throughout the State and including the EMS Division (ORC §4765.02). Each nominee must exhibit background and / or experience in EMS and are officially appointed by the Governor. The Executive Director of the EMS Division serves the EMS Board with reporting responsibilities to both the EMS Board Chair and the Director of ODPS. The EMS Division staff serves the EMS Board's administrative needs. All appointed EMS Board members serve a three year term without compensation except for reimbursement of expenses.

The EMS Board, in conjunction with the EMS Division, has statutory authority over the following activities:

- Establishing training and certification standards for the fire and EMS personnel;
- Establishing fire and EMS instructor training and certification standards;
- Accreditation of EMS programs of instruction and approval of EMS continuing education programs / chartering of firefighter and fire safety inspector programs of instruction;
- Oversight of Ohio's trauma system;
- Distribution of grant funds;
- Emergency Medical Services for Children (EMS-C);
- Regional Physician Advisory Boards (RPAB);
- Investigations to insure compliance with Chapter 4755 of the Ohio Revised Codes (ORC) and Ohio Administrative Codes (OAC);
- Collection and analysis of data submitted to the EMS Incident Reporting System (EMSIRS);
- Collection and analysis of data submitted to the Ohio Trauma Registry (OTR);
- Preparation of an EMS plan for the statewide regulation of EMS during periods of disaster.

Current EMS Board Members (as of February 2013):

Member	Representing	Term Expires	City
Melvin House <i>Chief Executive Officer</i>	Executive Director, EMS Division, ODPS	---	
Carol Cunningham, MD	State Medical Director	---	
Geoff Dutton	ODPS	---	

Bruce Shade <i>Chair</i>	Ohio Ambulance and Medical Transportation Association	2013	Willoughby OH
Daryl McNutt <i>Vice-Chair</i>	Ohio Fire Chief's Association	2015	Whitehouse OH
Pamela Bradshaw	Ohio Instructor Coordinators Society	2015	Wheelersburg OH
Deana Dahl-Grove, MD	Ohio Hospital Association	2014	Cleveland OH
James Davis	Ohio Association of Professional Firefighters	2013	Westerville OH
Matthew Dick	Ohio Association of EMS	2014	Delaware OH
Vickie Graymire	Ohio Nurses Association	2013	Columbus OH
Deanna Harris	Ohio State Firefighters Association	2013	Medina OH
William Mallory, Jr	Ohio Association of Professional Firefighters	2014	Lancaster OH
Mark Marchetta	At-Large, Affiliated with an EMS Organization	2015	Hopedale OH
Wendy Pomerantz	American Academy of Pediatricians, Ohio Chapter	2014	Cincinnati OH
Gary Redd	Ohio Association of Professional Firefighters	2015	Marion OH
Mark Resanovich	Ohio State Firefighters Association	2015	Uniontown OH
Brian Springer	American College of Emergency Physicians, Ohio Chapter	2013	Miamisburg OH
Steven Steinberg	American College of Surgeons, Ohio Chapter	2015	Columbus OH
Vacant	Ohio Fire Chief's Association		
Vacant	Ohio Hospital Association		
Vacant	Ohio State Firefighters Association		
Vacant	Ohio Association of Air Medical Services, Ohio Association of Critical Care Transport		

Question 1: Provide information on the last assessment of EMS, including assessor and date

The reassessment of EMS by the National Highway Traffic Safety Administration ([NHTSA](#)) Technical Assistance Team (TAT) was last conducted February 15-17, 2011. The assessors included:

- Christop Kaufmann, MD, MPH, FACS
- D. Randy Kuykendall
- W. Dan Manz
- Susan D. McHenry, MS
- Curtis Sandy, MD, FACEP
- Jolene R. Whitney, MPA

- a. Describe the EMS system, including the number and competencies (that is, ALS or BLS) of ground transporting agencies, non-transporting agencies, and air medical resources.

As of December 2012, the EMS Division reported there are approximately 42,000 certified EMS providers in the State of Ohio. Of the certified providers, approximately 2,100 are Emergency Medical Responders, 20,000 are Emergency Medical Technicians, 2,200 are Advanced Emergency Medical Technicians and 17,000 are Paramedics. The EMS Division is unable to provide the number of people actually providing emergency medical services from the list provided.

Delivery of EMS to the local level is provided by 1330 ground emergency and non-emergency ambulance services. A total of 1095 are transporting services with 27 providing basic life support (BLS); 38 providing intermediate life support; 5 exceeding scope of practice (ESoP) support and 632 providing advanced life support (ALS). There are 393 transporting services that have not provided to the EMS Division the level of service they provide. There are 235 non-transporting agencies with 32 providing BLS care; 4 providing intermediate life support and 32 providing ALS care. A total of 167 non-transporting units have not reported the level of care provided. These agencies are diverse, ranging from all volunteer to full-time multi-tiered urban response systems. The breakdown of departments consist of; all volunteer, 539; mix of paid and volunteer, 304; all paid, 375; and squads not reporting pay status, 111. Currently air medical resources are provided by 10 services, all providing ALS care.

In 2004, ORC §4766.02 created the Ohio Medical Transportation Board (OMTB) consisting of nine voting members and one non-voting member appointed by the governor with each member serving a two-year term and represent the following organizations:

- Ohio Ambulance Association – one voting member
- Owner or operators of private EMS organizations – two voting members (one must be a funeral director)
- A consumer of EMS not associated with any public or private EMS organizations – one voting member
- An official with a public EMS organization – one voting member
- Owners or operators of non-emergency medical service organizations that provide ambulette services only – two voting members
- Ohio Association of Critical Care Transport – two voting members (one member representing a ground-based service and one member representing an air-based service)
- A physician who is a member of the American College of Emergency Physicians – serves as chair and a non-voting member
- The Board also employs a full-time executive director and support staff to assist in implementing the functions of the Board

The organizations regulated by ORC §4766 include private emergency and non-emergency medical service providers who furnish, operate, conduct, maintain, advertise, engage in, or proposed or professes to engage in the business or service of transporting people who are seriously ill, injured, or otherwise incapacitated or who require the use of a wheelchair or are confined to a wheelchair; and, include air-medical providers. The OMTB's mission is to ensure through inspection, certification, and licensure that all non-emergency, emergency, and air-medical service organizations regulated by ORC §4766 and the rules promulgated thereunder, provide appropriate care and transportation for the citizens of Ohio.

The OMTB operates independently from the EMS Division. Whereas the OMTB regulates licensure

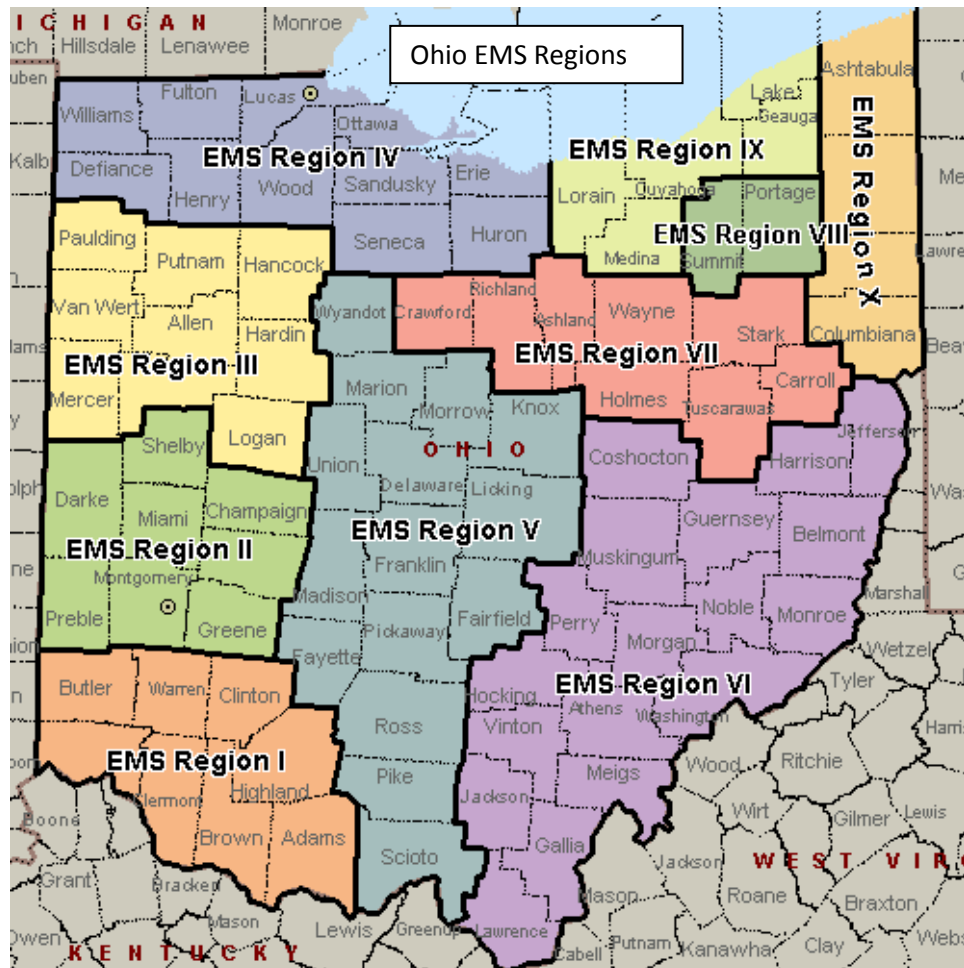
of organizations and permits equipment, the EMS Board licenses the employees of these organizations (i.e. paramedic, advanced emergency medical technician (AEMT) and emergency medical technician (EMT)). The EMS Board determines the scope of practice for the paramedic, AEMT and EMT and minimum staffing for ALS or BLS response. The EMS Division does not license or inspect EMS in the state who are not regulated by ORC §4766.

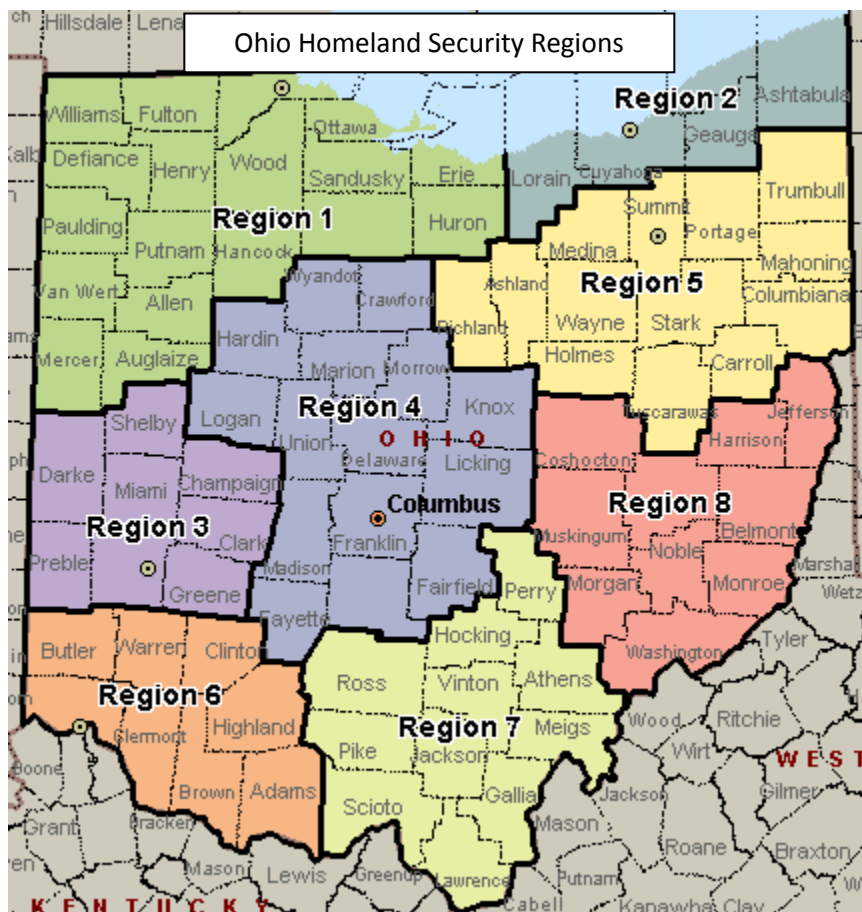
The NHTSA reassessment in 2011 recommended, “The legislature should reassign the current functions, authorities and resources of the Ohio Medical Transportation Board to the EMS Division as a step towards achieving a single lead EMS agency in Ohio.” The EMS Board has included merging the OMTB into the EMS Board in the *Ohio EMS 2015 Strategic Plan*. The merger is to establish government efficiency, eliminating consumer and constituent confusion, improving the medical system coordination and improvement in the disaster coordination. Currently there is a committee actively working with the ODPS legal service and the Assistant Attorney General for the OMTB to submit the new framework and transition plan into legislation. There is current pending legislation (HB 35) to combine both the EMS and OMTB boards. As a result of the pending legislation, the Governor has placed a hold on confirming appointments for the four current EMS Board vacancies. If the pending legislation is passed combining both boards there will be no change to the ORC regulatory authority over personnel or equipment.

The current proposal (HB 35) is for the blended EMS Board to consist of 20 members representing:

- Emergency physician
- Trauma surgeon
- Emergency pediatric physician
- Hospital administrator
- Registered nurse
- Career paid fire chief
- Volunteer fire chief
- EMS instructor
- EMS provider any level
- EMS provider any level
- EMS provider any level
- EMS provider any level
- Paramedic
- Paramedic
- Paramedic
- Owner/operator of private EMS service
- Mobile Intensive Care Unit Provider
- Air Medical EMS provider
- Ambulette operator
- Employee of ODPS

The State of Ohio is divided into 10 EMS regions that are not congruent with the 8 Homeland Security Planning regions. See the following two maps which outline both regions.





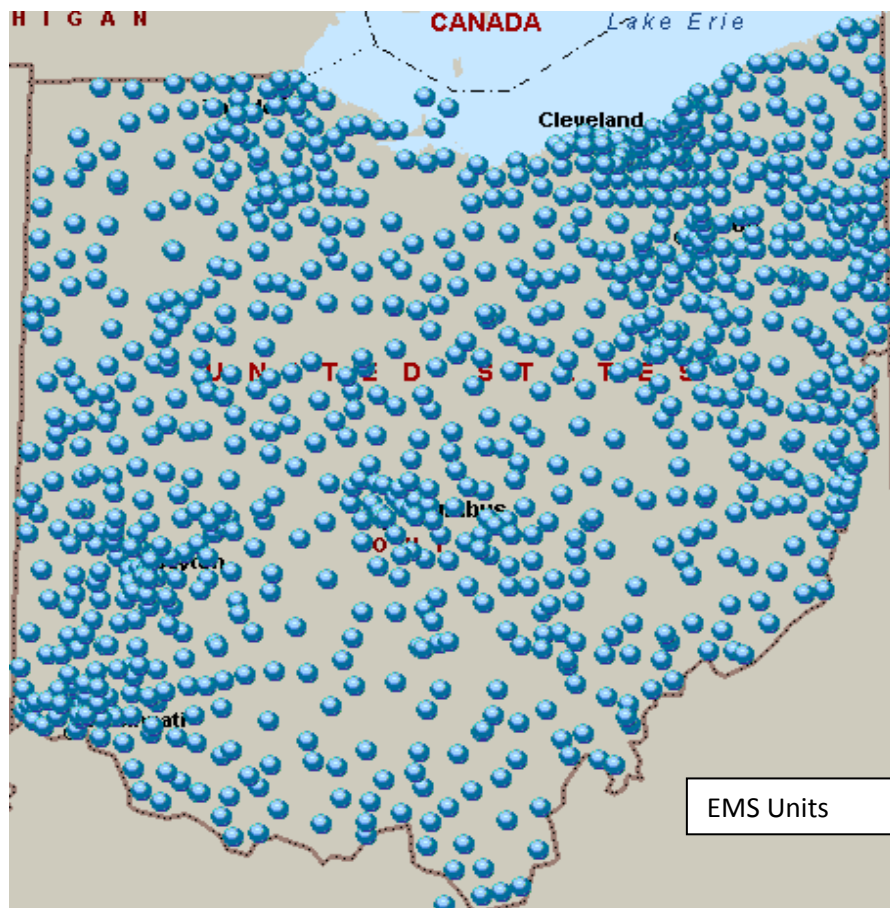
The motion to adopt / change the EMS regions to align with Homeland Security Planning regions was approved by the EMS Board in February 2012. A workgroup was established and met several times but has not provided input back to the EMS Board.

For each of the 10 EMS regions, the EMS Board, in accordance with ORC §4765.05, may appoint a Regional Physician Advisory Board (RPAB) or a regional director to oversee the delivery of pre-hospital EMS in that region. In accordance with OAC §4765-3-02 each RPAB shall be composed of no more than nine physicians who each possess knowledge and experience in or related to EMS, who work or reside in the region to be served, and who are board certified through a medical specialty board. Members are then appointed with terms not to exceed three years. The RPAB meetings are to occur at least four times annually or as often as necessary to carry out its duties. The chair of the RPAB or regional director is required to meet four times annually with the state medical director. There are no published minutes from these meetings and EMS Division was unable to provide these upon request. The RPAB or regional director assists the regions with development or recommendation of written medical protocols and in developing EMS continuing education programs, with equipment procurement, establishment of mutual aid agreements, with assistance in the maintenance of information, assistance in the identification of problems with provision of

EMS, and with the development of protocols for EMS medical directors. The RPAB has the responsibility to report protocol changes to the EMS Board as set forth in ORC §4765.40. This reporting is independent of the regional trauma system.

a. How are these resources allocated throughout the region to serve the population?

Statewide, the resources are allocated locally. There are no state mandates requiring any political entity to fund or provide EMS service. Each township or municipality determines its own needs and financial ability to provide service to residents. Townships or municipalities may decide to collaborate and merge resources to provide EMS service. In these cases a joint district may be formed and either the joint district or the county may control the resources and services. The following map outlines the EMS units in the state.



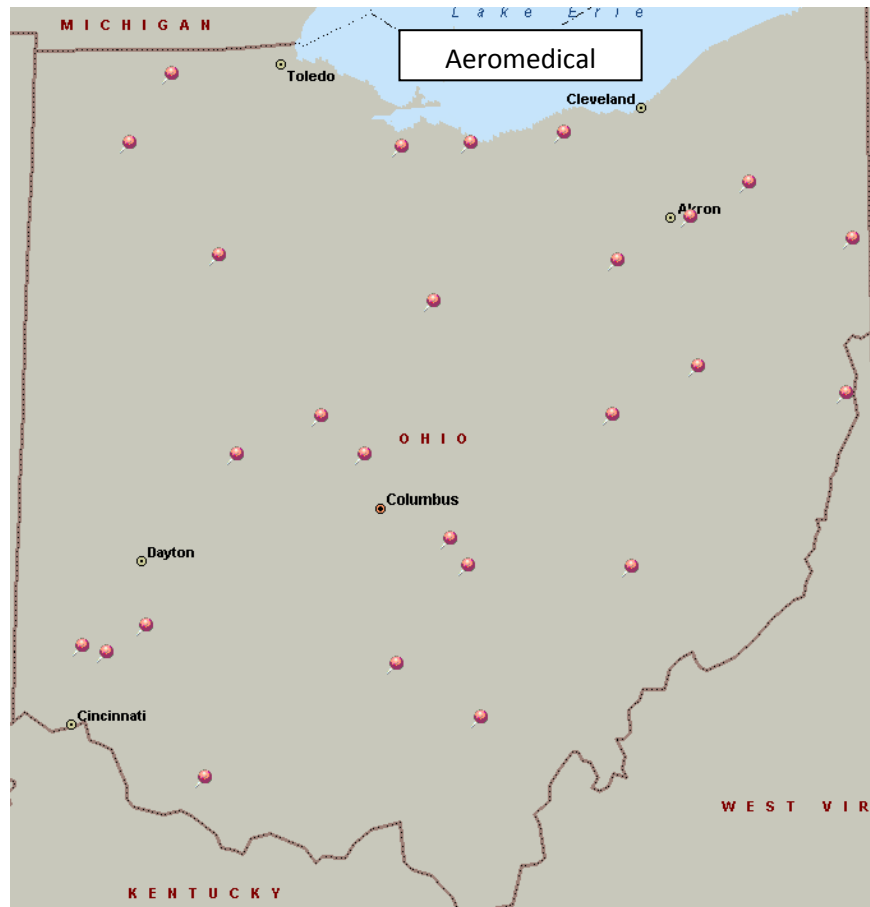
b. Describe the availability of enhanced 911 and wireless E-911 access in your region.

Statewide communication includes access through 911 services. Currently, enhanced wired and wireless E-911 services are available statewide in all 88 counties. Effective September 2012 the [Statewide Emergency Services Internet Protocol Steering Committee](#) was established by Am. Sub. House Bill 509 of the 129th Ohio General Assembly. This committee has been tasked to make available 911 services to the next generation of Voice over Internet Protocol (VoIP) users.

c. Identify any specialty pediatric transporting agencies and aeromedical resources.

Currently there is no means to distinguish the number of pediatric-only, private for-profit specialty transport services throughout the state. The OMTB directory currently lists 29 owner / operators of mobile intensive care units with the primary responsibility of intra-facility transfers and no response to EMS scenes. The 29 companies have a total of 494 units available for transport.

Statewide there are a total of 10 aeromedical transport services; 8 are headquartered in Ohio with two services headquartered out of state. There are a total of 33 bases for all ten services. All make a combination of inter-hospital and EMS scene transports.



The map below shows the mobile ICU units in Ohio.



e. Describe the availability of pediatric equipment on all ground transporting units.

Currently there is no statutory mandate or rule regarding pediatric equipment to be carried in not-for-profit ambulance services in the state. There was a recommendation from the EMS Board during an August 2009 meeting to adopt the *Equipment for Ambulances* as the recommended equipment list but not adopted into the official rules.

Emergency Medical Service for Children (EMS-C) in 2010/2011 completed a [survey](#) as a component of a Health Resources and Service Administration (HRSA) grant requirement looking specifically at on-line and off-line medical direction and pediatric equipment on ambulances. A total of 339 Ohio agencies were randomly selected to complete the survey. Surveys were sent to the EMS coordinator of each agency with follow-up to ensure a response. With 62% (210) of the agencies answering the survey, 201 that respond to 911 emergencies were included. Eighty-five percent were agencies with ALS-trained staff and the remaining 15% were agencies with BLS-trained staff. There were a total of 609 vehicles operated by the agencies that transported patients. The average percent of the recommended pediatric equipment carried on ambulances included 94.3% of the agencies with BLS-trained staff and 95.5% of the agencies with ALS-trained staff.

Question 2: Describe the procedures for online and off-line medical direction, including procedures for the pediatric population.

As defined in the ORC, all EMS agencies are required to have a medical director to provide medical oversight to the agency. Medical directors must carry a valid Ohio medical license and be actively involved in the provision of emergency care to patients. Medical oversight includes conducting performance improvement programs, education programs, and protocol updates. It is the responsibility of each regional RPAB or regional director to develop and recommend written medical protocols for EMS providers and provide guidance to local medical directors.

On behalf of the EMS Board, the RPABs were tasked with developing and drafting proposed treatment guidelines that EMS agencies could use in delivering the highest standard of care. The guidelines for both adult and pediatric patients are guidelines only and are not mandatory for Ohio EMS agencies. The guidelines were developed for all levels of providers including the emergency medical responder (EMR), emergency medical technician (EMT), advanced emergency medical technician (AEMT) and paramedic. It is the EMS Board's intent that each region and / or agency will review the protocols and use them to assist in the development of the agency or regional protocols. The most recent protocols were updated in February of 2012 to remain current with the most updated evidence available.

Individual medical directors for each agency may limit or ask that providers obtain medical control approval for certain treatments in both adult and pediatric populations. Each community has the ability to tailor and revise the protocol to fit their individual region or agency, but they must first ensure the providers remain with the approved [scope of practice](#) as outlined in OAC §4765-10-06. Medical directors are not permitted to expand the scope of practice but instead provide clarifications or define the limitations on services that are permitted. The EMS Board may allow providers to perform services beyond their scope of practice as part of an EMS Board approved research study. This must be in accordance with OAC §4765-6-04.

Am. Sub. House Bill 138 of the 123rd Ohio General Assembly requires EMS organizations to implement ongoing peer review and performance improvement to improve the availability and quality of EMS. As a component of the peer review and performance improvement, an EMS service needs to consider how to improve its ability to provide effective trauma care to all populations. Special attention is focused on the pediatric and geriatric patient populations and each squad is required to take into account the trauma care guidelines developed by the EMS Board. To assist the local medical directors with this task, the RPAB created a program in developing a [performance improvement program](#).

a. Describe how EMS and trauma medical direction and oversight are coordinated and integrated.

EMS providers administer the trauma triage protocol in the field as required by the OAC §4765-14. EMS providers use the criteria set forth in the rule, consistent with their certification, to evaluate whether an injured person qualifies as an adult or pediatric trauma patient in conjunction with the definition of trauma in ORC §4765.01. EMS medical directors are responsible for enforcing state or regional trauma triage protocols for EMS personnel under their medical direction through peer review or process improvement. There are no mandates to obtain trauma medical direction for either protocol development or enforcement of protocols.

It is the responsibility of the EMS Board to consult with the Ohio Trauma Committee, EMS organizations and personnel, RPAB, EMS instructors and persons who regularly provide medical direction to EMS personnel in the state for assistance in developing and implementing educational

opportunities regarding state and regional trauma triage protocols. The EMS Board may also enlist the EMS Division to participate as well.

Question 3: Describe the pre-hospital workforce competencies in trauma

In January 2009, the EMS Board adopted the National EMS Scope of Practice Model as the minimum guideline for EMS providers. Two years of discussion and input from EMS providers and EMS educators across the state paved the way for subsequent approval of the National Standard Curricula by the EMS Board in February 2012. Adaptation of the National EMS Scope of Practice Model also gave EMS the new provider titles (effective September 2011; ORC §4765.011) paired with an expanded set of psychomotor skills and scope of practice.

The EMS Board has outlined several steps to be completed prior to implementation of the new Standard Curricula and performance of any of the new psychomotor skills by a provider. The new Standard Curricula became effective February 6, 2012, although each program was required to read the entire ORC §4765 to ensure their compliance with the new standards. Programs were allowed to begin teaching the new curricula after February 6th if they met compliance, but were required by the EMS Board to follow the revised initial training and refresher curricula with all classes beginning September 1, 2012. EMS medical directors and EMS instructors are responsible for reviewing the new guidelines, psychomotor skill sets and implementing the following steps to include: education, training, competency, protocol development, performance improvement and continuing education.

In response to the changes, there are now State-approved refresher programs to facilitate the transition from old to new. Completion of these courses is in keeping with the National Registry of Emergency Medical Technicians (NREMT) Transition Policy. There will be EMS providers in various stages of transition from the former to the new Ohio EMS scope of practice for several years. There has been no definitive or estimated date for completion the transition.

a. Initial training and certification/licensure requirements

Initial training curriculum for all levels of providers follows the National Emergency Medical Services Education Standards set forth by National Highway Traffic and Safety Administration (NHTSA) and became effective in the State of Ohio September 2012 (OAC §4765).

The Emergency Medical Responder (EMR) curriculum (OAC §4765-12-05) consists of a minimum of 48 hours and contains 6 modules in the subject areas and objectives approved by the EMS Board. The EMR must demonstrate competency in the curriculum objectives through written and practical testing to receive a certificate of completion. <http://www.publicsafety.ohio.gov/links/NHTSA-%20EMR%20Instructional%20Guidelines.pdf>

The Emergency Medical Technician (EMT) curriculum (OAC §4765-15-05) consists of a minimum of 150 hours and contains 5 modules in the subject areas and objectives approved by the EMS Board. The EMT also completes 10 hours of clinical experience within the 150 hours. At the completion of the training program each student must pass a comprehensive course-ending examination with written and practical components, developed and administered by the EMS Board, which is based on the National Registry for Emergency Medical Technicians (NREMT) guidelines.

http://www.publicsafety.ohio.gov/links/ems_emt_b_curriculum.pdf

The Advanced EMT (AEMT) must first satisfy the prerequisite of successful completion of the EMT course. AEMT curriculum (OAC §4765-16-06) consists of a minimum of 200 hours and contains modules in the subject areas and objectives approved by the EMS Board. The AEMT must also demonstrate successful performance in 11 identified competencies. At the end of the training program each student must pass a comprehensive course-ending examination with a written and practical component, administered by the NREMT and recognized by the EMS Board.

The Paramedic curriculum (OAC §4765-17-04) follows the NHTSA National I Standard Curriculum. There are two prerequisites for the course including EMT certification and an anatomy and physiology course. The Paramedic curriculum is a combination of didactic, skills laboratory and clinical education. Completion is a minimum of 900 hours broken into 500 didactic instruction and laboratory practice and 400 hours of field clinical time. Upon completion of the course the examination, both written and practical, are administered by the NREMT and recognized by the EMS Board. <http://www.publicsafety.ohio.gov/links/NHTSA-Paramedic%20Instructional%20Guidelines.pdf>

b. Continuing education and recertification/re-licensure requirements

All providers must renew their certification every three years and the continuing education requirements are directed by OAC §4765 and vary depending on the provider level. Pursuant to ORC §4765, each course offered through an EMS training program or an EMS continuing education program, other than ambulance driving, shall be developed under the direction of a physician who specializes in emergency medicine. Each course that deals with trauma care shall be developed in consultation with a physician who specializes in trauma surgery.

In addition to the continuing education requirements, all providers during each 3-year certification cycle, are required by ORC §4765.16 to document completion of the Ohio Trauma triage course. The continuing education on trauma was developed under the direction of the Ohio Trauma Committee, EMS Board and the State Medical Director. The module can be taken at any initial or approved training programs or through the Ohio EMS online training program.

Continuing education requirements include:

EMR – OAC 4765-12-03

A minimum of 15 continuing education (CE) hours is required within the 3-year certification cycle. They must include at least one hour in each of the following topics: patient assessment; cardiopulmonary resuscitation; airway and oxygen administration; automated external defibrillation; illness and injury management; trauma issues; anaphylaxis and patient-assisted epinephrine administration. This requirement can be satisfied with the EMR refresher course approved September 2012, or current registration with NREMT at the first responder or equivalent level, or passing score within three attempts on an exam approved by the board. The exam may only be taken during the last six months of a First Responder's current certification period.

<http://www.publicsafety.ohio.gov/links/Ohio%20EMR%20Refresher%20Approved051612.pdf>

EMT – OAC 4765-15-03

A minimum of 40 CE hours is required within the 3-year certification cycle including at least six hours of pediatrics; two hours of geriatric and eight hours of trauma issues including completion of the trauma triage and transportation protocols. This requirement can be satisfied with the EMT refresher course; or current registration with NREMT at the EMT or equivalent level; or passing score within three attempts on an exam approved by the board. The exam may only be taken during the last six months of an EMT's current certification.

<http://www.publicsafety.ohio.gov/links/Ohio%20%20EMT%20Refresher%20Approved051612.pdf>

EMTA – OAC 4765-16-03

A minimum of 60 CE hours is required within the 3-year certification cycle which includes at least eight hours of pediatrics; four hours of geriatric and eight hours of trauma issues including completion of the trauma triage and transportation protocols. This requirement can be satisfied with the EMT refresher course which satisfies 40 of the 60 required hours plus 20 additional hours of CE; or current registration with NREMT at the EMTA or equivalent level; or passing score within three attempts on an exam approved by the board. The exam may only be taken during the last six months of an EMTA's current certification.

<http://www.publicsafety.ohio.gov/links/Ohio%20AEMT%20Refresher%20Approved051612.pdf>

Paramedic – OAC 4765-17-03

A minimum of 86 CE hours within the 3-year certification cycle is required, including at least twelve hours of pediatrics; four hours of geriatrics, six hours of emergency cardiac care and eight hours of trauma issues, and completion of the trauma triage and transportation protocols. This requirement can be satisfied with the Paramedic refresher course which satisfies 48 of the 86 required hours plus 38 additional hours of CE; or current registration with NREMT at the Paramedic or equivalent level; or passing score within three attempts on an exam approved by the board. The exam may only be taken during the last six months of a Paramedic's current certification.

<http://www.publicsafety.ohio.gov/links/Ohio%20Paramedic%20RefresherApproved051612.pdf>

c. Pediatric trauma training requirements for recertification

Pediatric trauma training is a mandatory requirement for recertification at any level. Current pediatric requirements in the three-year recertification cycle include:

- EMR – 1 hour of childbirth and pediatric issues
- EMT – 6 hours of pediatric issues
- AEMT – 8 hours of pediatric issues
- Paramedic – 12 hours of pediatric issues

Definitive Care Facilities

Benchmark-303: Acute care facilities are integrated into a resource-efficient, inclusive network that meets required standards and that provides optimal care for all injured patients.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-303.1) = The trauma system plan has clearly defined the roles and responsibilities of all acute care facilities treating trauma and of facilities that provide care to specialty populations (e.g. burn, pediatric, spinal cord injury, and others).	1	Y Goal 5

Benchmark 307: To maintain its state, regional, or local designation, each hospital will continually work to improve the trauma care as measured by patient outcomes

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-307.1) = The trauma system engages in regular evaluation of all licensed acute care facilities that provide trauma care to trauma patient and of designated trauma hospitals. Such evaluation involves independent external reviews.	1	N

Benchmark 310: The lead trauma authority ensures a competent workforce.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-310.3) = As part of the established standards, set appropriate levels of trauma training for nursing personnel who routinely care for trauma patients in acute care facilities.	1	Y Goal 5,9
(I-310.4) = Ensure that appropriate, approved trauma training courses are provided for nursing personnel on a regular basis.	1	Y Goal 5
(I-310.5) = In cooperation with the nursing licensure authority, ensure that all nursing personnel who routinely provide care to trauma patients have a trauma training certificate (e.g. ATCN, TNCC, or any national or state trauma nurse verification course). As an alternative after initial trauma course completion, training can be driven by the performance improvement process.	1	Y Goal 1,5
(I-310.8) = In cooperation with the physician licensure authority, ensure that physicians who routinely provide care to trauma patients have a current trauma training certificate of completion, (ex ATLS and others). As an alternative, physicians may maintain trauma competence through continuing medical education programs after initial ATLS completion.	1	Y Goal 1
(I-310.9) = Conduct at least one multidisciplinary trauma	1	N

conference annually that encourages system and team approaches to trauma care.			
(I-310.10) = As new protocols and treatment approaches are instituted within the system, structured mechanisms are in place to inform all personnel about the changes in a timely manner.	1	Y	Goal 9

Definitive Care Facilities

Pertinent History:

In Ohio, no state agency has statutory authority to verify / designate trauma centers. A hospital may operate as a trauma center if it has been verified by the American College of Surgeons (ACS) ([ORC §4765.01\(Q\)\(1\)](#)) or is operating under Ohio's Provisional Trauma Center Law (ORC §4765.01(Q)(2)). In Ohio, trauma center verification is voluntary. Any hospital within the state may pursue ACS verification. A regulatory relationship has not been established between the EMS Board and the ACS verified / provisionally designated trauma facilities across the state.

The intent of Substitute House Bill 138 of the 123rd General Assembly was to lay the groundwork for a statewide trauma system. As mentioned in other sections of this document, the emphasis of this legislation was on the pre-hospital phase of care, along with trauma registry development. In Ohio, statutory authority related to trauma system development does not extend beyond the EMS phase of care. Therefore, since legislation was enacted in 2002, actions to enhance the hospital portion of the trauma system have been constrained.

The following parameters of trauma system development related to definitive care facilities were placed in the Ohio Revised Code:

- Ohio facilities may not call themselves a “trauma center” unless approved for verification as a Level I, II, or III trauma center by the ACS or are operating under provisional designation IORC §4765.01(Q).
- “Trauma” (or “traumatic injury”) is defined as damage to or destruction of tissue that creates a risk of loss of life or limb, significant, permanent disfigurement or significant, permanent disability, and is caused by any of the following:
 - Blunt or penetrating injury;
 - Exposure to electromagnetic, chemical or radioactive energy;
 - Drowning, suffocation, or strangulation;
 - Deficit or excess of heat. (ORC §4765.01(N)).
- A patient that meets any of these requirements listed above in the pre-hospital setting is identified as a patient with a traumatic injury (ORC §3727.09 (A)–(E)).
- A hospital or physician may not admit or transfer a trauma patient to a hospital that is not an appropriate trauma center or failing to transfer a trauma patient to an appropriate trauma center.

Although these parameters are written into law, monitoring of compliance along with enforcement of these parameters does not exist in Ohio.

Within the [2011 report](#), NHTSA commented on the lack of an inclusive system within Ohio. This has generated discussion at the state level but no action has been taken.

Question 1: Describe the extent to which all acute care facilities participate in the trauma system.

State law (HB 138) requires that hospitals not represent themselves as trauma centers unless verified by the ACS, which specifically includes the fact that no hospital shall admit or transfer a trauma patient to a hospital that is not an appropriate trauma center. Since Ohio has a voluntary system, any hospital can

become a verified trauma center so long as hospitals comply with ACS standards. No monitoring of compliance to the law is currently in place at the state level.

All hospitals, whether verified trauma centers or non-verified facilities (i.e. termed “acute care hospitals” in Ohio), are required by law to submit pertinent data to the Ohio Trauma Registry (OTR). In addition, representatives from both trauma centers and non-trauma centers, maintain a voting seat on the Ohio Trauma Committee.

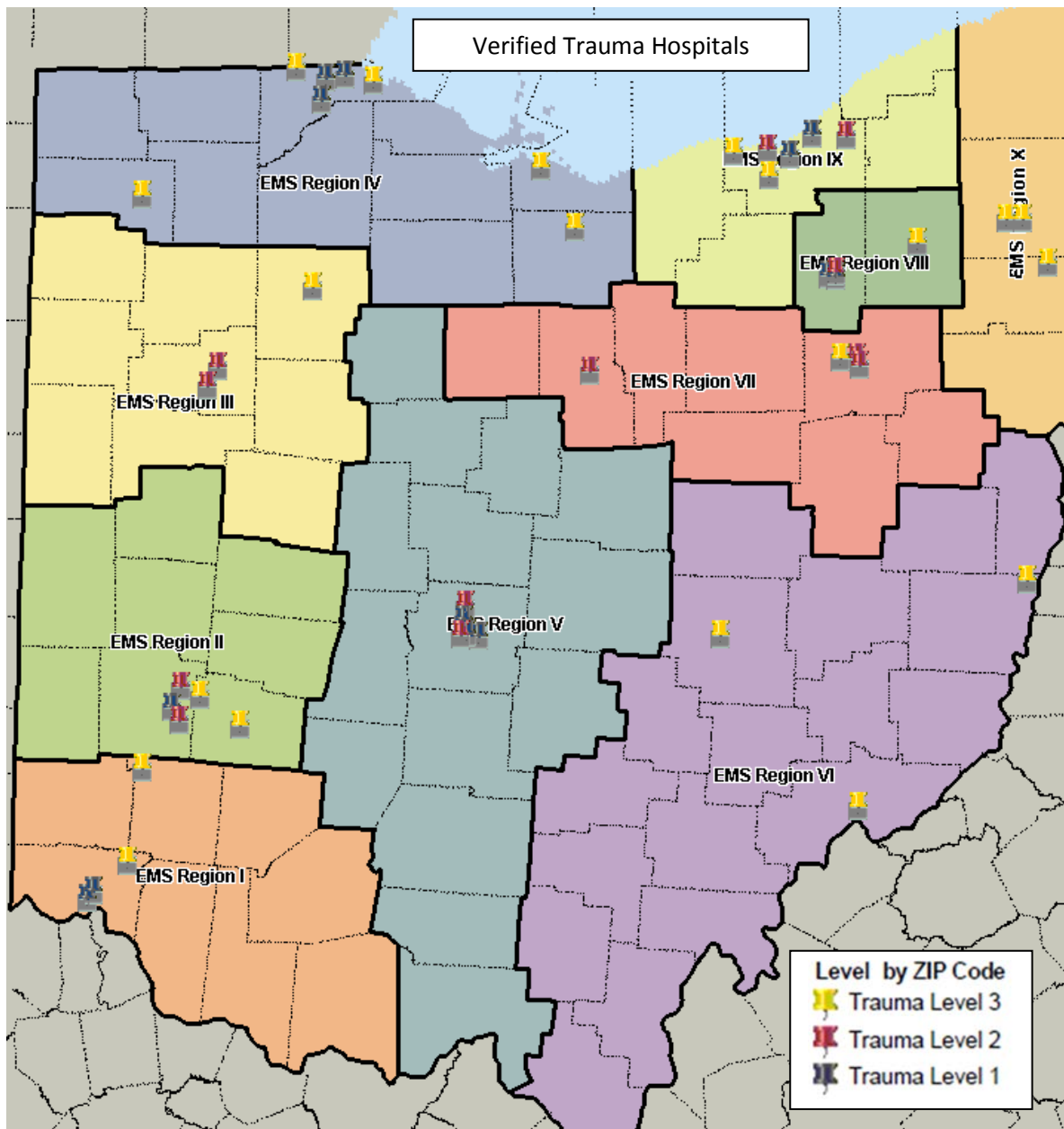
See the chart below which shows the number of trauma centers and acute care facilities in Ohio, as of December 2012, according to information obtained from ODPS.

Regions	Total # of Hospitals	Trauma Centers							Non-Trauma Centers
		TOTAL # Trauma Centers	Adult - Level 1	Adult - Level 2	Adult - Level 3	Peds - Level 1	Peds - Level 2	Provisional	
All Ohio	N=178	N=46 N=43 verified N=3 provisional	N=11	N=9	N=18	N=3	N=3*	N=3	N=133
Central Ohio Trauma System (COTS)	N=27	N=7	2	2	2	1			N=20
Northeast Ohio Regional Trauma Network (NOTRN)	N=11	N=6	2	1	2		1		N=5
Northern Ohio Trauma System (NOTS)	N=11	N=3	1*	2			1*		N=8
Northwest Ohio Regional Trauma Network (NOTR)	N=18	N=7	2	1	4				N=11
Southeast Ohio Regional Trauma Systems (SORT)	N=14	N=5	1	0	1		1	1 (level 2) 1 (level 3)	N=9
Tri-State Taruma Coalition (TSTC)	N=20	N=4	1		2	1			N=16
No Regional Involvement	N=77	N=14	2	3	7	1		1 (level 3)	N=63

* One hospital is verified as both an adult and pediatric trauma center

In 1996, there were 16 ACS verified trauma centers (10 Level I and 6 Level II). This number increased to 20 verified Level I and II ACS verified trauma centers by the time legislation was enacted (2000). The first Level verified Level III trauma center was in December 2001. Currently, as outlined above, there are 46 ACS verified trauma centers (Level I = 11, level II = 9, level III = 18, pediatric level I = 3, pediatric level II = 3, provisional = 3) from 45 hospitals in Ohio.

See map below which displays the location and verification level of Ohio trauma centers.



Listed below is a chart for Ohio verified and provisional trauma centers and outlines: region, level of designation, patient volume / year (800-959.9 ICD-9 range), patient volume / year with ISS > 15, number of Emergency Department visits / year and number of injury-related Emergency Department visits / year. The total number may be elevated as transfers from one trauma center to another trauma center may be counted twice.

Ohio Trauma Centers: Demographics of Injury by Hospital									
HOSPITAL	CITY	COUNTY	EMS Region	Adult TC Level	Pediatric TC Level	ICD-9 800-959 Trauma Pts / Year	# Pts / Yr with ISS > 15	# ED visits / Yr	# Injury Related ED visits / Yr
Atrium Medical Center	Franklin	Butler	1	3		467	24	63,000	835
Bethesda North	Cincinnati	Hamilton	1	3		540	33	NA	NA
Cincinnati Children's Hospital	Cincinnati	Hamilton	1		1	1754	102	124,274	31,048
University of Cincinnati	Cincinnati	Hamilton	1	1		2885	762	91,200	14,663
Reg 1 Subtotal						5646	921	278,474	46,546
Children's Medical Center Dayton	Dayton	Montgomery	2		2	704	64	75,119	15,546
Greene Memorial Hospital	Xenia	Greene	2	3		192	29	26,001	4,349
Kettering Medical Center	Kettering	Montgomery	2	2		1087	123	48,977	5,212
Miami Valley Hospital	Dayton	Montgomery	2	1		3,152	589	125,622	23,088
Soin Medical Center	Beavercreek	Montgomery	2	3		166	30	21,174	3,463
Reg 2 Subtotal						5301	835	296,893	51,658
Blanchard Valley Hospital	Findlay	Hancock	3	3		209	25	42,864	5,324
Lima Memorial Hospital	Lima	Allen	3	2		382	17	42,306	7,266
St. Rita's Medical Center	Lima	Allen	3	2		987	105	61,110	3,111
Reg 3 Subtotal						1578	147	146,280	15,701
Defiance Regional Medical Center	Defiance	Defiance	4	3		46	2	15,225	2,829
Firelands Regional Medical Center	Sandusky	Erie	4	3		309	32	48,160	8,487
Fisher-Titus Medical Center	Norwalk	Huron	4	3		144	1	27,601	7,246
ProMedica Flower Hospital	Sylvania	Lucas	4	3		265	10	33,000	NA
Mercy St. Charles Hospital	Toledo	Lucas	4	3		270	3	44,184	9,826
Mercy St. Vincent Medical Center	Toledo	Lucas	4	1		1857	318	68,188	12,627
ProMedica Toledo Hospital	Toledo	Lucas	4	1		1650	175	91,993	10,204
University of Toledo Med Center	Toledo	Lucas	4	1		1330	158	36,055	8,076
Reg 4 Subtotal						5871	699	364,406	59,295
Grant Medical Center	Columbus	Franklin	5	1		4331	839	88,369	12,614
Mount Carmel West	Columbus	Franklin	5	2		1113	100	58,324	14,282
Nationwide Children's Hospital	Columbus	Franklin	5		1	1395	102	81,859	16,945
Ohio State University Med Center	Columbus	Franklin	5	1		2362	281	68,254	13,689
Riverside Methodist Hospital	Columbus	Franklin	5	2		2475	212	89,739	15,583
Reg 5 Subtotal						11676	1534	386,545	73,113
Genesis Good Samaritan Hospital	Zanesville	Muskingum	6	3		NA	NA	NA	NA
Marietta Memorial Hospital	Marietta	Washington	6	3		5,440	18	41,622	5,440
Reg 6 Subtotal						5,400	18	41,622	5,440
Affinity Medical Center Massillon	Massillon	Stark	7	3		123	0	28,151	8,333
Aultman Hospital	Canton	Stark	7	2		980	211	85,762	25,955
Med Central Health Mansfield	Mansfield	Richland	7	2		632	22	52,738	5,346
Mercy Medical Center Canton	Canton	Stark	7	2		399	50	64,365	11,293
Reg 7 Subtotal						2134	283	231,016	50,927
Akron Children's Hospital	Akron	Summit	8		2	1524	87	59,493	15,500
Akron City Hospital	Akron	Summit	8	1		1647	225	77,640	13,592
Akron General Medical Center	Akron	Summit	8	1		1467	258	55,898	9,374
Robinson Memorial Hospital	Ravenna	Portage	8	3		NA	NA	NA	NA
Reg 8 Subtotal						4638	570	193,031	38,466
Fairview Hospital	Cleveland	Cuyahoga	9	2		557	46	75,786	15,587
Hillcrest Hospital	Mayfield Hts	Cuyahoga	9	2		896	62	NA	NA
Metrohealth Medical Center	Cleveland	Cuyahoga	9	1	2	3142	755	89,145	22,728
Southwest General Health Center	Middleburg Hts	Cuyahoga	9	3		542	75	47,363	11,739
St. John West Shore Hospital	Westlake	Cuyahoga	9	3		459	42	35,307	8,811
Univ Hosp Rainbow Babies Childrens	Cleveland	Cuyahoga	9		1	450	15	31,224	5,321
Reg 9 Subtotal						6046	995	247,601	64,186
Northside Medical Center	Youngstown	Mahoning	10	3		182	5	28,964	4,328
St. Elizabeth Health Center	Youngstown	Mahoning	10	1		1731	321	45,159	10,112
St. Joseph Health Center	Warren	Trumbull	10	3		NA	NA	NA	NA
Trumbull Memorial Hospital	Warren	Trumbull	10	3		NA	NA	NA	NA
Reg 10 Subtotal						1913	326	74,123	14,440
TOTAL						98533	12330	4,445,859	825104

* Patients that are transferred may be counted more than one (i.e. transferring and receiving hospital)

Since enactment of HB 138 (2000), 9 Ohio hospitals have received ACS verification but subsequently withdrew or lost their verification status. Four of the nine hospitals were verified only during the year or two immediately following implementation of the law. Five hospitals had longer times of maintaining ACS verification, yet did not pursue re-verification due to variety of reasons. Years of verification, along with rationale for not maintaining verification status are listed below, if available.

Hospital	County	Verification Years since HB 138	Level	Rationale: Issues that had large impact
Good Samaritan Hospital	Montgomery	2002-05	2-Adult	Not available / unknown
Huron Hospital	Cuyahoga	2002-03; 2005-10	2-Adult	Not available / unknown
Lakewood Hospital	Cuyahoga	9/92- 9/11	2- Adult	Low patient volume; MD pay; malpractice cost; MD (neurosurgery and thoracic surgery) response times
Southeast Regional Medical Center	Guernsey	6/97-6/10	3-Adult	High costs with low Medicaid reimbursement; high number of uninsured patients; orthopedic coverage
Upper Valley Medical Center	Miami	5/98-3/03	3-Adult	MD costs; frequency of MD taking call out of house

a. Describe the availability and roles of specialty centers within the system (pediatric, burn, TBI, SCI)

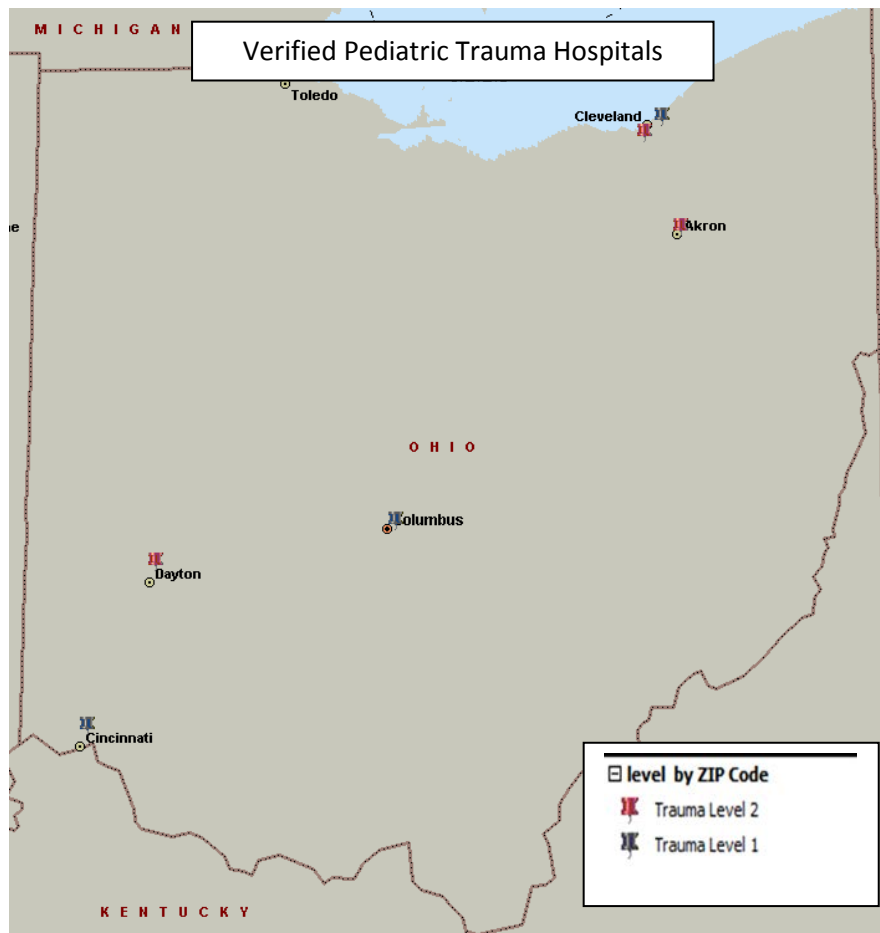
Pediatric

According to statutory authority in Ohio, pediatric is defined as children less than 16 years of age (ORC §4765.01(R)). Representatives from pediatric trauma centers are active within trauma system development at the state level.

Ohio is fortunate to have a large number of pediatric institutions in the state. There are five regional free standing pediatric institutions, verified as either a Level I or Level II pediatric trauma center and are as follows:

- Children's Medical Center of Akron, Level II, located in Akron, Ohio
- Children's Medical Center of Dayton, Level II, located in Dayton, Ohio
- Cincinnati Children's Hospital Medical Center, Level I, located in Cincinnati, Ohio
- Nationwide Children's Hospital, Level I, located in Columbus, Ohio
- University Hospital Rainbow Babies & Children's Hospital, Level I, located in Cleveland, Ohio

One adult Level I trauma center, MetroHealth Medical Center, is also a Level II pediatric verified center and is located in Cleveland making a total of 6 verified pediatric trauma centers in Ohio.



Patients transferred to these institutions utilize historic referral patterns that exist within the state. There has not been an analysis of appropriateness of pediatric trauma care / transfer patterns.

The verified pediatric trauma centers are located in the large urban regions of the state. Toledo (northwest Ohio) is a substantive urban area without an ACS verified pediatric trauma center. Southeastern Ohio, which is more rural than the remainder of Ohio and a part of the Appalachian Region, lacks close access to pediatric trauma care (Note: Thirty-two of the Ohio's eight-eight counties lie in Appalachia according to the Appalachian Regional Commission).

Burn

According to the American Burn Association (ABA), there are 6 verified burn centers in Ohio. They include the following:

- Akron Children's Hospital, Akron, Ohio;
- MetroHealth Medical Center, Cleveland, Ohio;
- Nationwide Children's Medical Center, Columbus, Ohio;
- Ohio State University, Columbus, Ohio;
- Shriners Burn Hospitals for Children, Cincinnati, Ohio;
- University Hospital, Cincinnati, Ohio.

There are transfer agreements between verified burn centers as part of Ohio disaster planning. In addition, Ohio has the luxury of having a free standing and nationally known non-profit hospital (Shriners Burn Hospitals for Children) dedicated to burn treatment and innovative burn research for children less than 18 years of age. Children from all over the mid-west region of the United States utilize this facility, if approved for treatment. A representative from the burn medical community is a voting member on the Ohio Trauma Committee. In addition, there are two additional non-verified burn centers in Ohio (Miami Valley Hospital and Mercy St. Vincent Medical Center). Data is not currently available on whether any of these burn centers are appropriately utilized.



Traumatic Brain Injury (TBI) / Spinal Cord Injury (SCI)

Ohio law is non-specific with regard to TBI/SCI. Statutory authority in Ohio mandates that injured patients be treated at an appropriate trauma center. Trauma patients with significant TBI can be managed by any of the Level I trauma centers in the state. Most of the Level II facilities also have significant expertise in the care of severely injured TBI patients, although some Level II facilities choose to transfer the most severely injured patients to a Level I for the neurosurgical and / or rehabilitation components. See the Rehabilitation section (pg. 139) for detailed information on Rehabilitation centers in Ohio. A representative from the rehabilitation medical community is a voting member on the Ohio Trauma Committee.

Question 2: Describe the roles of the non-designated acute care facilities in the trauma system.

As previously mentioned, acute care facilities must submit pertinent injury data to the Ohio Trauma Registry (OTR). Ohio law mandates that each acute care hospital have trauma care protocols related to initial stabilization and patient transfer agreements. At this time, it is unknown how many hospitals are in actual compliance with this as there is no formal monitoring at this point. At the current time, interaction between the state trauma system and acute care hospitals is minimal. The state trauma system does not generate any standard reports / information specific for the acute care hospitals. Transfer patterns between trauma hospitals and acute care hospitals are difficult to ascertain due to registry issues and the current 48-hour rule, which has been approved for deletion but not currently operationalized. See the Trauma Management Information Systems (MIS) section (pg. 158) for Ohio Trauma Registry (OTR) limitations.

According to triage criteria, EMS agencies within urban areas should be transporting the more severely injured or those that have a mechanism that may indicate significant injury to a verified trauma center. It is unknown whether that is actually happening. Some regional systems have attempted to evaluate this issue and have met with resistance due to HIPPA requirements and the sharing of hospital specific data. In more rural areas of Ohio and areas with longer driving distances, patients are frequently transported to the closest hospital. The eventual decision to transfer or not transfer to a verified center is the responsibility of the acute care hospital. Little is documented regarding acute care hospitals, as no authority exists for monitoring and enforcement of their actions. No audit system exists regarding appropriateness of initial transportation and transfers. The ramifications of not transferring severely injured can only be appreciated through impacts on the community reputation of the hospital and any criminal and/or civil suits that may arise in connection with individual patients.

The 2011 National Highway Traffic Safety Administration (NHTSA) report recommended that the state support the development of Level IV trauma centers, when this is appropriately endorsed by the American College of Surgeons (ACS) (NHTSA 2011 Report, pg. 29). According to the report, this would assist the state in the moving toward more of an inclusive trauma system.

a. Address their representation on the regional trauma committee.

There is a non-trauma center administrator who is a voting member of the Ohio Trauma Committee. In addition there are administrative and clinical representatives of trauma centers on the Ohio Trauma Committee (ORC §4765.04).

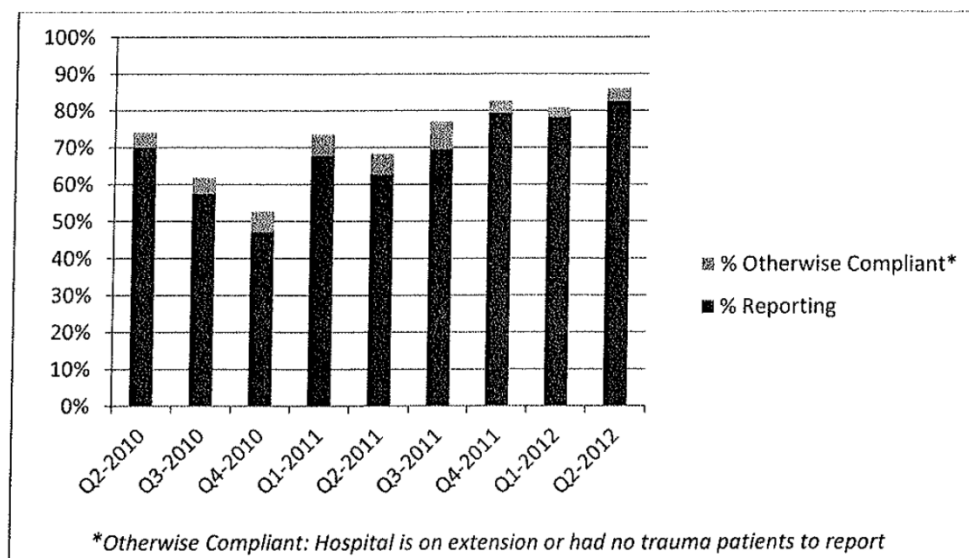
In areas without regional systems, acute care hospitals have minimal interaction with the state trauma system.

b. Do they submit registry and / or financial data?

Over the past 2 years and due to requests from the Ohio Trauma Committee, staff of the Office of Research and Analysis (ORA) has worked to increase Ohio Trauma Registry (OTR) submission compliance by verified trauma centers and acute care centers. As of November 2012, submission compliance for all Ohio hospitals is greater than 80%. The graph provides a summary of OTR data submission:

OTR Compliance

Hospital Reporting Compliance



To date, financial data submission from both verified trauma centers and non-trauma hospitals are legally mandated. However, this data submission is inconsistent in both volume and quality, while enforcement of data submission does not exist. At this point there have been no clear steps taken to improve the process, although this was previously discussed as an action item within the leadership workgroup (goal #1).

c. **What is their degree of engagement in the system-wide performance improvement process?**

Currently there is no system-wide performance improvement process that involves trauma centers or the acute care hospitals. See System-wide Evaluation and Quality Assurance section (pg. 153) of this document which outlines a first effort at evaluating Ohio transfer times and patterns, which would then include the acute care hospitals.

Question 3: Describe the process for verification and designation. Briefly outline the extent of authority granted to the lead trauma agency to receive applications and to verify, designate and de-designate regional trauma centers.

The statutory lead trauma agency (LTA) in Ohio does not exist. The principle trauma agency, ODPS has no authority to provide verification, designation or de-designation to Ohio trauma centers. Ohio facilities may not call themselves a “trauma center” unless approved for verification as a Level I, II, or III trauma center by the ACS. The ORA and the chair of the Ohio chapter of the ACS Committee on Trauma are informed when a hospital is undergoing the ACS verification process and when the final letter of approval (i.e. approval vs. failure) is received. No specific information on trauma center performance is made available to the ORA. Once this verification letter is received, ORA staff posts the information on the ODPS website. During the interim between ACS verification site visits, there is no process to monitor trauma centers for continued compliance of ACS trauma standards.

Question 4: Describe your standards for trauma center verification (including pediatric standards) and the extent to which they are aligned with national standards.

Ohio standards for trauma center verification are the ACS requirements, which are outlined in the *Resources for Optimal Care of the Injured Patient: 2006*. Verified trauma centers must comply with all changes to subsequent editions of this document / book.

a. Describe any waivers or program flexibility granted for centers not meeting verification requirements.

[Sub. Senate Bill 124](#) of the 124th Ohio General Assembly which passed in November 2002 and is otherwise known as the provisional designation bill (discussed below in Questions 5c), allows verified trauma centers an extension under state provisional designation if a focused review is necessary. Those that fail to maintain trauma center status should follow [policy](#) established by the EMS Board as they transition to a non-trauma center status.

b. Describe the process and frequency of use for de-designation of trauma centers.

Trauma centers in Ohio are either verified or fail to be verified by the ACS. The OAC stipulates the conditions under which a trauma center or hospital may be designated as a provisional trauma center for purposes of attaining verification (or re-verification). The responsibility of the state is to maintain records that such hospitals have met those conditions. ORA staff assists local EMS units in transporting patients to appropriate facilities by keeping the list of verified or provisionally designated centers current on their website (ORC §3727.101 and §3737.102).

Question 5: Outline how the geographic distribution and number of designated acute care facilities is aligned with patient care needs.

Geographic distribution of trauma centers has not been a consideration in Ohio's voluntary trauma system. The statute that authorizes the development of a trauma system does not give any state agency the authority to limit the number of participating trauma centers. Rather, the system has been developed such that any Ohio facility that is interested and passes ACS trauma verification will be listed as a verified trauma center in Ohio. Therefore, it is entirely possible that some Ohio regions may be over-represented by trauma centers while other regions may be under-represented.

Ohio has been extremely fortunate that a strong contingency of hospitals actively participate as ACS verified trauma centers. Even with 46 verified trauma centers, sections of Ohio continue to be under-represented. In the rural area of southeastern Ohio, there is a lack of trauma centers to support the regional population.

a. Describe the process by which additional trauma centers are brought into the system.

As population and injury patterns throughout the state change, it was expected that new trauma centers might develop. During establishment of the initial trauma system development, it was determined that new trauma hospital development may be difficult due to the state's definition of a trauma hospital, state EMS triage rules and criteria for trauma center verification by ACS. A need for provisional trauma center designation was identified. SB 124 which took effect in November 2002 provided a short-term solution to the complex problem of provisional designation. The primary

motivation for writing SB 124 was to address a lack of verified trauma centers in the southeast region of Ohio; however, it also is useful for verified centers that have fallen behind in their verification process or require a focused review.

Summary of this provisional verification bill is as follows. In order for a hospital to attain trauma center verification, it must undergo a consultative visit or re-verification by the ACS.

1. The CEO must certify in writing to the hospital's governing board that the hospital is committed and able to provide trauma care consistent with the level of verification being sought.
2. The hospital governing board must adopt a resolution stating that the hospital is committed and able to provide trauma care consistent with the level of verification that is being sought.
3. The hospital governing board must approve a written plan and timetable for obtaining the verification level being sought, including any actions for correcting deficiencies identified during the ACS review.
4. Status as a provisional center is terminated if the hospital withdraws its application or the hospital is not verified within 18 months after operating under provisional status (or 12 months if the hospital is being re-verified) (ORC §3727.101).

There is no authority for any group to monitor hospitals operating as a provisionally designated trauma center. There is no monitoring of hospitals to assure that they are providing an appropriate level of care or making an effort toward successful verification. There is no action or penalty set in statute or rule associated with non-compliance with the criteria for attaining provisional status. The Ohio Provisional designation process was intended to take place without a designating authority.

b. Describe the system response to the voluntary withdrawal of designation by acute care facilities.

Expounding upon OC 3727.102, staff at ORA outlined the [procedure](#) to follow when a hospital voluntary withdraws from being a trauma center. A survey is sent by the ORA to the withdrawing hospital requesting information on pertinent factors and rationale for their decision. This process was started in 2011 with results presented to the Ohio Trauma Committee. See chart under Question 1 of this section which summarizes the hospitals that have withdrawn.

c. Describe the mechanism for tracking and monitoring patient volume and flow between centers and how this influences the overall configuration of designated facilities.

The [ODPS Ohio Trauma Report 2010](#) outlines the volume of admitted injured patients during that calendar year that have a hospital stay of greater than 48 hours. As discussed in the Trauma MIS section (pg. 158), the > 48 hour rule has been dropped as a requirement by the EMS Board (July 2010); however, this change has not yet been implemented within the OTR. To date, there is no tracking and monitoring of patient volume and flow between centers. In 2011, the [Ohio Metrics](#) was developed to evaluate the trauma system and would provide some insight into patient flow. This document has not been implemented due to OTR limitations.

Question 6: Describe your system for assessing the adequacy of workforce resources available within participating centers.

The state has no formal system to assess the adequacy of workforce resources available within trauma centers other than the site review process within each hospital during the ACS verification. When a site

review takes place, the review team might make recommendations regarding the need for additional providers. This information is only available to the trauma center that is being reviewed.

There are no state requirements for education or training of hospital staff except as required during the ACS site review process. Trauma centers must have a surgeon present upon a patient's arrival (depending on type / level of resuscitation) or within 15 / 30 minutes of arrival (depending on level of trauma center).

No state rules exist to address the number of staff available at any given time or any patient / nurse ratio.

a. Address nursing and subspecialty needs (trauma or general surgery, intensivists, neurosurgeons, orthopedic surgeons, anesthesiologists, pediatric surgeons, and others, as required).

The state trauma system has not performed an assessment related to the availability of nursing and subspecialty needs, nor is there a plan to do so. A need assessment is included within Goal #1 of the *Ohio Trauma Framework: 2010*. Anecdotal information (discussions with hospitals, newspaper articles, etc.) indicates that urban areas have easier access to general surgeons and surgical subspecialties; however, even Ohio's largest hospitals have been plagued by shortages in certain subspecialty areas from time to time.

b. What human resource deficiencies have been identified, and what corrective actions have been taken?

To date, an evaluation of the human resource within the state has not been completed.

Question 7: Describe the educational standards and credentialing for emergency physicians and nursing staff, general surgeons, specialty surgeons, and critical care nurses caring for trauma patients in designated facilities.

The only educational standards and credentialing for emergency physicians, nursing staff, general surgeons, specialty surgeons and critical care nurses in Ohio are those that are required and outlined in the *Resources for Optimal Care of the Injured Patient: 2006* document.

a. What regional educational multidisciplinary conferences are provided to care providers? Who is responsible for organizing these events?

At the time of writing this document, the state of Ohio does not sponsor any type of regional educational multidisciplinary conferences related to trauma for care providers. However, trauma centers and / or regional trauma systems across the state sponsor multidisciplinary conferences.

System Coordination & Patient Flow

Benchmark 302: The trauma system is supported by an EMS system that includes communications, medical oversight, prehospital triage, and transportation; the trauma system, EMS system, and public health agency are well integrated.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #	
(I-302.6) = There are mandatory system-wide prehospital triage criteria to ensure that trauma patients are transported to an appropriate facility based on their injuries. These triage criteria are regularly evaluated and updated to ensure acceptable and system-defined rates of sensitivity and specificity for appropriately identifying a major trauma patient	3	N	
(I-302.7) = There is a universal access number for citizens to access the EMS / trauma system, with dispatch of appropriate medical resources. There is a central communications system for the EMS / trauma system to ensure field-to-facility bidirectional communications, interfacility dialogue, and all-hazards response communications among all system participants.	1	Y	Goal 1
(I-302.9) = There is a procedure for communication among medical facilities when arranging for interfacility transfers including contingencies for radio or telephone system failure.	2	Y	Goal 5

Benchmark 303: Acute care facilities are integrated into a resource-efficient, inclusive network that meets required standards and that provides optimal care for all injured patients.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #	
(I-303.4) = When injured patients arrive at a medical facility that cannot provide the appropriate level of definitive care, there is an organized and regularly monitored system to ensure that the patients are expeditiously transferred to the appropriate system-defined trauma facility.	2	Y	Goal 1

System Coordination and Patient Flow

Pertinent History:

The trauma adage of transporting the “right patient to the right place at the right time” continues as a goal for system coordination and patient flow. Numerous issues such as geography, weather, transport level of care, volunteer vs. paid EMS and family preference factor into the situation increasing the complexity of the decision-making. At the time of writing, there is no concrete evidence to grade Ohio’s performance in the area of system coordination and patient flow. Patient flow and care coordination plans may occur between individual hospitals or within the context of a regional trauma system; however, these still operate outside of the control and monitoring of the state trauma system. With probabilistic linkage of EMS Incident Reporting System (EMSIRS) and the Ohio Trauma Registry (OTR), the Ohio Trauma Committee looks to this linkage as a possible source of information regarding appropriate transport and patient flow.

Question 1: Describe the source of pre-hospital trauma triage protocols, and specify whether they are consistent with national guidelines.

The pre-hospital trauma triage protocols are written in Ohio rules (OAC §4765-1 and §4765-14). These protocols form a baseline upon which regional systems can expand, if desired. The Ohio trauma triage protocols were initially developed in 2001-02 by consensus of trauma experts within the state and by benchmarking with other state systems.

Statutory authority allows for regional variations to Ohio’s trauma triage protocols, as long as the following criteria are met:

- Ohio’s minimum triage criteria are met;
- The appropriate Regional Physician Advisory Board (RPAB) submits the variation to the EMS Board;
- The Ohio Trauma Committee has the opportunity to review and comment;
- The revised regional trauma triage protocols are approved by the EMS Board.

If the state trauma triage protocols are amended to include criteria that do not appear in a region’s protocols, such amendments are automatically applied to the region’s protocols until such time as the region amends their protocols (ORC §4765.40).

Completion of the Ohio Trauma Triage on-line course (1 hour credit) is required during each 3-year certification cycle for Ohio EMS providers to meet re-certification requirements (ORC §4765.16). The following are the trauma triage protocols for pediatrics (< 16 years), adults (16-69 years) and geriatric (70 years and older) and guide the determination of transport to a trauma center:

An adult trauma victim is a person between the ages of sixteen and sixty-nine years of age inclusive, exhibiting one or more of the following physiologic or anatomic conditions:

- Physiologic conditions
 - Glasgow coma scale less than or equal to thirteen;
 - Loss of consciousness greater than five minutes;
 - Deterioration in level of consciousness at the scene or during transport;
 - Failure to localize to pain;
 - Respiratory rate less than ten or greater than twenty-nine;
 - Requires endotracheal intubation;

- Requires relief of tension pneumothorax;
- Pulse greater than one hundred twenty in combination with evidence of hemorrhagic shock;
- Systolic blood pressure less than ninety, or absent radial pulse with carotid pulse present.
- Anatomic conditions
 - Penetrating trauma to the head, neck, or torso;
 - Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;
 - Injuries to the head, neck, or torso where the following physical findings are present:
 - Visible crush injury;
 - Abdominal tenderness, distention, or seatbelt sign;
 - Pelvic fracture;
 - Flail chest.
- Injuries to the extremities where the following physical findings are present:
 - Amputations proximal to the wrist or ankle;
 - Visible crush injury;
 - Fractures of two or more proximal long bones;
 - Evidence of neurovascular compromise.
- Signs or symptoms of spinal cord injury;
- Second degree or third degree burns greater than ten percent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway.

A pediatric trauma victim is a person under sixteen years of age exhibiting one or more of the following physiologic or anatomic conditions:

- Physiologic conditions
 - Glasgow coma scale less than or equal to thirteen;
 - Loss of consciousness greater than five minutes;
 - Deterioration in level of consciousness at the scene or during transport;
 - Failure to localize to pain;
 - Evidence of poor perfusion or evidence of respiratory distress or failure.
- Anatomic conditions
 - Penetrating trauma to the head, neck, or torso;
 - Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;
 - Injuries to the head, neck, or torso where the following physical findings are present:
 - Visible crush injury;
 - Abdominal tenderness, distention, or seatbelt sign;
 - Pelvic fracture;
 - Flail chest.
 - Injuries to the extremities where the following physical findings are present:
 - Amputations proximal to the wrist or ankle;
 - Visible crush injury:
 - Fractures of two or more proximal long bones;
 - Evidence of neurovascular compromise.
 - Signs or symptoms of spinal cord injury;
 - Second or third degree burns greater than ten percent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway.

A geriatric trauma victim is a person seventy years of age or older exhibiting one or more of the following causes of injury or physiologic or anatomic conditions: (Note: * **bold** indicates changes from adult triage criteria)

- Physiologic conditions
 - **Glasgow coma scale less than or equal to fourteen in a trauma patient with a known or suspected traumatic brain injury ***;
 - Glasgow coma score less than or equal to thirteen;
 - Loss of consciousness greater than five minutes;
 - Deterioration in level of consciousness at the scene or during transport;
 - Failure to localize to pain;
 - Respiratory rate less than ten or greater than twenty-nine;
 - Requires endotracheal intubation;
 - Requires relief of tension pneumothorax;
 - Pulse greater than one hundred twenty in combination with evidence of hemorrhagic shock;
 - **Systolic blood pressure less than one-hundred**, or absent radial pulse with carotid pulse present. *
- Anatomic conditions
 - Penetrating trauma to the head, neck, or torso;
 - Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;
 - Injuries to the head, neck, or torso where the following physical findings are present:
 - Visible crush injury;
 - Abdominal tenderness, distention, or seatbelt sign;
 - Pelvic fracture;
 - Flail chest.
 - Injuries to the extremities where the following physical findings are present:
 - Amputations proximal to the wrist or ankle;
 - Visible crush injury;
 - **Fracture of one proximal long bone sustained as a result of a motor vehicle crash;***
 - Fractures of two or more proximal long bones;
 - Evidence of neurovascular compromise.
 - Signs or symptoms of spinal cord injury;
 - Second degree or third degree burns greater than ten percent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway;
 - **Injury sustained in two or more body regions. ***
- Cause of injury *
 - **Pedestrian struck by a motor vehicle *;**
 - **Fall from any height, including standing falls, with evidence of a traumatic brain injury *.**

Statutory authority requires that Ohio's trauma triage protocols be reviewed and updated every three years by the EMS Board, in order to minimize over-triage and under-triage. These reviews are done through public hearings, public comment periods and current review of literature. As of this date, over and under triage information at the state level has not been assessed. These guidelines are not consistent with the Centers for Disease Control: Guidelines for Field Triage of Injured Patients Recommendation of the National Expert Panel on Field Triage (January 2009) or the triage information located in the ACS *Optimal Resources for the Care of the Injury Patient: 2006*. A motion to adopt CDC triage guidelines with the addition of geriatric additions suggested by the geriatric task force failed to pass

at the May 2011 Trauma Committee meeting. Rationale for this was that a geriatric set of criterion was not present in the CDC guidelines.

a. Describe how children and patients with severe TBI and SCI are triaged from the field to appropriate facilities.

Ohio has a strong contingency of pediatric verified trauma centers, with five of the six facilities being free-standing pediatric hospitals. As described above, children with any types of injuries are triaged according to the Ohio trauma triage protocol. In urban or high density regions where verified pediatric centers exist, EMS personnel frequently bypass the adult institutions and transport directly to the pediatric center; however, no data is available to validate this statement. In lower population density regions (more rural), it is believed that children are frequently transported to the adult Level II or III trauma center or to the acute care hospitals. Once again, no data is available to validate this statement. The primary triage of a child from the field to an appropriate center with varying level of severity has never been evaluated in Ohio, so information cited above is subjective.

The Ohio trauma triage criteria dictate that patients with severe TBI and SCI should be transported to an appropriate trauma center. The following chart defines the Ohio counties in four categories per 2010 census data, with details on percentage of land mass and population.

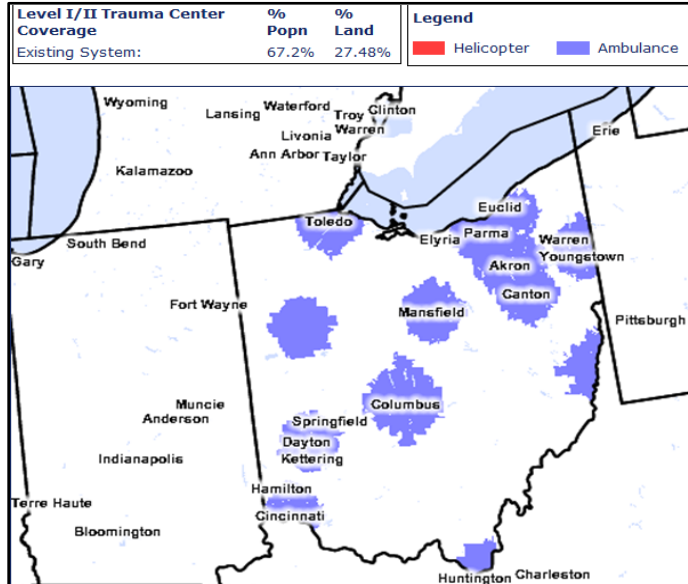
Ohio County Profile	Definition	% Land Mass	% Population
High Density	> 1000 people / sq mile	8.2%	41.5%
Medium High Density	300 - 999 people / sq mile	16.2%	24.7%
Medium Low Density	100 - 299 people / sq mile	39.0%	23.4%
Low Density	< 100 people / sq mile	36.6%	10.4%

In a high density setting, patients are usually triaged to the Level I or II center, bypassing other facilities; however, data is not available to validate that statement. However, 33.4 percent of Ohioans live in a rural community (i.e. as identified by census tracts of < 300 people per square mile) without the benefit of a level I trauma center nearby.

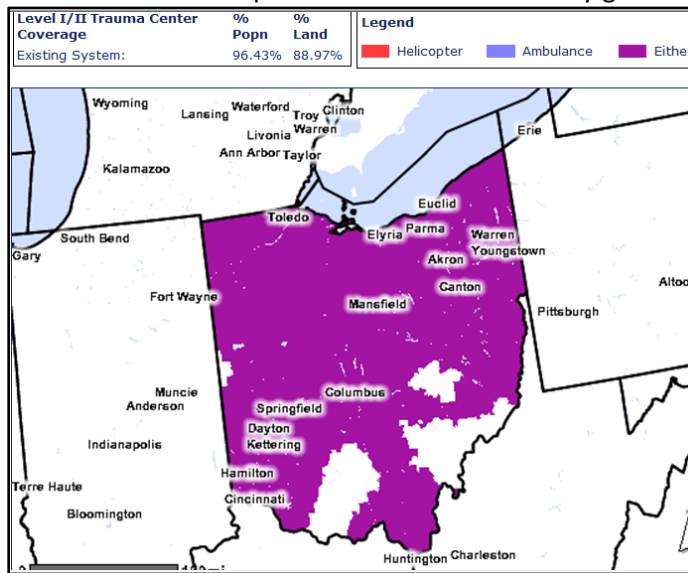


This is especially evident in the southeast region of Ohio. Therefore, transport of a severely injured adult could follow different scenarios depending on the various factors of geography, weather, level of transporting squad, etc. This is subjective discussion as no evaluation of field triage (i.e. appropriateness of transport, time of transport to definitive care) has been completed in the state of Ohio.

The following is a map that outlines regions in Ohio where transport to a Level I, II or III trauma center can be accomplished within 60 minutes by ground transport.



The following is a map that outlines regions in Ohio where transport to a Level I, II or III trauma center can be accomplished within 60 minutes by ground or air transport.



An [EMS / Trauma grant](#) completed in 2008 evaluated and researched the delay in transfer of severely injured pediatric trauma patients. This was a retrospective review of 748 children < 16 years of age with an inter-facility transfer to a verified pediatric trauma center in Ohio. Overall, 82% of the patients took greater than 2 hours for transfer, with a mean transfer time of approximately four hours. Perhaps even more critical was the finding that only 20% of those children with a severe injury (ISS \geq 155) were transferred to an appropriate pediatric trauma center within two hours of injury.

Question 2: Within the system, what criteria are used to guide the decision to transfer patient to an appropriate resource facility and are these criteria uniform across all centers?

The decision to transfer is left up to each hospital. To date, there has been no examination of data regarding the provision of care in appropriate facilities.

Question 3: Specify whether there are inter-facility transfer agreements to address the needs of each of the following:

By statutory authority, each hospital is mandated to have a hospital policy and procedure for the timely transport of the trauma patient (ORC §3727.09). In addition, each Ohio hospital is mandated to have a transfer agreement with an adult and a pediatric trauma center. There is no standardization of which patients to transfer. There is no current mechanism to monitor whether the transfer agreements exist or whether the transfer occurs.

- a. Transfer to an appropriate resource facility**
- b. TBI**
- c. SCI**
- d. Re-implantation**
- e. Burns**
- f. Children**
- g. Repatriation**

The answers to sections 3a-f are that, in each case, the decision to transfer is left up to each hospital. It is not known whether hospitals have in place legally mandated initial treatment guidelines and transfer agreements. Repatriation is not addressed in Ohio standards.

Question 4: Describe the system-wide policies addressing the mode of transport and the type and qualifications of transport personnel used for inter-facility transfers.

A Guide for Inter-facility Transport (NTHSA, April 2006) is listed on the ODPS website as a reference. ODPS and the EMS Board do not have any system-wide policies which address the mode of transport and the type of qualification of transport personnel using inter-facility transport for the injured patient. At the time of this writing, oversight of inter-facility transport is not within the domain of the EMS Board.

The Ohio Medical Transportation Board (OMTB) has legislative authority over private modes of transport (i.e. aeromedical, fixed wing, mobile intensive care units, ambulettes, etc.) and has policies which define the specific types of equipment required for inter-facility transports. Staffing requirements for each mode of transport are defined. However, no state-wide policies exist that address the mode of transport for a specific level of injury. In Ohio, referring physicians are responsible for determining the level of transport care that is needed.

Question 5: Specify whether there is a central communications system to coordinate inter-facility transfers. Describe how this system has access to information regarding resource availability with the region.

Ohio does not have a central communications system to coordinate inter-facility transfer. Inter-facility transfers are managed from hospital to hospital. No tools exist to assist with inter-facility transfer decision making. During a mass casualty incident (MCI), a state-wide communication system (Surge Net) exists in order to query hospitals regarding bed-capacity.

Rehabilitation

Benchmark 308: The lead agency ensures that adequate rehabilitation facilities have been integrated into the trauma system and that these resources are made available to all populations requiring them.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-308.1) = The lead agency has incorporated, within the trauma system plan and the trauma center standards, requirements for rehabilitation services, including inter-facility transfer of trauma patients to rehabilitation centers.	1	Y Goal 6
(I-308.2) = Rehabilitation centers and outpatient rehabilitation services provide data on trauma patients to the central trauma system registry that include final disposition, functional outcome, and rehabilitation costs and also participate in performance improvement processes.	2	Y Goal 6

Benchmark 103: A resource assessment for the trauma system has been completed and is regularly updated.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-103.1) = The trauma system has completed a comprehensive system status inventory that identifies the availability and distribution of current capabilities and resources.	1	Y Goal 1

Rehabilitation

Pertinent History:

To be verified by the American College of Surgeons (ACS), Ohio trauma centers are required to provide rehabilitative services, either through their own inpatient facility or to a freestanding rehabilitation hospital through a transfer agreement (Resources for Optimal Care of the Injured Patient 2006). As there is no statewide system that coordinates the transfer of patients to specialty rehabilitation facilities, each trauma center is responsible for this coordination of care.

Early in Ohio trauma system development, rehabilitation data was noted as an integral element. In response, the Trauma Rehabilitation Registry (TRR) was created as a separate module of the Ohio Trauma Registry (OTR) in 2005. Currently, some rehabilitation centers in Ohio submit data. However, rehabilitation data has not been submitted on a consistent basis by the rehabilitation hospitals as required by law (ORC §4765.06) and compliance has not been monitored nor enforced. See Trauma Management Information Systems (MIS) section (pg. 158) for details.

Question 1: Provide data about the number of rehabilitation beds and specialty rehabilitation services (SCI, TBI, and pediatric) available within the trauma system's geographic region. On average, how long do patients need to wait for these rehabilitation beds? Does the average wait vary by type of rehabilitation needed?

According to the website, rehabilitation in the state of Ohio is provided by 36 Commission on the Accreditation of Rehabilitation Facilities (CARF) accredited programs. Rehabilitation services are provided at many of the trauma centers as well as at private rehabilitation facilities. Based on data available, there are over 1,000 CARF inpatient rehabilitation beds and over 1,800 non-CARF inpatient rehabilitation beds. The average occupancy rate information in Ohio is not currently available. In addition, there is no information is available regarding average wait-times for a rehabilitation bed or whether average wait-times vary by type of rehabilitation needed. See chart below for synopsis of facilities.

Hospital Name	Number of Rehab Beds	Trauma Center Level	Specialty Area Per Website	CARF Accredited**	CARF Specialty Program
Adena Greenfield Medical Center	16			X	Stroke, Adults
Affinity Medical Center-Massillon	20	Level 3	Pediatrics	X	Stroke, Adults
Akron General Hospital Edwin Shaw Hospital for Rehabilitation	70		Brain Injury, Spinal Cord Injury	X	Brain Injury, Stroke, Pediatrics, Adults
Alliance Community Hospital	10		Brain Injury, Spinal Cord Injury, Pediatrics		
Atrium Medical Center	15	Level 3	Brain Injury, Spinal Cord Injury	X	Stroke, Adults

Hospital Name	Number of Rehab Beds	Trauma Center Level	Specialty Area Per Website	CARF Accredited**	CARF Specialty Program
Aultman Health Foundation	30	Level 2	Brain Injury, Spinal Cord Injury	X	Stroke, Adults
Belmont Community Hospital	28		Brain Injury, Spinal Cord Injury		
Berger Hospital	12		Brain Injury		
Bethesda Hospital	44		Brain Injury		
Cincinnati Children's Hospital Medical Center	24	Level 1	Brain Injury, Spinal Cord Injury, Pediatrics	X	Pediatrics
Cleveland Clinic Children's Hospital for Rehab	52		Brain Injury, Spinal Cord Injury, Pediatrics	X	Pediatrics
Cleveland Clinic Foundation	12				
Clinton Memorial Hospital	10		Brain Injury, Spinal Cord Injury		
Community Hospital of Williams County-Montpelier	10		Multiple trauma		
Dayton Rehabilitation Institute	50		Brain Injury, Spinal Cord Injury		
Euclid Hospital	48			X	Adults
Fairview Hospital	25	Level 2	Brain Injury, Spinal Cord Injury, Pediatrics		
Firelands Regional Medical Center-South Campus	34	Level 3	Brain Injury, Spinal Cord Injury		
Fort Hamilton Hospital	12				
Galion Community Hospital	10		Brain Injury, Spinal Cord Injury		
Genesis Good Samaritan Hospital	30		Head Trauma, Spinal Cord Injury	X	Adults
Good Samaritan Hospital	30		Head Trauma, Spinal Cord Injury	X	Adults
Grandview Hospital	16		Brain Injury, Spinal Cord Injury		
Grant Medical Center	30	Level 1	Brain Injury, Spinal Cord Injury, Pediatrics		
Greenbriar Rehabilitation Hospital	29				
Greene Memorial Hospital Inc	12	Level 3			

Hospital Name	Number of Rehab Beds	Trauma Center Level	Specialty Area Per Website	CARF Accredited**	CARF Specialty Program
HealthSouth Rehabilitation Hospital at Drake	40		Brain Injury, Spinal Cord Injury		
Hillside Rehabilitation Hospital	69		Brain Injury	X	Brain Injury, Stroke, Pediatrics, Adults
Holzer Medical Center	29		Brain Injury, Spinal Cord Injury	X	Adults
Joint Township District Memorial Hospital	8		Brain Injury, Spinal Cord Injury		
Kettering Medical Center	14		Brain Injury, Spinal Cord Injury	X	Adults
Lake West Hospital	12		Spinal Cord Injury		
Lakewood Hospital	15		Spinal Cord Injury	X	Adults
Lima Memorial Hospital	17	Level 2	Brain Injury, Spinal Cord Injury, Pediatrics	X	Adults
Louis Stokes Cleveland Department of VA Medical Center	†			X	Spinal Cord, Adults
Madison County Hospital	10		Brain Injury, Pediatrics		
Marietta Memorial Hospital	20		Head Injury, Spinal Cord Injury, Multiple Trauma	X	Stroke, Adults
MedCentral Health System-Mansfield	15	Level 2	Brain Injury, Spinal Cord Injury, Pediatrics		
Mercy Hospital Fairfield	†			X	Adults
Mercy Hospital Mt. Airy	14		Brain Injury, Spinal Cord Injury		
Mercy Hospital Western Hills	10				
Mercy Regional Rehabilitation Center (Mercy Medical Center)	39		Brain Injury	X	Stroke, Adults
Mercy Rehabilitation Center	†		Spinal Cord Injury, Multiple Trauma	X	Adults
Mercy St. Charles Hospital	20	Level 3	Brain Injury, Spinal Cord Injury, Pediatrics	X	Adults

Hospital Name	Number of Rehab Beds	Trauma Center Level	Specialty Area Per Website	CARF Accredited**	CARF Specialty Program
Mercy St. Vincent Medical Center	32	Level 1	Brain Injury, Spinal Cord Injury, Pediatrics		
MetroHealth Medical Center	143	Level 1	Spinal Cord Injury	X	Adults, Pediatrics, Burn
Miami Valley Hospital	39	Level 1	Brain Injury, Spinal Cord Injury	X	Brain Injury, Spinal Cord, Adults
Mt. Carmel West	24	Level 2		X	Stroke, Adults
Nationwide Children's Hospital	12	Level 1	Brain Injury, Spinal Cord Injury, Pediatrics	X	Pediatrics
Parma Community General Hospital	33		Brain Injury, Spinal Cord Injury	X	Stroke, Adults
ProMedica Flower Hospital	45	Level 3	Brain Injury, Spinal Cord Injury		
Ralph & Alice Walcher Rehab. Center	†				
Rehab Hospital at Heather Hill	56				
Riverside Methodist Hospital	†			X	Stroke, Adults
Robinson Memorial Hospital	16	Level 3	Brain Injury, Spinal Cord Injury, Pediatrics		
Southern Ohio Medical Center	20		Brain Injury, Spinal Cord Injury, Pediatrics	X	Stroke, Adults
Southwest General Health Center	20	Level 3	Brain Injury, Spinal Cord Injury		
Springfield Regional Medical Center	12		Pediatrics		
St. Elizabeth Health Center	30	Level 1	Brain Injury, Spinal Cord Injury	X	Stroke, Adults, Pediatrics
St. Luke's Hospital	22				
St. Rita's Medical Center	22		Head Injury, Spinal Cord Injury	X	Stroke, Adults, Pediatrics
Summa Akron City Hospital	15	Level 1	Stroke		
Summa Barberton Hospital	26				
Summa St. Thomas Hospital	20				
Summa Wadsworth-Rittman Hospital	14				

Hospital Name	Number of Rehab Beds	Trauma Center Level	Specialty Area Per Website	CARF Accredited**	CARF Specialty Program
The Christ Hospital	36		Stroke	X	Stroke, Adults
The Ohio State University Hospitals (Wexner Medical Center)	72	Level 1	Brain Injury, Spinal Cord Injury	X	Brain Injury, Spinal Cord, Stroke, Adults, Pediatrics
Trinity Medical Center East	20				
University Hospitals of Cleveland	26	Level 1	Pediatrics		
University of Toledo Medical Center	36	Level 1	Brain Injury, Spinal Cord Injury	X	Brain Injury, Spinal Cord, Stroke, Adults, Pediatrics
Upper Valley Medical Center	11		Brain Injury, Spinal Cord Injury	X	Adults
Wooster Community Hospital	10		Brain Injury, Spinal Cord Injury	X	Adults

*Source: Ohio Department of Health, accessed 6/25/12

** Source: CARF International website, provider search: www.carf.org

‡ Data not available

Question 2: Describe how existing trauma system policies and procedures appropriately address treatment guidelines for rehabilitation in acute and rehabilitation facilities.

The Ohio trauma system policies and procedures do not address treatment guidelines for rehabilitation in acute and rehabilitation facilities.

Question 3: Identify the minimum requirements and qualifications that rehabilitation centers have established for the physician leaders (for example, medical director or SCI program, medical director of TBI program, and medical director of rehabilitation program).

OAC §3701-83-29, Personnel and Staffing Requirements – Inpatient Rehabilitation Facilities, requires that the medical director of an inpatient rehabilitation facility shall be a physician who has appropriate experience and training to provide rehabilitation physician services, as demonstrated by at least one of the following:

- Certification as a physiatrist by the American Board of Physical Medicine and Rehabilitation or the American Osteopathic Board of Rehabilitation Medicine;
- Formal residency in physical medicine and rehabilitation;
- Fellowship in rehabilitation for at least one year; or
- At least two years of experience in providing inpatient rehabilitation services.

Questions 4: Describe how rehabilitation specialists are integrated into trauma system planning and advisory groups.

Rehabilitation specialists are integrated into trauma system planning in a variety of ways. The composition of the Ohio Trauma Committee, as set forth in ORC §4765.04, requires that a physician who is certified by the American Board of Physical Medicine and Rehabilitation or American Osteopathic Board of Rehabilitation Medicine and actively provides rehabilitation care to trauma victims have an Ohio Trauma Committee seat. The current representative has been a member since 2000.

For many years, actions related to rehabilitation were not a focus of the Ohio Trauma Committee due to statutory authority limitations. However, with the development and implementation of Goal 6 of the *Ohio Trauma Framework: 2010* titled Definitive Care – Rehabilitation, a workgroup was recently established to address rehabilitation related issues that exist in the current trauma system. The Ohio Trauma Committee rehabilitation representative has assumed leadership of Workgroup 6 and has recruited assistance from experts in the field, including 2 physiatrists, a trauma surgeon, a PhD sociologist, rehabilitation coordinator/occupational therapist, data coordinator, patient advocate, city engineer, 2 nurses, and a trauma data manager for a pediatric and adult rehabilitation center. Initiation of this workgroup was in the summer 2012, therefore purpose, responsibilities and goals of the workgroup are in the early stages of development. At this time, it is unclear if statutory authority will allow rehabilitative actions to be implemented.

Lastly, the Trauma / EMS Grant Program Fourth Priority provide dedicated funds for rehabilitation research projects. The ORC §4765.07 states that “priority shall be given to entities that research, test, and evaluate procedures that promote rehabilitation, retraining, and reemployment of adult and pediatric trauma victims and social service support mechanisms for adult and pediatric trauma victims and their families.” Four rehabilitation research projects have been funded since 2009 and are as follows:

- Predictors of participation by children in life situations following traumatic Injury (Ohio State University Research Foundation, 2009)
- Teen-Online Problem Solving for Adolescent Brain Injury (Cincinnati Children’s Hospital, 2009)
- The Neural Substrates of Executive Function Skills following Adolescent TBI (Cincinnati Children’s Hospital 2009)
- Trauma and Rehabilitation Registry Merge (MetroHealth, 2012)

Most recently, [one study](#) was conducted to identify variables from the Trauma Registry that impact long-term outcomes for persons with traumatic injuries.

Additional Requested Information:

Listed below is a report that outlines the proportion of patients with SCI, TBI.

Spinal Cord Injuries						
Discharge Disposition	2007	2008	2009	2010	2011	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
AMA	0	0	2	3	0	5
ECF/NH/SNF	56	73	70	72	111	382
Home	131	114	81	127	133	586
Home w/ health care	5	6	2	6	6	25
Jail or Prison	1	1	1	0	1	4

Morgue	64	70	66	47	58	305
Ohio hospital	14	11	5	11	6	47
Other	19	61	92	49	20	241
Out of state hospital	1	1	0	1	1	4
Rehab	163 (35.9)	153 (31.2)	133 (29.4)	129 (28.9)	164 (32.8)	742 (31.7)
Total	454	490	452	445	500	2,341

Traumatic Brain Injuries						
Discharge Disposition	2007	2008	2009	2010	2011	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
AMA	45	51	41	40	46	223
ECF/NH/SNF	1,211	1,224	1,228	1,424	1,776	6,863
Home	4,813	4,368	3,776	4,360	4,581	21,898
Home w/ health care	111	131	127	130	209	708
Jail or Prison	37	33	30	38	42	180
Morgue	779	798	749	744	773	3,843
Ohio hospital	129	148	92	83	97	549
Other	448	1,511	2,359	1,086	425	5,829
Out of state hospital	6	5	10	2	5	28
Rehab	865 (10.2)	767 (8.5)	627 (6.9)	726 (8.4)	776 (8.9)	3761 (8.6)
Total	8,444	9,036	9,039	8,633	8,730	43,882

ISS =>15 and age <=12						
Discharge Disposition	2007	2008	2009	2010	2011	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
ECF/NH/SNF	1	2	0	2	3	8
Home	275	119	105	131	149	779
Home w/ health care	3	0	1	2	1	7
Morgue	37	59	61	71	65	293
Ohio hospital	5	9	5	2	4	25
Other	17	46	69	29	18	179
Out of state hospital	2	0	2	0	0	4
Rehab	19 (5.3)	36 (13.3)	19 (7.3)	28 (10.6)	43 (15.2)	145 (10.1)
Total	359	271	262	265	283	1,440

ISS =>15 and age >=13						
Discharge Disposition	2007	2008	2009	2010	2011	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
AMA	13	9	17	14	27	80
ECF/NH/SNF	944	703	768	861	1,056	4,332
Home	2,441	1,324	1,274	1,399	1,645	8,083
Home w/ health care	89	111	89	90	148	527
Jail or Prison	20	13	11	11	26	81

Morgue	923	872	881	841	929	4,446
Ohio hospital	92	89	52	66	78	377
Other	257	604	953	608	223	2,645
Out of state hospital	4	8	3	1	5	21
Rehab	887 (15.6)	648 (14.8)	541 (11.8)	608 (13.5)	713 (14.7)	3397 (14.2)
Total	5,670	4,381	4,589	4,499	4,850	23,989

*Data Source: Ohio Trauma Registry. Only includes patients with an admission of greater than 48 hours.

Emergency Preparedness

Benchmark 104: An assessment of the trauma system's emergency preparedness has been completed, including coordination with the public health agency, EMS system, and the emergency management agency.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-104.1) = There is a resource assessment of the trauma system's ability to expand its capacity to respond to mass casualty incidents (MCIs) in an all-hazards approach.	4	N
(I-104.2) = There has been a consultation by external experts to assist in identifying current status and needs of the trauma system to be able to respond to MCIs.	3	N
(I-104.3) = The trauma system has completed a gap analysis based on the resource assessment for trauma emergency preparedness.	1	N

Benchmark 305: The lead agency ensures that its trauma system plan is integrated with, and complementary to, the comprehensive mass casualty plan for natural and manmade incidents, including an all-hazards approach to planning and operations.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-305.1) = The EMS, the trauma system, and the all-hazards medical response system have operational trauma and all-hazards response plans and have established an ongoing cooperative working relationship to ensure trauma system readiness to all-hazards events.	3	Y Goal 3
(I-305.2) = All-hazards events routinely include situations involving natural (e.g., earthquake), unintentional (e.g., school bus crash) and intentional (e.g., terrorist explosion) trauma-producing events that test the expanded response capabilities and surge capacity of the trauma systems	2	Y Goal 3
(I-305.3) = The trauma system, through the lead agency, has access to additional equipment, materials, and personnel for large-scale traumatic events. (Note: The lead agency will work with other appropriate national, state, regional, and local agencies to secure these additional resources.)	2	Y Goal 3

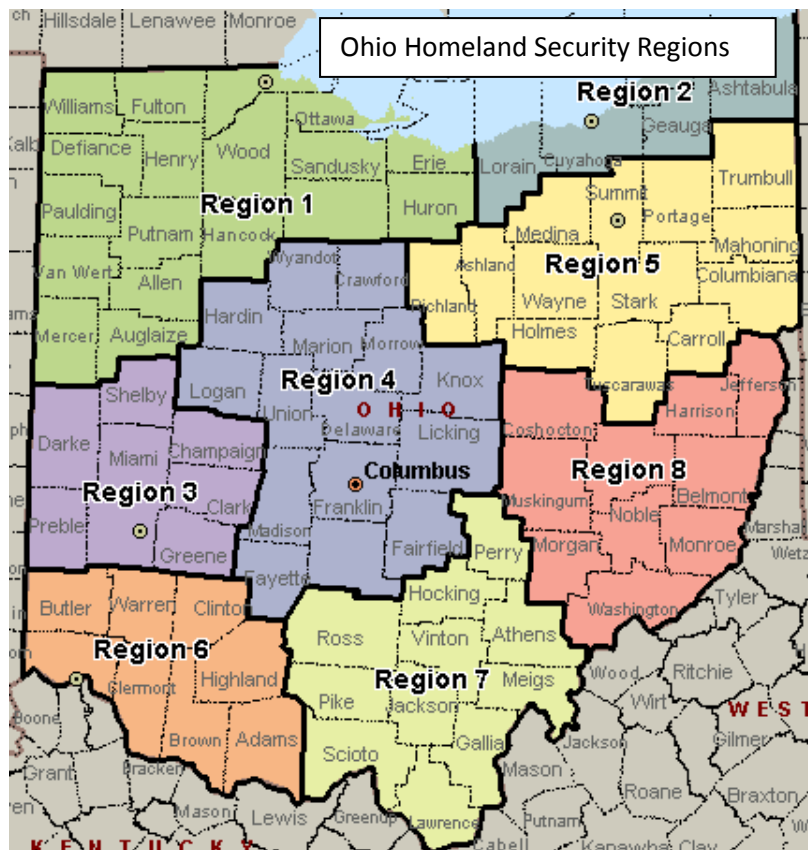
Emergency Preparedness

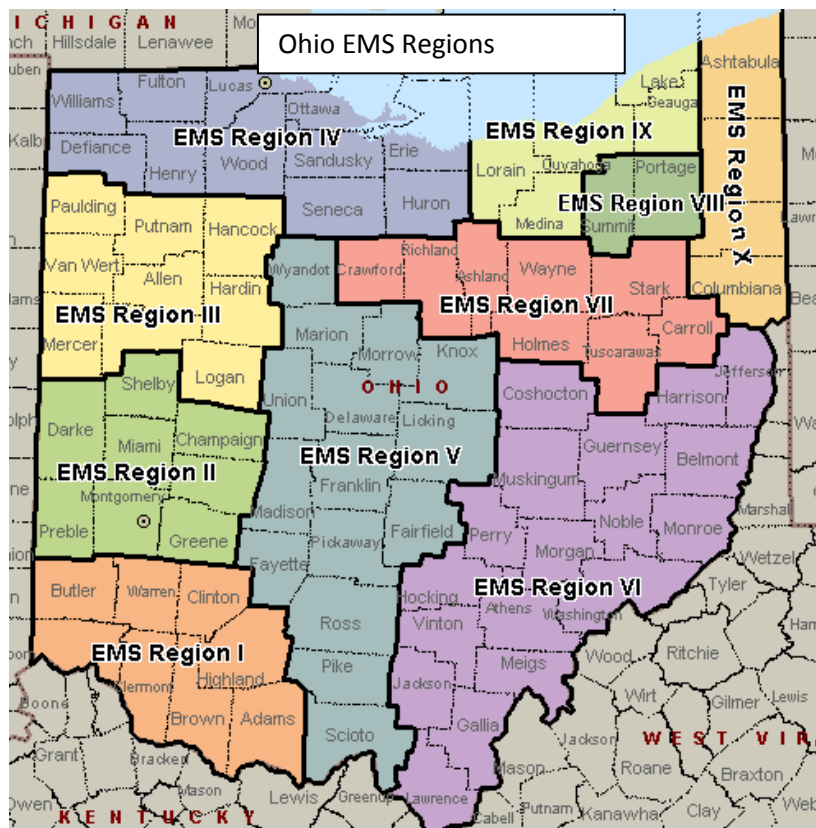
Pertinent history:

The Ohio Emergency Operations Plan ([Ohio EOP](#)) establishes a framework through which state agencies and other designated non-state agencies assist local communities to respond and recover from any type of disaster that affects the health, safety or welfare of the citizens of the state as mandated in ORC § 5502.22. Ohio EOP follows the Emergency Support Function structure as outlined in the U.S. Department of Homeland Security's National Response Framework (NRF) and incorporates the National Incident Management System (NIMS), which includes the Incident Command System (ICS).

The coordinating body for the Ohio EOP falls under the auspices of the Ohio Emergency Management Agency (EMA). Established under ORC § 5502.22, the Ohio EMA coordinates state-level assistance and resources during an emergency and prepares the state for all hazards through planning, training, exercises and funding activities at the state and local level. These activities include providing planning assistance and administering state and federal funding/grant assistance to individuals and governmental entities recovering from disaster damage and costs. The Executive Director of the Ohio EMA is responsible for all the coordinating activities.

The State is divided into 8 Homeland Security Planning regions that are not congruent with the 10 EMS regions.





A motion to adopt / change the EMS regions to align with Homeland Security Planning regions was approved by the EMS Board in February 2012. A workgroup was established, met several times but has not yet provided input back to the EMS Board. Each Homeland Security Planning region has a coordinator to collaborate with the county EMA, public health agencies and all hospitals in planning for events and the response. All events are handled on a local level initially; the state will not intervene unless requested by the local jurisdictions. Regional activity is variable, several regions had intact infrastructure for disaster coordination prior to the 2003 Health Resources and Services Administration (HRSA) grants. After 2003, Homeland Security Planning regions without an established infrastructure were required to participate in regional planning and writing of regional response plans. Within these regions, instead of a regional coordinator (independent of hospitals) a hospital incident liaison (HIL), hospital based employee acts as the coordinating center for the region.

The Ohio EOP is structured according to the Emergency Support Functions (ESF) that corresponds to the format of the NRF. In Ohio, the ESF is the primary mechanism through which Federal assistance to the state and state assistance to local governments is managed during emergencies. The ESFs detail the roles and responsibilities of state, federal and other public and private agencies that are charged with carrying-out functional missions to assist local jurisdictions in response to disasters.

Public Health and Medical Services fall under ESF-8, which addresses public health and medical services concerns during emergency events or incidents. The Ohio Department of Health (ODH) is the primary agency for ESF-8.

Upon request, the EMA could not provide a written organizational chart for Emergency Preparedness in the State of Ohio.

Question 1: When was the last assessment of trauma system preparedness resources conducted, and what were the significant findings of the assessment as they relate to emergency preparedness?

The last statewide formal assessment was conducted in 2008 by the Ohio Hospital Association through the regional coordinators. Since that assessment, annual Hazard Vulnerability Assessments (HVA) have been conducted on a regional level. At that level, all annual HVAs are collected so as to create a Regional Healthcare HVA. The results of the HVA are to identify gaps that may exist in planning and guide funding decisions. Each region has a plan in place to track resources annually and report findings to the state. Needs identified by individual hospitals are sent to the Regional Healthcare Coordinator (RHC) to request funding for the regional assets through the ODH. Federal grant funds over the last nine years have allowed the purchase of some but not all requested regional resources and gaps remain.

EMS works with the Homeland Security Planning Regions and participates in drills and exercises with local hospitals. This is done through the local emergency planning committee and run out of each county EMA. The regional coordinators assist in exercise coordination and the allocation of needed assets.

Question 2: What actions were taken to remediate or mitigate the gaps identified through tabletop or simulated responses in disaster drills among the acute care facilities participating in the system?

The ODH has contracted in the past through the Ohio Hospital Association (OHA) for large items that were identified as gaps statewide. Otherwise, the needs are assessed and addressed on a regional level. There is no state-wide algorithm of how to mitigate gaps.

Every exercise conducted by regions is conducted in Homeland Security Exercise and Evaluation Program (HSEEP) format which calls for an after action report and a corrective action plan. Hospitals and the region are responsible for addressing the corrective action plan items before they move forward with another exercise.

Through drills and/or tabletop exercises it was noted that HILs were utilizing caches for their own hospitals first. To mitigate this problem, the #2 priority for the 2013 fiscal year is to create a regional hospital coordinating center and formalize the coordination process in the regions without the infrastructure. In some regions the coordinating center is the regional hospital association. To date there is one region left to formalize the coordination process.

Question 3: What is the trauma system plan to accommodate a need for a surge in personnel, equipment, and supplies?

The hospitals in each of the regions have signed and are part of a Memorandum of Understanding (MOU) to share resources such as personnel, equipment and supplies during an emergency. Regional coordinators or HILs will generally assist the hospitals in facilitating this agreement by contacting the other hospitals in the region or the state for assets needed during an emergency. In so doing, they free the hospitals to concentrate on internal events. Agreements are being sought to move staff and equipment as needed to another facility not affected by the event. There is also a statewide agreement among many hospitals regarding specialized care such as pediatrics, burns, and trauma. Lastly, some

regions have robust regional caches to supplement needs during an event. A MOU exists between regions to share assets; however, unmet needs are funneled to the state for further review and action.

Question 4: How is the trauma system integrated into the state's incident command system and the communications center?

Hospitals in the state are asked to utilize a formalized hospital incident command system (HICS). HICS is the preferred system throughout Ohio. Hospitals have a web-based system throughout the state entitled SurgeNet. In the event of a local mass casualty incident (LMCI) – affected hospitals identify: (1) their emergency department's current capability of acceptance of caring for red, yellow, or green level patients; (2) whether an operating room is available in 30 minutes; and, (3) whether decontamination is available. Further, a hospital may enter inpatient bed capability based on the National Disaster Medical System (NDMS) 7 categories. Each hospital reports how many beds it can provide immediately (e.g., in case of a hospital evacuation), or can provide in 24, 48, or 72 hours based on the request. All regions in Ohio have SurgeNet capability for NDMS, but not all have LMCI capability. The State Emergency Operations Center (EOC) and the ODH has the capability to view this information for situational awareness and reporting.

If an incident is occurring in multiple regions, the regional coordinator or HIL has the ability to obtain resources through the state EOC EFS-8 desk.

Question 5: What strategies and mechanisms are in place to ensure adequate inter-hospital communication during an MCI?

The Ohio Office of Information Technology implemented the Multi-Agency Radio Communications Systems (MARCS), the 800 MHz radio system to provide communication statewide. The Ohio Emergency Management Agency has a redundancy for the MARCS with a deployable Transportable Communications System (TCS) which can be used to patch UHF and VHF. Hospitals have various modalities to communicate with the EMS community whether it is via radio or cell phone.

Although the MARCS and TCS are in every hospital for statewide use, each region has their own system to best communicate with the hospitals in that region. The Ohio Public Health Communication System can be utilized to advise all users at one time throughout the state that an incident has occurred. Requests, such as performing a bed counts, can be placed simultaneously with all users; whereas, with the MARCS radio each hospital would have to be called individually. In regions with pre-existing systems the MARCS is utilized as a redundant system.

There are gaps in the methods utilized by the state to communicate on a large scale. Keeping users up-to-date and reaching all potential users will always present challenges. Since MCI's are typically local or regional and not statewide, most regional systems have a previously established method for inter-hospital communications.

System-wide Evaluation and Quality Assurance

Benchmark 301: The trauma management information system (MIS) is used to facilitate ongoing assessment and assurance of system performance and outcomes and provides a basis for continuously improving the trauma system, including a cost-benefit analysis.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-301.1) = The lead trauma authority ensures that each member hospital of the trauma system collects and uses patient data, as well as provider data, to assess system performance and to improve quality of care. Assessment data are routinely submitted to the lead trauma authority.	3	N

Benchmark 304: The jurisdictional lead agency, in cooperation with other agencies and organizations, uses analytical tools to monitor the performance of population-based prevention and trauma care services.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-304.1) = The lead agency, along with partner organizations, prepared annual reports on the status of injury prevention and trauma care in state, regional, or local areas. Note: Annual reports may be distributed electronically rather than, or in addition to, printed copies.	1	Y Goal 1
(I-304.2) = The trauma MIS database is available for routine public health surveillance. There is concurrent access to the databases (ED, trauma, prehospital medical examiner, public health epidemiology) for the purpose of routine surveillance and monitoring of health status that occurs regularly and is a shared responsibility.	2	Y Goal 8

Benchmark 309: The financial aspects of the trauma systems are integrated into the overall performance improvement system to ensure ongoing fine-tuning and cost-effectiveness.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-309.4) = Financial data are combined with other cost, outcome, or surrogate measures, for example, years of potential life (YPLL), quality-adjusted life years (QALY), and disability-adjusted life years (DALY); length of stay, length of ICU stay, number of ventilator days; and others, to estimate and track true system costs and cost-benefits.	1	Y Goal 7

System-wide Evaluation and Quality Assurance

Pertinent History:

Ohio's trauma system has struggled to implement a system-wide evaluation and quality assurance program. A first attempt at developing a state performance improvement system for trauma was in July 2003. Summary is as follows:

- July 2003: Chair of Ohio Trauma Committee organized a State Trauma Performance Improvement (PI) workgroup;
- March 2004: List of indicators approved;
- May 2004: Statewide PI plan submitted to and approved by EMS Board;
- October 2004: Quarterly PI report draft presented to and approved by Ohio Trauma Committee;
- May 2005: EMS Board approved the format of the Quarterly PI report;
- September 2005: Discussion that the Ohio Trauma Committee's role was narrowly defined in Ohio Revised Code and that EMS Board /ODPS administration discourage trauma committee activities outside the scope of statutory authority of the EMS Board and the EMS Division;
- July 2006: Lack of hospital compliance for data submission noted to be hindering data for PI;
- January 2007: PI committee placed on hold.

In April 2012, in accordance with the *Ohio EMS 2015 Strategic Plan* and the *Ohio Trauma Framework 2010* (Trauma Goal # 7, pg. 28), a state Trauma Performance Improvement (PI) workgroup was re-established. The workgroup is tasked with developing and implementing a state Trauma PI system for injured patients in Ohio.

Question 1: What is the membership of the committee charged with ongoing monitoring and evaluating of the trauma system?

Membership of the committee is in the developmental stage.

a. To whom does it report its finding?

The chair of the Trauma PI workgroup is a member of the Ohio Trauma Committee and is scheduled to present a report of the Trauma PI workgroup's progress at each Ohio Trauma Committee meeting. A scorecard has been developed for each goal to depict progress on specific actions. The tentative plan is to update the scorecard after each meeting and to post it on the Ohio Department of Public Safety (ODPS) website along with committee minutes. As this PI committee is just developing, the exact structure for a state PI system has not been established. At time of writing, no reports have been generated.

b. How does it decide what parameters to monitor?

The Trauma PI Committee (Workgroup #7) is to identify, select and prioritize areas of interest. The committee is currently working on which areas within the scorecard will be addressed first. At the time of this writing, it is believed that transfer times and issues related to that topic will be the first priority for the PI committee.

c. What action is it empowered to take to improve trauma care?

Currently, the PI committee is empowered only to make recommendations to the Ohio Trauma Committee and EMS Board. While no agency has statutory authority over the hospital or rehabilitation components of the trauma system, data from the EMSIRS and OTR are to be used, within the confidentiality parameters established in the ORC (ORC §4765.06(C)), for research and for generating reports which highlight areas for needed improvement (OAC §4765-4-02).

Question 2: Describe the trauma system performance improvement efforts as they pertain to the system for the following groups of providers in the context of system integration:

a. Dispatch centers

To date, the Ohio Trauma Committee and EMS Board have not participated in any trauma system performance measures related to dispatch centers.

b. Pre-hospital provider agencies

The EMS Board is involved in pre-hospital performance improvement which is separate from the Ohio Trauma Committee. By statutory authority, each EMS organization is responsible to implement ongoing peer review and quality assurance programs designed to improve the availability and quality for the EMS services that it provides (ORC §4765.12). This performance information is kept confidential within the EMS organization, not monitored or evaluated outside the realm of the individual EMS agency. It is unknown if EMS PI issues are included in regional PI activities. There is no mandate to report any PI information back to the EMS Board nor is there an oversight process to ensure that PI is done.

c. Trauma centers

Currently, there is no statewide trauma PI. Trauma PI for verified trauma centers lies within the purview of ACS verification/re-verification.

Regional trauma systems have varied involvement in PI. The Southeast Ohio Regional Trauma System (SORTS) conducts a regional review of selected patients within the Dayton region. The Tri-State Trauma Coalition (TSTC) has a committee that is beginning to review regional data for opportunities for improvement. The Central Ohio Trauma System (COTS) is currently in the process of revising their regional PI program with a part-time staff person dedicated to regional PI development.

d. Other acute care and specialty facilities

To date, the Ohio Trauma Committee has not participated in any trauma system performance measures related to other acute care and specialty facilities. Barriers exist such as lack of probabilistic linkage between EMSIRS and OTR data and actual system to implement change outside of the verified trauma centers.

e. Rehabilitation centers

To date, the Ohio Trauma Committee has not analyzed any trauma system performance measures related to rehabilitation centers.

Questions 3: List the process and patient outcome measures that are tracked at the trauma system level, including measures for special populations

In 2010, the Trauma Visionary Committee (TVC) developed a [metrics scorecard](#) format, which was approved by the EMS Board in December 2011. The prime objective of an Ohio Metrics Scorecard is to evaluate the overall effectiveness of the trauma system and to facilitate future evolution of Ohio's trauma system. Consensus was obtained by the TVC members that the following elements were considered the essential parameters of a scorecard for system evaluation:

- Data is easily ascertained by either registry data or survey;
- Data is objective, reliable and sensitive to variation;
- Data is evaluative of system;
- Outcome results should be of Interest among public and policy makers;

The concept of this scorecard is to identify areas of largest need so that additional analysis can be performed, specific remedial actions instituted and re-measurement undertaken. To date, no Ohio Metric Scorecard reports, using Ohio Trauma Registry (OTR) data, have been generated. Limitations of the trauma registry, such as limited inclusion criteria, inability to probabilistically link databases, and non-compliance of reporting continue as issues that have hindered progress on utilization of this evaluation tool.

No specific measures for special populations were incorporated into the Ohio Metric Scorecard.

Question 4: As part of your system-wide performance improvement, specify whether each of the following is assessed on a regular basis:

- a. Time from arrival to a center and ultimate discharge to a facility capable of providing definitive care. If yes, specify the mean time to transfer**

Not assessed at this time.

- b. Proportion of patients with injury more severe than a predefined injury severity threshold (for example, ISS > 15, or other criteria) who receive definitive care at a facility other than a Level I or II trauma center (under-triage)**

Not assessed at this time.

- c. Proportion of patients with injury less severe than a predefined injury severity threshold (for example, ISS < 9) who are transferred from any facility to a Level I or II trauma center (over-triage)**

Not assessed at this time.

At time of writing, over-triage and under-triage are impossible to determine with the limitations of the trauma registry. With the purchase and implementation of the new commercial software for the trauma registry, there is hope that probabilistic linkage and reporting of data will occur.

Question 5: Describe how your system addresses problems related to significant over-triage or under-triage, both primary and secondary.

To date, no data related to monitoring of over-triage and under-triage has been generated. SB 138 mandated a review of both these parameters; however, data registry limitations have made this impossible. Parameters to monitor over-triage and under-triage are written in the Ohio Metrics Scorecard.

Trauma Management Information Systems

Benchmark 102: There is an established trauma management information system (MIS) for ongoing injury surveillance and system performance assessment.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-102.1) = There is an established injury surveillance process that can, in part, be used as an MIS performance measure. Trauma system works with EMS and public health to identify special at-risk populations.	4	Y Goal 8
(I-102.2) = Injury surveillance is coordinated with statewide and local community health surveillance.	1	Y Goal 8
(I-102.4) = There is a process to evaluate the quality, timeliness, completeness, and confidentiality of data.	1	Y Goal 8
(I-102.5) = There is an established method of collecting trauma financial data from all health care facilities and trauma agencies, including patient charges and administrative and system costs.	2	Y Goal 8

Benchmark 301: The trauma management information system (MIS) is used to facilitate ongoing assessment and assurance of system performance and outcomes and provides a basis for continuously improving the trauma system ,including a cost-benefit analysis.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-301.1) = The lead trauma agency authority ensures that each member hospital of the trauma system collects and uses patient data, as well as provider data, to assess system performance and to improve quality of care. Assessment data are routinely submitted to the lead trauma authority.	3	N
(I-301.2) = Pre-hospital care providers collect patient care and administrative data for each episode of care and not only provide these data to the hospital, but also have a mechanism to evaluate the data within their own agency including monitoring trends and identifying outliers.	3	N
(I-301.3) = Trauma registry, emergency department, pre-hospital, rehabilitation, and other databases are linked or combined to create a trauma system registry.	3	N
(I-301.4) = The lead agency has available for use the latest computer / technology advances and analytical tools for monitoring injury prevention and control components of the trauma system. There is reporting on the outcome of implemented strategies for injury prevention and control programs within the trauma system.	1	Y Goal 8

Trauma Management Information Systems (MIS)

Pertinent History:

With the passage of Am. Sub Senate Bill 98 of the 119th Ohio General Assembly (1992), the formation of a trauma registry and an emergency medical systems (EMS) incident reporting system within the Ohio Department of Public Safety (ODPS) was established in law (ORC §4765.06). Data collection for the Trauma Acute Care Registry (TACR), a component within the Ohio Trauma Registry (OTR) began in 1999. SB 98 delineated the following data points for collection: 1) information regarding the care of adult and pediatric trauma victims in this state; 2) reporting of adult and pediatric trauma-related deaths; 3) identification of adult and pediatric trauma patients; 4) monitoring of adult and pediatric trauma patient care data; 5) determination of the total amount of uncompensated adult and pediatric trauma care provided annually by each facility that provides care to trauma victims; and, 6) collection of any other information specified by the EMS Board. The Trauma Rehabilitation Registry (TRR), a second component / module incorporated within OTR, began data collection in 2005.

Data collection for the Emergency Medical Services Incident Reporting System (EMSIRS), a separate database from the OTR, began in January 2002. The purpose of this database is the collection of information regarding the delivery of emergency medical services in Ohio and the frequency at which the services are provided. EMS in the state is defined as a service that uses EMTs and paramedics rather than one that transports sick and injured individuals; hence, air medical services do not have a mandatory reporting requirement to this database. Some air medical services voluntarily submit data to the registry.

These three data sources - TACR, TRR and EMSIRS - combine to form the three main components of Trauma MIS in Ohio. A historical perspective (Appendix C, pg. 239) regarding the development of the Trauma MIS since 1999 has been created to show the progression.

The State of Ohio supports other databases that are pertinent to injury. These are housed within other agencies, such as Ohio Department of Health (ODH). The Ohio Hospital Association (OHA) collects hospital discharge data. Agreements exist between state agencies and OHA to share data, but these are not mandated by law.

The Injury Epidemiology section (pg. 9) of the document describes these additional databases, explaining their interaction or lack of interaction with the Trauma MIS. If needed, these databases can be queried and analyzed to provide additional information for a clearer understanding of the injuries within the state.

Question 1: Which agency has oversight of the MIS?

The Office of Research and Analysis (ORA) within the EMS Division and under the direction of the ODPS provides oversight for all three components of the Trauma MIS.

The Trauma Registry Advisory Subcommittee (TRAS) was created by the EMS Board in November 2000 (OAC §4765-4-02) to oversee the operation of TACR and to provide expertise to the ORA staff. TRAS is a subcommittee of the Ohio Trauma Committee, which is under the EMS Board. Composition of TRAS has evolved over the years. Currently, participants include trauma registrars, nurses, physicians, and an epidemiologist providing consistent expertise and direction regarding the TACR component. With the

committee restructuring in 2012, TRAS underwent minimal reorganization (Trauma Goal # 8 Workgroup), but continues to function with the aim of completely supporting the Trauma Registry infrastructure as laid out in the *Ohio Trauma Framework: 2010*.

An Incident Reporting System Advisory Committee (IRSAC) began in April 2002 for the purpose of supporting the EMSIRS dataset. In January 2012, this committee was permanently disbanded, as were all the committees in order to restructure and realign with the new strategic plan. With the committee restructuring, the responsibility of the EMSIRS dataset is now placed under the EMS Systems Committee of the EMS Board. No reports / updates regarding EMSIRS data have been reported at the EMS Board level since the transition of leadership to the EMS Systems Committee in April 2012.

a. Describe the roles and responsibilities of the lead agency in collecting and maintaining the data.

The EMS Board has ultimate responsibility and oversight for all aspects of the Trauma MIS. The Board has delegated these duties to the ORA and charged the EMS Division with maintaining the following data sources:

- TACR – The [Trauma Acute Care Registry](#) is a module of the OTR and houses cause of injury, treatment and outcome information on all seriously injured persons admitted to Ohio hospitals for more than 48 hours. With a 48-hour rule in place (See the answer to Question 3 below for more information regarding updates to the TACR), the TACR averages approximately 38,000 records / year with 78 data elements / patient record.
- TRR – The [Trauma Rehabilitation Registry](#) is a module of the OTR and houses admission and discharge assessment regarding functional impairment of trauma patients sent to inpatient rehabilitation facilities in Ohio. Approximately 1,000 records / year with 36 data elements / patient record are entered into the TRR.
- EMSIRS – The [EMS Incident Reporting System](#) houses information on all emergency runs in Ohio made by emergency medical services personnel. Approximately 1 million records / year are included with 80 data elements / patient record.

Currently there is no mechanism to cross reference or uniquely identify a patient throughout all three of these databases, from time of injury through rehabilitation.

There is no requirement or action regarding integration of the Trauma MIS with other injury related databases in Ohio (synopsis of other databases provided later in this section). One attempt at data integration with Ohio Death Certificates occurred in 2005 when a sample of imported death certificates from the ODH was matched to the OTR. This one-time process was fraught with technical and interpretive difficulties, such that ongoing matching has not been pursued

Trauma Acute Care Registry (TACR)

Decisions on content for the TACR module were developed between the years of 1993-1998. Data collection began in January 1999 for TACR. All health care facilities (i.e. hospitals, nursing facilities licensed or certified, inpatient rehabilitation facilities, ambulatory surgical facilities) that evaluate and /or treat injured individuals are required to submit data to the state (OAC §4765-4-03). Other entities such as the county coroners and other state / public agencies designated by the EMS Board that possess information regarding trauma care are also required to submit to the OTR (OAC §4765-4-03). This means that all trauma centers, in addition to most acute care (non-trauma verified) facilities are required to submit injury data. Facilities are required to submit discharged patient data to the OTR on patients that meet inclusion criteria on a quarterly basis, with [established dates](#) published on the ODPS website. Nursing facilities, ambulatory surgical facilities and coroner's office

have not been held accountable for trauma data submission. TACR inclusion criteria (Version 3: currently utilized and Version 6: most recently approved) are outlined below in Question 3.

Various methods are utilized for data submission to OTR. All trauma centers in the state utilize a commercial trauma registry product to collect data. Any hospital that treats patients which meet the inclusion criteria has the responsibility to electronically provide data to the state. For hospitals within a regional system, the data is submitted to the regional registries (N=6), with subsequent data submission to the OTR by the region. Verified trauma centers not within a region are responsible for direct submission of data to the OTR. Lastly, non-trauma centers not in a region are responsible to electronically submit data via the OPDS web-based system.

In order to prevent upload data errors, a system of logical failing edits is used. A computer-generated report which lists record failures is generated at the time of data submission. Each hospital has the opportunity to correct the issues and re-submit the record with a subsequent upload.

The ORA staff had attended TRAS and are currently attending the Trauma Goal # 8 Workgroup meeting (i.e. trauma registry), where TACR issues are addressed.

Trauma Rehabilitation Registry (TRR)

Decisions on content for the TRR module of the OTR were developed between the years of 2002-2004 by TRAS. Data collection by rehabilitation hospitals began in January 2005 with inclusion criteria outlined below in Question 3. Uploads for this data are included with the TACR data process. An ORA staff member is assigned to TRR for uploads to the OTR, quality checks and other maintenance of this dataset. Submission of data from rehabilitation facilities is on the same quarterly schedule as the TACR.

Emergency Medical Systems Incident Reporting System (EMSIRS)

Content and decisions related to EMSIRS began in 1999 with the decision to collect data on emergency runs only. Additionally, the group decided the National Highway Traffic Safety Administration's (NHTSA) uniform pre-hospital dataset would be used as the template for the Ohio dataset. Data collection for EMSIR-1 began in January 2002. A home-grown ODPS Information Technology section was developed for EMSIRS-1 and EMSIRS-2. As with TACR, two options were available, either an upload system for those agencies with existing applications or a reporting system into which users log into a secure website.

EMSIRS-1 began data collection in January 2002 and continued until December 31, 2012. EMSIRS-2 was originally planned to begin in 2005 but various problems with technology and funding delayed implementation. EMSIRS-2 began accepting data in January 2008, with an overlap period from 2008 through 2012. An ORA staff member is assigned to manage EMSIRS and is responsible for the data upload process. This person was also responsible for leading the Incident Reporting System Advisory Committee (IRSAC), which began in 2002 and was permanently disbanded in January 2012. The responsibility of the EMSIRS dataset now resides within the EMS System Committee of the EMS Board.

b. How are the completeness, timeliness, and quality of the data monitored?

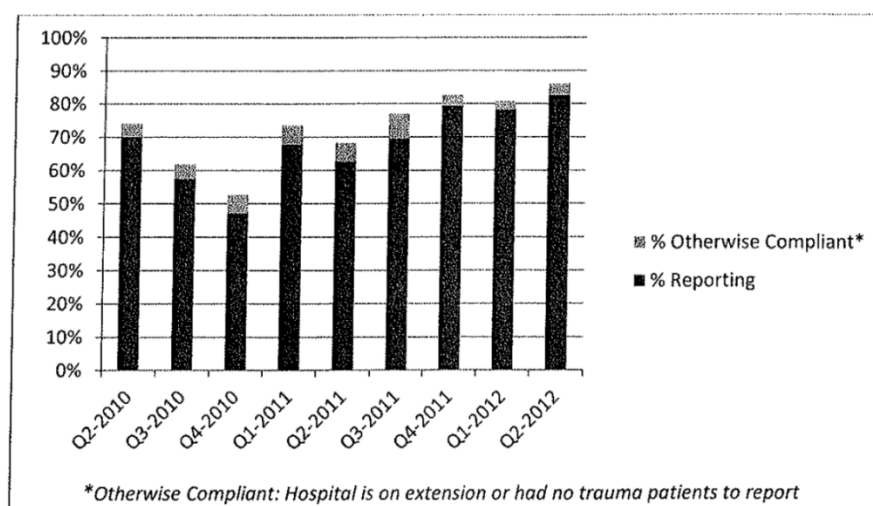
Trauma Acute Care Registry (TACR)

Completeness: The submission process requires that 41 of the 78 TACR data fields (for each patient record) contain data. If the field contains an acceptable “not documented” value, the record passes. For example, there are hospitals in the state which choose to not report complications and have the export set to default a return of “not documented” or “none”. The hospital will receive notification when a specific data field is incomplete. It is then the responsibility of each hospital to correct the data or the case is not included. There is no reported tracking of incomplete submissions. There is no significant penalty for not submitting data in a timely or accurate manner. The only impact to an institution for not contributing data is that the institution is acknowledged at the Ohio Trauma Committee meeting and they are ineligible to access ODPS grant monies. In some recent instances, a letter has been addressed to the CEO of the hospital regarding compliance.

Timeliness: Prior to 2009, no system for monitoring timely submission of data by hospitals to TACR existed. In 2009, two policies were developed by ORA staff to address a regional deficiency ([Procedure for OTR Compliance Determination](#) and [Policy on Notification of Non-Compliance](#); however, these policies were not implemented state-wide. Once it was noted that compliance was not being addressed state-wide (March 2011), the Ohio Trauma Committee requested procedures begin to contact facilities regarding lack of data submission. Currently, if a facility is persistently behind in data submission, the facility must submit a [request for an extension](#) and outline the justification and plan of correction for return to compliance. As of 2011, hospital compliance for timeliness of reporting is reviewed / discussed at Ohio Trauma Committee. The compliance report from November 2012 Ohio Trauma Committee is shown below:

OTR Compliance

Hospital Reporting Compliance



Quality: In 2004, the office of ORA hired a private consultant firm to conduct a validity assessment of the TACR component of the OTR. Money for this project was secured through the Governor's Highway Safety Office to cover the data collection portion. One thousand charts from 28 Ohio hospitals were re-abstracted for specific pre-identified data elements by independent contracted abstractors. To avoid bias, abstractors were not permitted to compare data which had been previously abstracted and submitted to the OTR. As per the contract, all information on the abstracted data from 1,000 charts was submitted to ORA staff by September 2004. The next step in this project was to compare the abstracted data with the TACR data in order to validate quality / accuracy of data. Data comparisons between the two datasets were never completed. Lack of money, lack of time and lack of expertise within the office were cited as reasons. No recommendations have been cited or implemented as a result of this work.

To date, the state has not implemented any cross-check processes for quality and / or accuracy of data being collected / submitted except for the system of failing edits when a "required field" is left blank.

In Ohio, trauma registrars are an integral component for assuring quality of data abstraction and therefore, data submission. The Alliance of Ohio Trauma Registrars (AOTR) is a voluntary organization open to everyone; however, membership is mainly comprised of persons representing verified trauma centers or data managers from regional repositories. These regional representatives technically represent their regional membership which includes verified and non-verified centers. As regional systems are sporadic across the state, not all community hospitals are represented within AOTR. AOTR meetings are held bi-monthly, in Columbus, with the goal of improving consistency in coding and data management. Also included within AOTR meetings are:

- Networking with peers;
- Review of variables within registry;
- Mentoring of new trauma registrars;
- Discussing changes at NTDB which will impact practice;
- Educational offerings.

Trauma Rehabilitation Registry (TRR)

Completeness: There is a system with logical failing edits that is conveyed to the rehabilitation facilities when data is missing. It is the responsibility of each hospital to correct the data or, subsequently, the case is not submitted. If data is not corrected and re-submitted, this could result in an undercounting of information.

Timeliness: It is currently unknown how many rehabilitation facilities should be reporting as the number of rehabilitation facilities in the state is unknown. OTR indicates that eighteen facilities are currently submitting data to the TRR. Compliance for reporting data is not being monitored.

Quality: Other than the logical edits that are returned to the facilities for correction, no other process for assuring the quality of the data has been implemented at the state level.

EMSIRS

Completeness: Logic edits allow monitoring of EMSIRS data for completeness after it is uploaded.

Timeliness: According to the ORA, 778 EMS squads are reporting. It is estimated that 1,094 EMS squads should be reporting; however, the total number is unknown. A report is automatically generated the day after submission which notes the number of runs reported by each reporting EMS agency. This report identifies which EMS agencies have submitted or are behind in the submission process.

Quality: Other than logical edits that are returned to the agencies for correction, no other quality process has been implemented at the state level.

Question 2: Specify which of the following data sources are linked to the information system. Describe the method of linkage (for example, probabilistic or deterministic).

Ohio has struggled for many years with the issue of linking the three data components of the Trauma MIS. Documentation indicates that as early as April 2001 (Ohio Trauma Committee minutes) a unique identifier system or probabilistic linkage is an essential tool required to merge the three components of OTR. This discussion has continued over the years in Ohio Trauma Committee, Trauma Registry Advisory Subcommittee (TRAS) and most recently, within the Trauma Visionary Committee (TVC) in 2011 without resolution.

LinkSolve, a probabilistic software package was purchased by ODPS and noted to be available for OTR usage in May 2004 (Ohio Trauma Committee minutes). LinkSolve training was completed in November 2004 by ODPS staff (Ohio Trauma Committee minutes). In 2005 the ODPS received a NHTSA 408 grant to fund an individual to assist with the probabilistic linkage project and an ICD mapping project (Ohio Trauma Committee minutes May 2005). Despite this funding, LinkSolve has yet to be utilized. To date, probabilistic linkage has not occurred among the three components of the OTR, which makes it impossible to follow a patient from injury to rehabilitation.

Datasets which contain trauma-related data but are housed outside of the OTR exist in the state of Ohio. These datasets are not linked to the OTR. The chart below, derived from the Safe States Alliance 2007 Recommendations for Injury Surveillance in State Health Departments and revised by OIPP in March 2011 outlines core aspects of current Ohio datasets commonly utilized for state injury surveillance. Few linkages between datasets exist.

Core Injuries, Injury Risk Factors, and Data Sets for State Injury Surveillance

Dataset Owner	Safe States Core Data Sets											Other Data Sets			
	Ohio Department of Health				Ohio Hospital Association		NHTSA	Local	Ohio Department of Public Safety			ODJFS		Poison Center Calls	
	Vital Stats.	BRFSS/ YRBS**	Child Fatality Review	EpiCenter (real time ER admitting complaint)	Hospital Discharge Data	ED	FARS	Coroner	EMS	OCJS	OTSO	SACWIS (child welfare)	Medicaid (\$)	Poison Center Data	
Injury/Injury Risk Factor															
Statewide data available?	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y
Falls & Fall-related injuries	X	BRFSS	(X)	(X)	X	(X)		(X)	(X)	(X)				(X)	
Burn															
Fire and burn injuries	X		(X)	(X)	X	(X)		(X)	(X)	(X)				(X)	
Smoke alarm use		BRFSS	(X)												
Firearm injuries	X		(X)	(X)	X	(X)		(X)	(X)	(X)	(X)			(X)	
Violence															
Weapon carrying by youth		YRBS	(X)								(X)				
Homicide	X		(X)		X	(X)		(X)	(X)		(X)		(X)		
Assault			(X)								(X)		(X)	(X)	
Child Maltreatment			(X)									X			
Motor Vehicle Injuries	X		(X)	(X)	X	(X)	(X)	(X)	(X)	(X)		X		(X)	
Alcohol in MV deaths			(X)				(X)	(X)	(X)			(X)			
Self-reported seat belt/ SB use		Both									(X)				
Pedestrian MV injuries	X		(X)	(X)	X	(X)	X	(X)	X	X		X		(X)	
Reported bicycle helmet use/ BH use		BRFSS	(X)									(X)			
Reported child restraint use/ CR use		(BRFSS)	(X)				(X)				(X)	(X)			
Non traffic MV	X		(X)	(X)	X	(X)		(X)	(X)	(X)				(X)	
Poison															
Poisoning/Drug OD	X		(X)	(X)	X	(X)		(X)		(X)				(X)	(X)
Alcohol/other drug use		Both	(X)	(X)				(X)	(X)						(X)
Drowning/near drowning	X		(X)	(X)	X	(X)		(X)	(X)	(X)				(X)	
Suffocation	X		(X)	(X)	X	(X)		(X)	(X)	(X)				(X)	
Suicide															
Suicide	X		(X)	(X)	X	(X)		(X)	(X)						
Suicide attempts		Both			X	(X)								(X)	
Traumatic brain injuries	(X)		(X)	(X)	X	(X)		(X)	(X)					(X)	
Traumatic spinal cord injury	(X)		(X)		(X)	(X)		(X)	(X)					(X)	

Abbreviations: FARS= Fatal Analysis Reporting System data, BRFSS = Behavioral Risk Factor Surveillance System, YRBS= Youth Risk Behavior Survey, OTR = Ohio Trauma Registry, EMSIRS= Emergency Medical Services Incident Reporting System, OPS=Occupant Protection Survey, OIBRS=Ohio Incident Based Reporting System, UCR=Uniform Crime Reporting, SACWIS=Statewide Automated Child Welfare Information System, OTSO=Ohio Traffic Safety Office, OCJS=Office of Criminal Justice Services, ODJFS=Ohio Department of Job and Family Services, Poison Center Data -Rainbow Babies & Children's Hospital, Nationwide Children's Hospital, Cincinnati Children's Hospital Medical Center)

**BRFSS/YRBS should be reviewed annually for inclusion of injury variables

*not considered a Core Data set

() Parenthesis indicates data sets that are considered supplementary

SB=seat belt, BH=bicycle helmet, CR=child restraint

Question 3: What are the regional trauma registry inclusion criteria?

TACR Inclusion Criteria:

The trauma registry inclusion criteria are the first section of the Trauma Data Dictionary. Each regional trauma registry system includes the state criteria as a baseline, but has the option of collecting

additional data points for their own region development. The list below outlines the history of Trauma Data Dictionary timelines regarding major changes in inclusion criteria, content, and dates of approval:

Date	Version	EMS Board Approval	Implemented at state level?	Change to inclusion criteria?	Major points within revision
1998	1	Yes	Yes	NA	Initial version
Jan 2003	2	Yes	Yes	No	Increased clarity within definition(s)
July 2004	3	Yes (January 2005)	Yes (current website version)	Transfer definition clarified	
Nov 2009	4	Never taken to EMS Board	No	No	Consensus with NTDB
Dec 2010	5	Yes	No	Removal of 48-hour criteria; isolated hip fracture definition changed	
Oct 2012	6	Yes	No	None	Minor NTDB changes

Version 6 of the Trauma Data Dictionary, which contains the most recent version of the TACR Inclusion Criteria, was approved for implementation by the EMS Board in October 2012. However, as the state is currently operating under Version 3, the state registry is unable to accept patients with this updated inclusion criteria (i.e. removal of 48-hour rule and revised definition of hip fractures) until a commercial state trauma registry software is purchased and the system is operational.

The following is the TACR Patient Inclusion Criteria (Version 3) that is currently being utilized to determine which patient data is to be submitted to the state OTR:

1. Patient's first or initial admission for at least 48 hours, and who meet one of the following inclusion criteria; OR
2. Patients who transfer into or out of any hospital, regardless of their length of stay, and who meet one of the following inclusion; OR
3. Patients that arrive dead on arrival (DOA) and who meet one of the following inclusion criteria; OR
4. Patients that die after receiving any evaluation or treatment while on hospital premises, and who meet one of the following inclusion criteria:

Inclusion Criteria

ICD-9-CM Diagnosis Codes on discharge from acute care hospital		
ICD-9-CM Diagnosis Codes		ICD-9-CM Diagnoses Descriptions
800.00 – 819.1		Fractures
821.00 – 904.9		Fractures, dislocations/sprains, intracranial injury, internal injury of thorax, abdomen and pelvis, open wounds, injury to blood vessels
911.0, 911.1, 912.0, 912.1		Abrasions/friction burns to trunk, shoulder and upper arm
916.0, 916.1, 919.0, 919.1		Abrasions / friction burns hip, thigh, leg, ankle, other or multiple sites
920 – 929.9		Contusions and crush injury
940.0 – 959.9		Burns, injury to nerves and spinal cord, traumatic complications and unspecified injury
987.9		Smoke inhalation
991.0 – 991.6		Frostbite, hypothermia and external effects of cold
994.0, 994.1, 994.7, 994.8		Asphyxiation, strangulation, drowning, and electrocution
995.50 – 995.59		Child maltreatment and abuse
OR		
ICD-9-CM Diagnoses		E-CODE
348.4	Uncal herniation	AND WITH ANY OF THE FOLLOWING External Cause Codes (E-Codes)
348.5	Cerebral Edema	
348.8	Pneumocephalus	
372.72	Subconjunctival hemorrhage	
518.5	Traumatic ARDS	
784.7	Epistaxis	
		E800 – E848.8 E878 – E905.0 E906.0 – E928.8 E950.0 – E998.9

Codes separated by a hyphen indicate a range of codes including both codes AND all codes in between. Example 800.0 – 801.5
 Codes separated by a comma indicate a single code. Example 901.1, 901.2, 901.8

ICD-9-CM Diagnoses Codes EXCLUDED	
820.0 – 820.9	Isolated hip fracture
905 – 909	Late effects of injury
910.0 – 910.9, 911.2 – 911.7, 912.2 – 912.9, 913.0 – 913.9, 914.0 – 914.9, 915.0 – 915.9, 916.2 – 916.9, 917.0 – 917.9, 918.0 – 918.9, 919.2 – 919.9	Superficial Abrasions, blisters, insect bites
930 – 939	Foreign bodies
External Cause Codes EXCLUDED	
E849 – E849.9	Place of occurrence
E850 – E869.9	Poisonings
E870 – E879.9	Misadventures during surgical and medical care
E905.1 – E905.9	Venomous animals and plants (except snakes)
E929 – E929.9	Late effects of Accidental Injury
E930 – E949	Drugs, medicinal and biological substances causing adverse effects in therapeutic use

Effective Date July 1, 2004

Multiple issues exist which have resulted in the OTR continuing to use the Version 3 (2004) Inclusion Criteria. The OTR inclusion criteria of 48-hours hospital admission, which has been in place since the inception of the registry and unique to Ohio, has hindered the ability to comprehensively evaluate over and under-triage. This has been a topic of discussion within the Ohio Trauma Committee for many years. In the fall of 2005, an ORA project was attempted, specifically to evaluate removal of the 48-hour rule. This issue continued to languish in open discussions until November 2009, when the Ohio Trauma Committee approved a recommendation by TRAS, to remove the 48-hour rule. This action would allow

data from all injured Ohioans to be submitted to the OTR, thus making it a more comprehensive representation of injury in Ohio.

The request was submitted to the ORA, within ODPS in November 2009. Since the OTR is a home grown data collection system, ODPS Information Technology staff is required for any technical changes or upgrades to the system. The program changes were never implemented on the state homegrown dataset due to the lack of funding for programmer work. Staff of the ORA began the process of pursuing a commercial software package for the OTR in December 2010. It was announced in December 2012 that ODPS purchased a commercial software package. Allowances to disregard data submission deadline for 2013 have been instituted until this new state commercial software is implemented and functioning. At that time, the following Inclusion Criteria (Version 6) listed below will be utilized.

PATIENT INCLUSION CRITERIA (Version 6)

To be included in the Trauma Acute Care Registry (TACR),

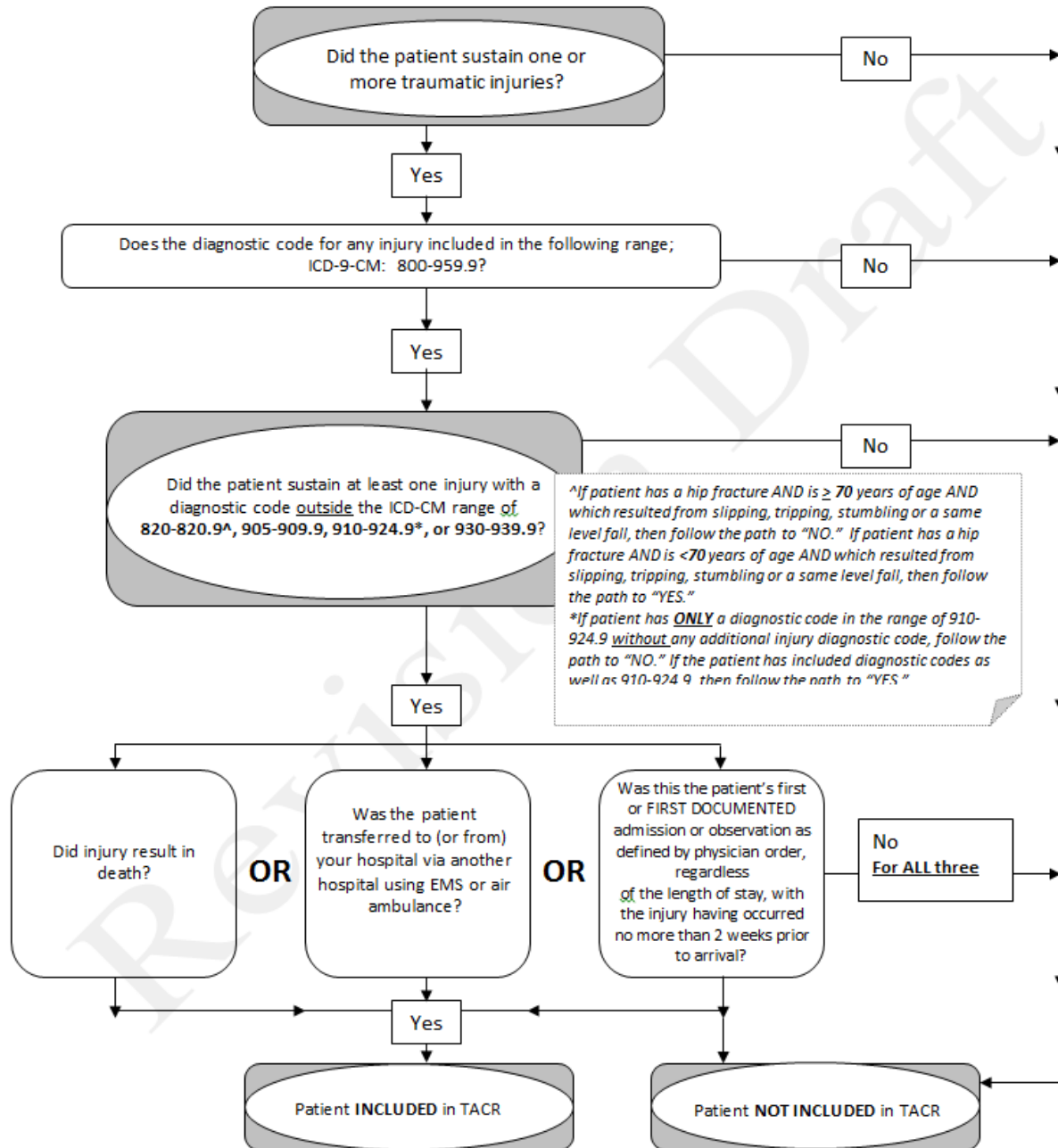
1. The patient must incur at least one of the injury diagnostic codes defined in the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) in the range of 800 – 959.9, 987.9, 991.0-991.6, 994.0, 994.1, 994.7, 994.8, 995.50 - 995.59.
2. The patient **MUST ALSO**:
 - Be admitted for the first time to a hospital or hospital observation unit as defined by a physician order regardless of the length of stay, with the injury having occurred no more than two (2) weeks prior to arrival; **AND/OR**
 - Be transferred via EMS transport (including air ambulance) from one hospital to another hospital regardless of the patient's hospital length of stay; **AND/OR**
 - Have an outcome of death resulting from the traumatic injury (independent of hospital admission or hospital transfer status).

PATIENT EXCLUSION CRITERIA (Version 6)

Patients with the following isolated ICD-9-CM codes are **EXCLUDED** from the TACR:

- **820.0-820.9, isolated** hip fracture in patients **≥ 70 years of age AND** which result from slipping, tripping, stumbling or a same level fall;
- **905-909.9**, late effects of injury;
- **910-924.9**, superficial injuries, including blisters, contusions, abrasions and insect bites (but exclude 910-924.9 if that is the **ONLY** injury identified. Patients who have an injury within the Inclusion ICD-9-CM range as well as a 910-924.9 injury, **WOULD** be included in the registry.); **AND/OR**
- **930-939.9**, foreign bodies.

Ohio Trauma Acute Care Registry Inclusion/Exclusion Criteria



With unknown timeframe for the state to move forward in making changes to the OTR, Trauma Goal # 8 Workgroup members (formally TRAS) who participate in regional registries, decided to move forward with implementing Version 6 Data Dictionary / Inclusion Criteria in January 2013. Hospitals within these regional systems now submit the approved data set (according to Version 6) to the regional trauma registries. Some of the regional registries (i.e. NORTR, NORTN) have already been collecting information on trauma patients within the ranges shown below without a length of stay rule. Export to the state OTR, however, is per the Version 3 Data Dictionary / Inclusion Criteria until the new system is implemented.

TRR Inclusion Criteria:

The TRR module inclusion criteria, implemented in January 2005, are as follow:

Version 1.0 Effective January 1, 2005

Ohio Trauma Registry Inpatient Rehabilitation Facility Patient Inclusion Criteria

Patient's first or initial admission to an inpatient rehabilitation facility who meet one of the following inclusion criteria;

1. Patients whose acute care hospitalization included any of the inclusion criteria; **OR**
2. Patients who have an Impairment Group Code on admission listed in the table on page 4 Inclusion Criteria

ICD-9-CM Diagnosis Codes on discharge from acute care hospital		
ICD-9-CM Diagnosis Codes		ICD-9-CM Diagnoses Descriptions
800.00 – 819.1		Fractures
821.00 – 904.9		Fractures, dislocations/sprains, intracranial injury, internal injury of thorax, abdomen and pelvis, open wounds, injury to blood vessels
911.0, 911.1, 912.0, 912.1		Abrasions/friction burns to trunk, shoulder and upper arm
916.0, 916.1, 919.0, 919.1		Abrasions / friction burns hip, thigh, leg, ankle, other or multiple sites
920 – 929.9		Contusions and crush injury
940.0 – 959.9		Burns, injury to nerves and spinal cord, traumatic complications and unspecified injury
987.9		Smoke inhalation
991.0 – 991.6		Frostbite, hypothermia and external effects of cold
994.0, 994.1, 994.7, 994.8		Asphyxiation, strangulation, drowning, and electrocution
995.50 – 995.59		Child maltreatment and abuse
OR		
ICD-9-CM Diagnoses		E-CODE
348.1	Anoxic Brain Injury	E800 – E848.8
348.4	Uncal herniation	E878 – E905.0
348.5,	Cerebral Edema	E906.0 – E928.8
348.8	Pneumocephalus	E950.0 – E998.9
372.72	Subconjunctival hemorrhage	
518.5	Traumatic ARDS	
784.7	Epistaxis	
		AND WITH ANY OF THE FOLLOWING External Cause Codes (E-Codes)

Acute Care Hospitalization ICD-9-CM Diagnoses Codes EXCLUDED	
820.00 – 820.9	Isolated hip fracture
905.0 – 909.9	Late effects of injury
910.0 – 910.9, 911.2 – 911.7, 912.2 – 912.9, 913.0 – 913.9, 914.0 – 914.9, 915.0 – 915.9, 916.2 – 916.9, 917.0 – 917.9, 918.0 – 918.9, 919.2 – 919.9	Blisters, insect bites
930 – 939	Foreign bodies
Acute Care Hospitalization External Cause Codes EXCLUDED	
E849.0 – E849.9	Place of occurrence
E850.0 – E869.9	Poisonings
E870.0 – E879.9	Misadventures during surgical and medical care
E905.1 – E905.9	Venomous animals and plants (except snakes)
E929.0 – E929.9	Late effects of Accidental Injury
E930.0 – E949.9	Drugs, medicinal and biological substances causing adverse effects in therapeutic use

Version 1.0 Effective January 1, 2005

Adult Impairment Group Code on Admission to Rehabilitation Facility			
Brain Dysfunction		Orthopedic Disorders	
02.1	Non-traumatic injury *	08.12	Status Post Bilateral Hip Fractures
* must be associated with an acceptable E-code.		08.2	Status Post Femure (shaft) Fracture
		08.3	Status Post Pelvic Fracture
		08.4	Status Post Major Multiple Fractures
02.21	Traumatic, open injury		
02.22	Traumatic, closed injury		
Spinal Cord Dysfunction, Traumatic			
004.210	Paraplegia, unspecified	Amputation of Limb (trauma related)	
04.211	Paraplegia, incomplete	05.1	Unilateral Upper Limb above the elbow (AE)
04.212	Paraplegia, complete	05.2	Unilateral Upper Limb below the elbow (BE)
04.220	Quadriplegia, Unspecified	05.3	Unilateral Lower Limb above the knee (AK)
04.2211	Quadriplegia, Incomplete C1-4	05.4	Unilateral Lower Limb below the knee (BK)
04.2212	Quadriplegia, Incomplete C5-8	05.5	Bilateral Lower Limb above the knee (AK/AK)
04.2221	Quadriplegia, Complete C1-4	05.6	Bilateral Lower Limb above/below the knee (AK/AK)
04.2222	Quadriplegia, Complete C5-8	05.7	Bilateral Lower Limb below the knee (BK/BK)
04.230	Other Traumatic Spinal Cord Dysfunction	05.9	Other amputation
Major Multiple Trauma		Burns	
14.1	Brain + Spinal Cord Injury	11	Burns
14.2	Brain + Multiple Fracture/Amputation		
14.3	Spinal Cord + Multiple Fracture/amputation		
14.9	Other multiple trauma		

Pediatric Impairment Group Code on Admission to Rehabilitation Facility			
Traumatic Brain Dysfunction		Burns	
2.21	Traumatic, open injury	7.1	Burns
2.22	Traumatic, closed injury		
2.9	Unspecified traumatic brain injury	Orthopedic Disorders	
2.11	Anoxic/Hypoxic Encephalopathy	Orthopedic Conditions	
Traumatic Spinal Cord Dysfunction		5.11	Status Post Unilateral Hip Fracture
4.21	Incomplete Traumatic Paraplegia	5.12	Status Post Femure (shaft) Fracture
4.22	Complete Traumatic Paraplegia	5.13	Status Post Pelvic Fracture
4.23	Unspecified Traumatic Paraplegia	5.14	Status Post Major Multiple Fractures
4.24	Incomplete Traumatic Tetraplegia Quadriplegia, C1-4	Amputation of Limb (trauma related)	
4.25	Incomplete Traumatic Tetraplegia Quadriplegia, C5-8	5.21	Unilateral Upper Extremity above the elbow
4.26	Complete Traumatic Tetraplegia Quadriplegia, C1-4	5.22	Unilateral Upper Extremity below the elbow
4.27	Complete Traumatic Tetraplegia Quadriplegia, C5-8	5.23	Unilateral Lower Extremity above the knee
4.29	Unspecified Traumatic Tetraplegia Quadriplegia	5.24	Unilateral Lower Extremity below the elbow
		5.25	Bilateral Lower Extremity above the knee
Major Multiple Trauma		5.26	Bilateral Lower Ext. above/below the knee
6.1	Brain + Spinal Cord Injury	5.27	Bilateral Lower Extremity below the knee
6.2	Brain + Multiple Fracture/Amputation	5.29	Other amputation
6.3	Spinal Cord + Multiple Fracture/amputation		
6.9	Other multiple trauma		

Question 4: Which stakeholders had a role in selecting the data elements for inclusion in the regional registry?

Stakeholders involved in the initial design of the data elements for inclusion within the OTR included physicians, nurses, registrars, and EMS personnel. Over the past decade, any modifications to the OTR have been the responsibility of the TRAS with the main constituency as physicians, nurses, registrars, epidemiologists, and ORA staff. Currently, all recommendations from Workgroup # 8 (formally) TRAS are forwarded to Ohio Trauma Committee for additional input and then submitted to the EMS Board for final approval and subsequent implementation.

a. From what source(s) were the data field definitions derived?

The initial Data Dictionary for the TACR resulted from the Traumabase[®] data collection guidelines and a minimal listing of data points established in rule (OAC §4765-4-03). Over time, the data dictionary has been modified to incorporate additional variables, updated definitions and to add additional response options. In 2009, the Data Dictionary was updated to be in alignment with the National Trauma Data Bank (NTDB) standards. At that time, several variables, which were not previously required (i.e. including information on trauma team activation, procedures and complications), were added. It is now the responsibility of Workgroup #8 (formally TRAS) to meet yearly and review the updated NTDB requirements and make recommendations, if needed, for data dictionary revisions.

An ad-hoc TRAS subcommittee developed a Rehabilitation Data Dictionary, which included rehabilitation specific inclusion criteria for the data registry and rehabilitation specific field definitions. Information was obtained by benchmarking with other states and obtaining input from rehabilitation experts within the state. The Rehabilitation Data Dictionary was approved in July 2004 by the EMS Board and implemented in January 2005. To date, there has been neither review nor update of the field definitions.

The original definitions for EMSIRS-1 were derived from the 1992 Uniform Pre-hospital Dataset (UPDS) by the Ohio Systems Management Committee from 1999 through 2000. The Systems Management Committee, which later became the Incident Reporting Systems Advisory Committee (IRSAC) in April 2002, updated the dataset for EMSIRS-2. Components and definitions of EMSIRS-2 are aligned with the National EMS Information System (NEMSIS). This EMSIRS-2 revised dataset was approved by the EMS Board in May, 2005 and was incorporated with required reporting in 2008.

b. What pediatric data elements are captured?

Data elements within the OTR are based on the NTDB standards. All variables are required for patients of all ages. The variables that are unique to the pediatric population and included by TRAS agreement are the following:

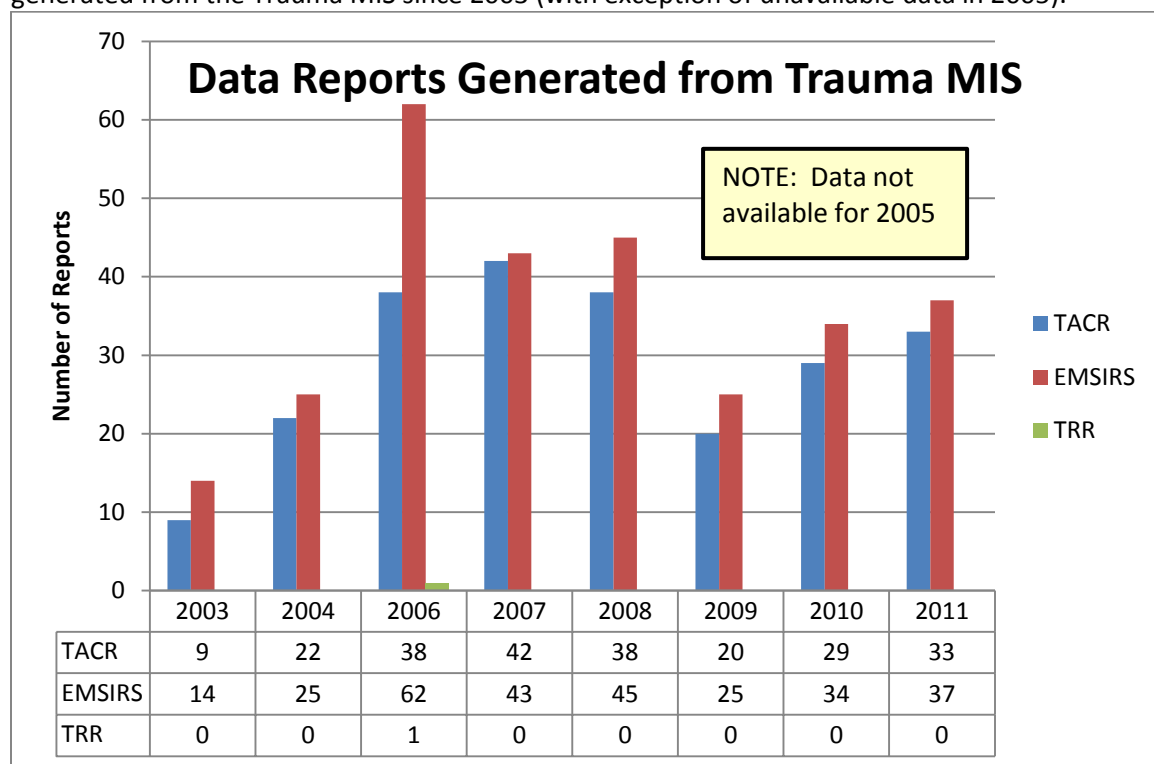
- Passenger safety restraints;
- Pre-existing conditions for children.

Question 5: What local or system-wide reports are routinely generated and at what frequency?

The following volume reports or State Annual Reports (2001-2, 2003, 2009 and 2010) have been posted on the ODPS website:

- TACR
 - 2001 – 2002 Trauma Annual Report
 - 2003 Trauma Annual Report
 - 2009 Trauma Annual Report
 - [2010 Trauma Annual Report](#)
 - Physical Toll of Violence – 2011
 - Biennial Report on Incidence of Traumatic Brain Injury in Ohio: 2007- 2009
- TRR
 - NONE
- EMSIRS:
 - EMS Benchmark 2003
 - EMS Benchmark 2004
 - EMS Benchmark 2005
 - EMS Benchmark 2006
 - EMS Benchmark 2007
 - [EMS Benchmark 2008](#)

No standing reports are developed by the state for the EMS Board, Ohio Trauma Committee, and Trauma Visionary Committee or for regional committees. At this point, no aggregate reports for verified trauma centers are posted or distributed. Most reports tend to be requested on an *ad hoc* basis by individual facilities, regional systems, ODPS staff, etc. Attached is a synopsis of the data reports generated from the Trauma MIS since 2003 (with exception of unavailable data in 2005).



Some regional trauma systems publish annual reports to their regional membership and other interested parties (COTS; NORTR; NORTN, TSTC).

Question 6: Are data contributed to the National Trauma Data Bank (NTDB) or other outside agencies? If so, please specify which agencies?

The OTR, as outlined in statutory law, prohibits non-risk adjusted data to be released. As a result, OTR is unable to submit data to NTDB. Therefore, in Ohio, it is the responsibility of individual hospitals, primarily verified trauma centers, to submit their own non-risk adjusted data to the NTDB on a timely basis. In at least one Ohio region (COTS), the regional registry submits individual hospital data to NTDB.

Opinions vary on the pros and cons of the OTR submitting data to NTDB for Ohio trauma centers. Some facilities would prefer to send their own data as they receive comparison reports directly from the NTDB. It is unclear if these comparison reports would occur if group data was submitted by the state trauma registry. Secondly, as it is an ACS requirement for verification that trauma centers submit their data, facilities can verify their own participation if they take ownership of this process.

The negative aspects of the OTR not submitting directly to NTDB centers on whether or not the state of Ohio will continue to pursue participation in the Trauma Quality Improvement System (TQIP) at the state level or an alternative method of risk adjustment of trauma data. This would require a law change that would permit non-risk adjusted data from the OTR to be sent to the NTDB with the assurance that individual patient information would not be disclosed. The precedent to allow non-risk-adjusted data to be sent to a national data center was accomplished through a change in statutory law regarding the EMSIRS database in July 2012 (ORC §4765.06(G)). Until then, Ohio was one of the few states in the country that did not submit non-risk adjusted EMS data to the NEMSIS data system. The change in law (July 2012) did not extend to trauma data.

Research

Benchmark 301: The trauma management information system (MIS) is used to facilitate ongoing assessment and assurance of system performance and outcomes and provides a basis for continuously improving the trauma system including, a cost-benefit analysis.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-301.4) = the lead agency has available for use the latest in computer / technology advances and analytic tools for monitoring injury prevention and control components of the trauma system. There is reporting on the outcome of implemented strategies for injury prevention and control programs within the trauma system.	1	Y Goal 8

Benchmark 306: The lead agency ensures that the trauma system demonstrates prevention and medical outreach activities within its defined service area.

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-306.1) = The trauma system has developed mechanisms to engage the general medical community and other system participants in their research findings and performance improvement efforts.	1	Y Goal 7
(I-306.3) = The effect or impact of outreach program (medical community training / support and prevention activities) is evaluated as a part of a system performance improvement process. Note: "Evaluation" implies both informal evaluation processes and more structured research	1	Y Goal 7

Benchmark 307: To maintain its state, regional, or local designation, each hospital will continually work to improve the trauma care as measured by patient outcomes

MTSPE Indicator	Ohio Score (2008)	In Ohio Framework and if yes, goal #
(I-307.2) = The trauma system implements and regularly reviews a standardized report on patient care outcomes as measured against national norms. Note: This process may include clinical and bench research.	1	Y Goal 7

Research

Pertinent History:

The 123rd General Assembly, with the passage of Am. Sub H.B. 138, tasked the EMS Board with producing seven reports on a variety of topics related to EMS and Trauma. Serving as the administrative arm of the EMS Board, the EMS Division contracted with several organizations with the appropriate expertise to produce studies and / or research that would assist the EMS Board in responding to this mandate. A final report was presented to the Governor Taft and the 125th General Assembly in November 2003. These have become known as the [Seven Special Studies](#).

The following are descriptions of the seven studies completed:

1. The status and needs of emergency medical services and pediatric trauma care provided between this state and other jurisdictions and methods to improve specialized care to pediatric trauma victims. Completed by Nationwide Children's Hospital, grant award: \$185,371.
2. The status and needs of emergency medical services and adult trauma care provided between this state and other jurisdictions; and methods to improve care to geriatric trauma victims. Completed by Riverside Methodist Hospital, Senior Health Services, grant award: \$65,366.
3. The feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study shall include an analysis of the cost of acquiring, maintaining, and using such devices, potential sources of funding and training required to ensure effective use of the devices. Completed by St. Vincent Mercy Medical Center, grant award: \$61,442.
4. Methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner. Completed by the Central Ohio Trauma System & Ohio State Coroner's Association, award amount: \$87,500.
5. Methods to increase advanced trauma life support, basic trauma life support, and pre-hospital trauma life support training among appropriate health care providers, particularly in rural areas of the state. Completed by the Ohio Chapter, American College of Surgeons & Ohio Society of Trauma Nurse Coordinators, grant award: \$49,320.
6. The roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in this state, and methods to enhance those roles. Completed by the Hospital Council of Northwest Ohio, grant award: \$65,500.
7. The causes and impact of trauma on minority populations in this state and methods to improve emergency medical services and trauma care for those populations. This study shall be conducted in cooperation with the Commission on Minority Health. Completed by Nationwide Children's Hospital, grant award: \$49,545.

Early in the development of the state trauma system, leadership recognized the need to conduct research as a way of furthering system development. Based on the results of these studies, there was consensus among the EMS Board members that additional research was indicated and would require additional funding. The EMS Board believes that a comprehensive EMS and Trauma research "agenda" is of great value.

Since the completion of the Seven Special Studies, the role of the EMS Division related to research has been accomplished predominantly through the EMS / Trauma Grant Program.

Question 1: Describe the current procedures and processes investigators must follow to request access to the trauma system registry.

- Data can be requested by contacting the EMS Data Center at 800-233-0785 or via email EMSdata@dps.state.oh.us. A detailed information sheet is available through the EMS website to assist investigators with available information and reports. Investigators are encouraged to review the available trauma data dictionaries: the Emergency Medical Services Incident Reporting System (EMSIRS), the Trauma Acute Care Registry (TACR), and/ or the Trauma Rehabilitation Registry (TRR) in order to request the appropriate data specific to their research or project needs. Once a request is received, the EMS Data Center staff contact the investigator to ensure generation of the correct report and adherence to the confidentiality provisions of the Ohio Revised Code.(ORC 4765.06)
- Individuals requesting public records are permitted by Ohio's Sunshine Law to specify the format of their report and the method of its delivery. The requestor is responsible for charges associated with compiling large files or the cost to copy to a CD, as well as shipping and handling of non-standard envelopes.
- Investigators are to cite the Ohio Department of Public Safety, Division of Emergency Medical Services as the source for any publications that utilize this data.

Question 2: What are the mechanisms used to ensure patient confidentiality when regional trauma registry data are used by investigators?

The Ohio Sunshine Laws is the collective name for the Public Records Act and the Open Meetings Act. The Ohio Public Records Act entitles Ohio citizens to access records from government entities. The EMS Data Center processes data requests from the three registries: EMSIRS, Trauma Acute Care Registry and the Trauma Rehabilitation Registry. (See <http://www.ohioattorneygeneral.gov/legal/sunshine-laws>.)

The EMS Data Center must comply with the Sunshine Laws when considering data requests but cannot release any information which identifies or even tends to identify either the provider or the recipient of care. The data collected by the EMS Data Center contains personal medical information and is considered a combination of public and confidential information. The determination of what is public and what is confidential data is made by the staff of the EMS Data Center and the EMS Division's Custodian of Records in accordance with ORC §149.43 and ORC §4765.06. The data provided to researchers by the EMS Data Center contains only public information. Confidential information is excluded from the data released to researchers.

Question 3: Provide examples of where research was conducted for the purpose of providing evidence that the processes of care and outcome of injured patients in the system's region are within acceptable standards.

All Level I verified trauma centers are required by the American College of Surgeons (ACS) to conduct research at their own institutions. These trauma centers utilize data from their own trauma registries and databases to support research initiatives, the scope and nature of which vary, but in some instances have examined trauma care within the state. Trauma centers throughout the state have also collaborated on research projects.

The Ohio EMS Board appointed the Grants Committee to oversee and make recommendations for the administration of the EMS / Trauma Grants Program. The primary goal of the EMS / Trauma Grant Program is to enhance EMS service in Ohio by providing funding for training and equipment to local EMS organizations in Ohio. The grant program has been expanded to include funding of trauma-related research in three areas: injury prevention, trauma rehabilitation and trauma medical procedures. The Program is administered within the Division by the Grants Administrator. The Grants Administrator works closely with the EMS Board's Grants Committee to ensure that all grant funds are distributed fairly, in a timely manner, and in accordance with the direction provided by the EMS Board.

Section §4765.07 of the Ohio Revised Code defines the priority distribution of funds for Ohio's EMS / Trauma Grant Program. The program is divided into six different focus areas, identified by their priority. New legislation, H.B. 128 of the 129th General Assembly, created two additional funding priorities (Priority 5 and Priority 6)) to the original four specified in HB 138 for the Ohio EMS Grant Program. The current priorities available are:

- Priority 1: EMS Training and Equipment Grants;
- Priority 2: Trauma Procedures Research Grants;
- Priority 3: Injury Prevention Research Grants;
- Priority 4: Trauma Rehabilitation and Retraining Research Grants;
- Priority 5: EMS Board Research Grants;
- Priority 6: Assistance to Paramedic Programs Grants.

Funding for trauma system research has been limited to money obtained from Ohio seatbelt fines and allocated to the EMS / Trauma Grant Program for research and EMS equipment. This program has funded research projects that examine the processes of care and outcome of injured patients within the state. These research grants have resulted in numerous publications in peer-reviewed journals.

The following are examples of research projects that have been funded by the EMS / Trauma Grant Program over the past three years:

- **Defining Trauma Outcomes through an Investigation of Associations between Trauma and Rehabilitation Registry Data (Trauma Research Grant 2011-2012).** Their research revealed that trauma data, especially ISS and GCS, is a necessary component of research and quality projects when trying to understand the long-term outcomes of persons with traumatic injuries. They also suggest that the quality and effectiveness of trauma systems and care can be enhanced by merging of Trauma and Rehabilitation registries. A comprehensive Trauma System that links EMS, trauma and rehabilitation registry data, will have the ability to fully assess the quality of care delivered through a continuum of services. This will also enable the State to evaluate an integrated Trauma system that is able to define long-term outcomes for individuals that sustain traumatic injuries.
Grant recipient: MetroHealth Medical Center, Physical Medicine and Rehabilitation Department.
- **Evaluation of Pediatric Trauma Triage Criteria for Highest Activation (EMS Injury Prevention Research Grant 2010-2011).** The goal of this study was to prospectively evaluate the correlation of triage criteria, including those mandated by the ACS, with the need for immediate resources provided by a trauma resuscitation team. The results revealed that the ACS-6 mandated criteria performed well in the context of over-triage and under-triage rates. Small revisions of the ACS-6 criteria for the pediatric population may potentially have some benefits. It was also suggested that

additional education on assessment of GCS in the pediatric population and /or interpretation of pre-hospital information may assist with appropriate highest level of trauma team activation. *Grant recipient: Cincinnati Children's Hospital Medical Center, Trauma Service.*

- **Evaluation of Trauma Triage Criteria for Medical Transport of Adults and Children (EMS Trauma Research Grant 2010-2011).** This study examined the mandated trauma triage criteria by looking at which criteria were useful in predicting the benefit of air transport of adult patients to a Level I trauma center and to extend analysis to the pediatric population as well. This research revealed that a minority of patients from their injured cohort of air medical transported patients has serious injuries that required the resources immediately available at a Level I trauma center. In addition, mechanism of injury was not a good indicator of trauma mortality or trauma center resource utilization. *Grant recipient: The Ohio State University Medical Center.*
- **Assessment of Factors Associated with the Delayed Transfer of Pediatric Trauma Patients: An EMS and Emergency Physician Survey (EMS Injury Prevention Research Grant 2009-2010).** The goal of this study was to clarify the existing trauma system knowledge and resource barriers impacting the rapid and appropriate transfer of injured children to designated trauma centers in the State of Ohio. The results of these surveys suggest that both EMS providers as well as ED physicians across the state may benefit from a more complete understanding of the current trauma triage criteria. The results also show that providers' having limited pediatric experience is associated with lower quality of care for children. The researchers suggest that the use of simulation programs to train providers in the management of high risk but low frequency events. Distance from a pediatric trauma center was identified as an important issue for providers not transporting to a pediatric trauma center. The researchers feel that it is important to develop the state's trauma system (i.e. additional education and telemedicine opportunities, supporting the development of more level 3 trauma centers, and more efficient and appropriate use of air transport) to ensure that these children receive timely and high quality care at the first institution where they are brought to. *Grant recipient: Cincinnati Children's Hospital Medical Center, Trauma Service.*

Question 4: How has the research been used to modify policy or practice within the system?

One example of how research has been utilized to modify the system is the work done by the Geriatric Trauma Task Force. In 2007, the Geriatric Trauma Task Force was created by the Ohio Trauma Committee to develop age-specific criteria to triage elderly trauma victims to trauma centers. The Task Force utilized Ohio Trauma Registry data and the EMS Incident Reporting System to define characteristics of the geriatric patient. A literature search was also conducted to identify triage criteria specific to geriatric trauma patients. Based on the results of their research, the Task Force presented several potential triage criteria to the Ohio Trauma Committee.

In its final report, the Geriatric Trauma Task Force recommended that trauma patients ≥ 70 years be defined as having geriatric trauma. They should be triaged for evaluation in a trauma center for:

- GCS < 15 in the presence of known or suspected traumatic brain injury;
- Systolic BP < 100 mmHg;
- Multiple body regions injured;
- Fall from any height with evidence of traumatic brain injury;
- Pedestrian struck by motor vehicle;
- Known or suspected proximal long bone fracture sustained in a motor vehicle crash.

Thy also recommended geriatric trauma patients should be given special consideration for evaluation at a trauma center if they have diabetes, cardiac disease, pulmonary disease (COPD), a clotting disorder (including taking anticoagulants), and an immunosuppressive disorder or require dialysis.

This effort resulted in the creation of a separate geriatric trauma triage criteria for the state. The EMS Board accepted changes in October 2008 and the new triage rules were implemented December 29, 2008.

Question 5: What resources (for example, personnel and fiscal) are available to the lead agency to assist in conducting system research?

The Office of Research and Analysis (ORA), housed within the Ohio EMS Division, provides the Ohio Trauma Registry data to investigators on a case by case basis. The scope and nature of the research projects can vary greatly, from simply just wanting the aggregate numbers to more in depth requests. The attached, [Summary of Research Data Requests \(2007\)](#), is the most current summary available according to ORA staff.

System research has not been conducted by of the EMS Board, nor has it been conducted by the Office of Research and Analysis (ORA).

THE EMS / Trauma Grant Program, as described above, does enable outside researchers to conduct trauma research but the trauma system has not been specifically targeted as a priority area. The source of this funding is from Ohio seat belt fines. It has declined in recent years owing to improved compliance with Ohio seat belt laws and may not be a reliable source of future research funding. Below is a breakdown of grant disbursements since 2002.

OHIO EMS GRANT PROGRAMS						
	Training & Equipment	Injury Prevention & Prevention Research	Trauma Research	Trauma Rehabilitation	Total	
	Priority 1	Priority 2	Priority 3	Priority 4		
Award Year 2002-2003	\$ 5,800,000.00	0	0	0	\$ 5,800,000.00	
Number of Awards	762					
Award Year 2003-2004	\$ 5,150,435.00	\$ 246,957.00	\$ 145,069.00	\$ 257,539.00	\$ 5,800,000.00	
Number of Awards	745	17	4	4		
Award Year 2004-2005	\$ 5,111,792.00	\$ 325,004.00	\$ 249,796.00	\$ 150,152.00	\$ 5,836,744.00	
Number of Awards	751	15	3	3		
Award Year 2005-2006	\$ 3,408,000.00	\$ 194,588.00	\$ 139,043.00	\$ 122,401.00	\$ 3,864,032.00	
Number of Applicants	766	21	2	10		
Number of Awards	715	9	2	3		
Non-compliant data	43					
Non-compliant other	8					
Award Year 2006-2007	\$ 3,363,000.00	\$ 110,000.00	\$ 70,000.00	\$ 19,480.00	\$ 3,562,480.00	
Number of Applicants	721	2	6	4		
Number of Awards	686	1	1	1		
Non-compliant data	15					
Non-compliant other	20					
Award Year 2007-2008	\$ 3,244,200.00	\$ 355,695.00	\$ 137,249.00	\$ 33,123.00	\$ 3,770,267.00	
Number of Applicants	771	3	2	3		
Number of Awards	734	3	2	1		
Non compliant data	28					
Non compliant other	9					
Award Year 2008-2009	\$ 3,250,000.00	\$ 348,143.00	\$ 200,000.00	\$ 82,415.00	\$ 3,880,558.00	
Number of Applicants	751	3	6	4		
Number of Awards	735	2	4	2		
Non compliant data	12					
Non compliant other	4					
Award Year 2009-2010	\$ 2,850,000.00	\$ 528,913.00	\$ -	\$ 121,087.00	\$ 3,500,000.00	
Number of Applicants	724		2	5		
Number of Awards	720		0	4		
Non compliant data						
Non compliant other						
Award Year 2010-2011	\$ 3,250,625.00	\$ 138,770.00	\$ -	\$ 110,605.00	\$ 3,500,000.00	
Number of Applicants	708	1	0	3		
Number of Awards	701	1	0	2		
Non compliant data						
Non compliant other						
Award Year 2011-2012	\$ 2,999,948.00	\$ 110,000.00	\$ 350,607.00	\$39,445	\$ 3,500,000.00	
Number of Applicants	780	8	6	6		
Number of Awards	771	1	5	2		
Non compliant data	0					
Non Compliant other	9					
Total					\$ 43,014,081.00	
	Training & Equipment	Trauma Procedures	Injury Prevention	Trauma Rehabilitation	Board Research	Paramedic Assistance
	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6
Award Year 2012-2013	\$ 2,588,581.00	\$ 143,760.00	\$ 142,976.00	\$ 129,000.00	\$ 48,991.00	\$ 46,692.00
Number of Applicants	741	2	9	4	4	13
Number of Awards	733	1	3	2	2	12
Non Compliant data	0					
Non Compliant other	8					
Total						

American College of Surgeons
State of Ohio Trauma System Consultative Site Review

State Focused Questions

The following questions were provided by the Ohio Trauma Committee.

1. Describe how Ohio can exercise more authority and or accountability for the trauma system without statute defining a lead trauma agency.
2. Help us understand ways Ohio could measure outcomes related to the trauma system without integration of risk adjusted data and effective registry interfaces.
3. After analyzing Ohio's trauma system infrastructure, please describe a sample model for integration of regional trauma systems and regional physician advisory boards into the state system.
4. Can you provide ideas for funding sources for Ohio's trauma system based on your experiences with other state trauma systems.
5. If Ohio were to form a statewide performance improvement collaborative, please explain potential barriers, benefits, and methods.
6. Ohio does not have a trauma medical director who is dedicated solely towards trauma system development. Explain what impact this position may have on the system. Can a statewide system be effective without a trauma medical director who is not a surgeon? What benefits can be realized by the addition of a trauma medical director to Ohio's trauma system?

Appendix A

Chapter 4765: DIVISION OF EMERGENCY MEDICAL SERVICES

4765.01 [Effective Until 3/22/2013] Division of emergency medical services definitions.

As used in this chapter:

(A) “First responder” means an individual who holds a current, valid certificate issued under section 4765.30 of the Revised Code to practice as a first responder.

(B) “Emergency medical technician-basic” or “EMT-basic” means an individual who holds a current, valid certificate issued under section 4765.30 of the Revised Code to practice as an emergency medical technician-basic.

(C) “Emergency medical technician-intermediate” or “EMT-I” means an individual who holds a current, valid certificate issued under section 4765.30 of the Revised Code to practice as an emergency medical technician-intermediate.

(D) “Emergency medical technician-paramedic” or “paramedic” means an individual who holds a current, valid certificate issued under section 4765.30 of the Revised Code to practice as an emergency medical technician-paramedic.

(E) “Ambulance” means any motor vehicle that is used, or is intended to be used, for the purpose of responding to emergency medical situations, transporting emergency patients, and administering emergency medical service to patients before, during, or after transportation.

(F) “Cardiac monitoring” means a procedure used for the purpose of observing and documenting the rate and rhythm of a patient’s heart by attaching electrical leads from an electrocardiograph monitor to certain points on the patient’s body surface.

(G) “Emergency medical service” means any of the services described in sections 4765.35, 4765.37, 4765.38, and 4765.39 of the Revised Code that are performed by first responders, emergency medical technicians-basic, emergency medical technicians-intermediate, and paramedics. “Emergency medical service” includes such services performed before or during any transport of a patient, including transports between hospitals and transports to and from helicopters.

(H) “Emergency medical service organization” means a public or private organization using first responders, EMTs-basic, EMTs-I, or paramedics, or a combination of first responders, EMTs-basic, EMTs-I, and paramedics, to provide emergency medical services.

(I) “Physician” means an individual who holds a current, valid certificate issued under Chapter 4731. of the Revised Code authorizing the practice of medicine and surgery or osteopathic medicine and surgery.

(J) “Registered nurse” means an individual who holds a current, valid license issued under Chapter 4723. of the Revised Code authorizing the practice of nursing as a registered nurse.

(K) “Volunteer” means a person who provides services either for no compensation or for compensation that does not exceed the actual expenses incurred in providing the services or in training to provide the services.

(L) “Emergency medical service personnel” means first responders, emergency medical service technicians-basic, emergency medical service technicians-intermediate, emergency medical service technicians-paramedic, and persons who provide medical direction to such persons.

(M) “Hospital” has the same meaning as in section 3727.01 of the Revised Code.

(N) “Trauma” or “traumatic injury” means severe damage to or destruction of tissue that satisfies both of the following conditions: (1) It creates a significant risk of any of the following: (a) Loss of life; (b) Loss of a limb; (c) Significant, permanent disfigurement; (d) Significant, permanent disability. (2) It is caused by any of the following: (a) Blunt or penetrating injury; (b) Exposure to electromagnetic, chemical, or radioactive energy; (c) Drowning, suffocation, or strangulation; (d) A deficit or excess of heat.

(O) “Trauma victim” or “trauma patient” means a person who has sustained a traumatic injury.

(P) “Trauma care” means the assessment, diagnosis, transportation, treatment, or rehabilitation of a trauma victim by emergency medical service personnel or by a physician, nurse, physician assistant, respiratory therapist, physical therapist, chiropractor, occupational therapist, speech-language pathologist, audiologist, or psychologist licensed to practice as such in this state or another jurisdiction.

(Q) “Trauma center” means all of the following: (1) Any hospital that is verified by the American college of surgeons as an adult or pediatric trauma center; (2) Any hospital that is operating as an adult or pediatric trauma center under provisional status pursuant to section 3727.101 of the Revised Code; (3) Until December 31, 2004, any hospital in this state that is designated by the director of health as a level II pediatric trauma center under section 3727.081 of the Revised Code; (4) Any hospital in another state that is licensed or designated under the laws of that state as capable of providing specialized trauma care appropriate to the medical needs of the trauma patient.

(R) “Pediatric” means involving a patient who is less than sixteen years of age.

(S) “Adult” means involving a patient who is not a pediatric patient.

(T) “Geriatric” means involving a patient who is at least seventy years old or exhibits significant anatomical or physiological characteristics associated with advanced aging.

(U) “Air medical organization” means an organization that provides emergency medical services, or transports emergency victims, by means of fixed or rotary wing aircraft.

(V) “Emergency care” and “emergency facility” have the same meanings as in section 3727.01 of the Revised Code.

(W) “Stabilize,” except as it is used in division (B) of section 4765.35 of the Revised Code with respect to the manual stabilization of fractures, has the same meaning as in section 1753.28 of the Revised Code.

(X) “Transfer” has the same meaning as in section 1753.28 of the Revised Code.

(Y) “Firefighter” means any member of a fire department as defined in section 742.01 of the Revised Code.

(Z) “Volunteer firefighter” has the same meaning as in section 146.01 of the Revised Code.

(AA) “Part-time paid firefighter” means a person who provides firefighting services on less than a full-time basis, is routinely scheduled to be present on site at a fire station or other designated location for purposes of responding to a fire or other emergency, and receives more than nominal compensation for the provision of firefighting services.

Effective Date: 09-17-2002; 04-05-2007

4765.01 [Effective 3/22/2013] Division of emergency medical services definitions

As used in this chapter:

(A) “First responder” means an individual who holds a current, valid certificate issued under section 4765.30 of the Revised Code to practice as a first responder.

(B) “Emergency medical technician-basic” or “EMT-basic” means an individual who holds a current, valid certificate issued under section 4765.30 of the Revised Code to practice as an emergency medical technician-basic.

(C) “Emergency medical technician-intermediate” or “EMT-I” means an individual who holds a current, valid certificate issued under section 4765.30 of the Revised Code to practice as an emergency medical technician-intermediate.

(D) “Emergency medical technician-paramedic” or “paramedic” means an individual who holds a current, valid certificate issued under section 4765.30 of the Revised Code to practice as an emergency medical technician-paramedic.

(E) “Ambulance” means any motor vehicle that is used, or is intended to be used, for the purpose of responding to emergency medical situations, transporting emergency patients, and administering emergency medical service to patients before, during, or after transportation.

(F) “Cardiac monitoring” means a procedure used for the purpose of observing and documenting the rate and rhythm of a patient’s heart by attaching electrical leads from an electrocardiograph monitor to certain points on the patient’s body surface.

(G) “Emergency medical service” means any of the services described in sections 4765.35, 4765.37, 4765.38, and 4765.39 of the Revised Code that are performed by first responders, emergency medical technicians-basic, emergency medical technicians-intermediate, and paramedics. “Emergency medical service” includes such services performed before or during any transport of a patient, including transports between hospitals and transports to and from helicopters.

(H) “Emergency medical service organization” means a public or private organization using first responders, EMTs-basic, EMTs-I, or paramedics, or a combination of first responders, EMTs-basic, EMTs-I, and paramedics, to provide emergency medical services.

(I) “Physician” means an individual who holds a current, valid certificate issued under Chapter 4731. of the Revised Code authorizing the practice of medicine and surgery or osteopathic medicine and surgery.

(J) “Registered nurse” means an individual who holds a current, valid license issued under Chapter 4723. of the Revised Code authorizing the practice of nursing as a registered nurse.

(K) “Volunteer” means a person who provides services either for no compensation or for compensation that does not exceed the actual expenses incurred in providing the services or in training to provide the services.

(L) “Emergency medical service personnel” means first responders, emergency medical service technicians-basic, emergency medical service technicians-intermediate, emergency medical service technicians-paramedic, and persons who provide medical direction to such persons.

(M) “Hospital” has the same meaning as in section 3727.01 of the Revised Code.

(N) “Trauma” or “traumatic injury” means severe damage to or destruction of tissue that satisfies both of the following conditions: (1) It creates a significant risk of any of the following: (a) Loss of life; (b) Loss of a limb; (c) Significant, permanent disfigurement; (d) Significant, permanent disability. (2) It is caused by any of the following: (a) Blunt or penetrating injury; (b) Exposure to electromagnetic, chemical, or radioactive energy; (c) Drowning, suffocation, or strangulation; (d) A deficit or excess of heat.

(O) “Trauma victim” or “trauma patient” means a person who has sustained a traumatic injury.

(P) “Trauma care” means the assessment, diagnosis, transportation, treatment, or rehabilitation of a trauma victim by emergency medical service personnel or by a physician, nurse, physician assistant, respiratory therapist, physical therapist, chiropractor, occupational therapist, speech-language pathologist, audiologist, or psychologist licensed to practice as such in this state or another jurisdiction.

(Q) “Trauma center” means all of the following: (1) Any hospital that is verified by the American college of surgeons as an adult or pediatric trauma center; (2) Any hospital that is operating as an adult or pediatric trauma center under provisional status pursuant to section 3727.101 of the Revised Code; (3) Until December 31, 2004, any hospital in this state that is designated by the director of health as a level II pediatric trauma center under section 3727.081 of the Revised Code; (4) Any hospital in another state that is licensed or designated under the laws of that state as capable of providing specialized trauma care appropriate to the medical needs of the trauma patient.

(R) “Pediatric” means involving a patient who is less than sixteen years of age.

(S) “Adult” means involving a patient who is not a pediatric patient.

(T) “Geriatric” means involving a patient who is at least seventy years old or exhibits significant anatomical or physiological characteristics associated with advanced aging.

(U) “Air medical organization” means an organization that provides emergency medical services, or transports emergency victims, by means of fixed or rotary wing aircraft.

(V) “Emergency care” and “emergency facility” have the same meanings as in section 3727.01 of the Revised Code.

(W) “Stabilize,” except as it is used in division (B) of section 4765.35 of the Revised Code with respect to the manual stabilization of fractures, has the same meaning as in section 1753.28 of the Revised Code.

(X) “Transfer” has the same meaning as in section 1753.28 of the Revised Code.

(Y) “Firefighter” means any member of a fire department as defined in section 742.01 of the Revised Code.

(Z) “Volunteer firefighter” has the same meaning as in section 146.01 of the Revised Code.

(AA) “Part-time paid firefighter” means a person who provides firefighting services on less than a full-time basis, is routinely scheduled to be present on site at a fire station or other designated location for purposes of responding to a fire or other emergency, and receives more than nominal compensation for the provision of firefighting services.

(BB) “Physician assistant” means an individual who holds a valid certificate to practice as a physician assistant issued under Chapter 4730. of the Revised Code.

Amended by 129th General Assembly File No. 161, HB 284, § 1, eff. 3/22/2013. Effective Date: 09-17-2002; 04-05-2007

4765.011 Designation as EMR, EMT, or AEMT.

(A) With respect to the following individuals who receive certificates to practice issued under this chapter, all of the following apply: (1) A first responder shall be also known as an emergency medical responder or EMR; (2) An emergency medical technician-basic or EMT-basic shall be also known as an emergency medical technician or EMT, respectively; (3) An emergency medical technician-intermediate or EMT-I shall be also known as an advanced emergency medical technician or AEMT, respectively.

(B) With respect to the provisions of this chapter and all other provisions of the Revised Code that refer to the individuals specified in division (A) of this section, all of the following apply: (1) A reference to a first responder is deemed to be a reference to an emergency medical responder or EMR; (2) A reference to an emergency medical technician-basic or EMT-basic is deemed to be a reference to an emergency medical technician or EMT, respectively; (3) A reference to an emergency medical technician-intermediate or EMT-I is deemed to be a reference to an advanced emergency medical technician or AEMT, respectively.

4765.02 State board of emergency medical services.

There is hereby created the state board of emergency medical services within the division of emergency medical services of the department of public safety. The board shall consist of the members specified in this section who are residents of this state. The governor, with the advice and consent of the senate, shall appoint all members of the board, except the employee of the department of public safety designated by the director of public safety under this section to be a member of the board. In making the appointments, the governor shall appoint only members with background or experience in emergency medical services or trauma care and shall attempt to include members representing urban and rural areas, various geographical regions of the state, and various schools of training. One member of the board shall be a physician certified by the American board of emergency medicine or the American osteopathic board of emergency medicine who is active in the practice of emergency medicine and is actively involved with an emergency medical service organization. The governor shall appoint this member from among three persons nominated by the Ohio chapter of the American college of emergency physicians and three persons nominated by the Ohio osteopathic association. One member shall be a physician certified by the American board of surgery or the American osteopathic board of surgery who is active in the practice of trauma surgery and is actively involved with emergency medical services. The governor shall appoint this member from among three persons nominated by the Ohio chapter of the American college of surgeons and three persons nominated by the Ohio osteopathic association. One member shall be a physician certified by the American academy of pediatrics or American osteopathic board of pediatrics who is active in the practice of pediatric emergency medicine and actively involved with an emergency medical service organization. The governor shall appoint this member from among three persons nominated by the Ohio chapter of the American academy of pediatrics. One member shall be the administrator of an adult or pediatric trauma center. The governor shall appoint this member from among three persons nominated by the OHA: the association for hospitals and health systems, three persons nominated by the Ohio osteopathic association, three persons nominated by the association of Ohio children's hospitals, and three persons nominated by the health forum of Ohio. One member shall be the administrator of a hospital that is not a trauma center. The governor shall appoint this member from among three persons nominated by OHA: the association for hospitals and health systems, three persons nominated by the Ohio osteopathic association, three persons nominated by the association of Ohio children's hospitals, and three persons nominated by the health forum of Ohio. One member shall be a registered nurse who is in the active practice of emergency nursing. The governor shall appoint this member from among three persons nominated by the Ohio nurses association and three persons nominated by the Ohio state council of the emergency nurses association. One member shall be the chief of a fire department that is also an emergency medical service organization in which more than fifty per cent of the persons who provide emergency medical services are full-time paid employees. The governor shall appoint this member from among three persons nominated by the Ohio fire chiefs' association. One member shall be the chief of a fire department that is also an emergency medical service organization in which more than fifty per cent of the persons who provide emergency medical services are volunteers. The governor shall appoint this member from among three persons nominated by the Ohio fire chiefs' association. One member shall be a person who is certified to teach under section 4765.23 of the Revised Code or, if the board has not yet certified persons to teach under that section, a person who is qualified to be certified to teach under that section. The governor shall appoint this member from among three persons nominated by the Ohio emergency medical technician instructors association and the Ohio instructor/coordinators' society. One member shall be an EMT-basic, one shall be an EMT-I, and one shall be a paramedic. The governor shall

appoint these members from among three EMTs-basic, three EMTs-I, and three paramedics nominated by the Ohio association of professional fire fighters and three EMTs-basic, three EMTs-I, and three paramedics nominated by the northern Ohio fire fighters. One member shall be an EMT-basic, one shall be an EMT-I, and one shall be a paramedic whom the governor shall appoint from among three EMTs-basic, three EMTs-I, and three paramedics nominated by the Ohio state firefighter's association. One member shall be a person whom the governor shall appoint from among an EMT-basic, an EMT-I, and a paramedic nominated by the Ohio association of emergency medical services. The governor shall appoint one member who is an EMT-basic, EMT-I, or paramedic affiliated with an emergency medical services organization. One member shall be a member of the Ohio ambulance association whom the governor shall appoint from among three persons nominated by the Ohio ambulance association. One member shall be a physician certified by the American board of surgery, American board of osteopathic surgery, American osteopathic board of emergency medicine, or American board of emergency medicine who is the chief medical officer of an air medical agency and is currently active in providing emergency medical services. The governor shall appoint this member from among three persons nominated by the Ohio association of air medical services. The governor may refuse to appoint any of the persons nominated by one or more organizations under this section, except the employee of the department of public safety designated by the director of public safety under this section to be a member of the board. In that event, the organization or organizations shall continue to nominate the required number of persons until the governor appoints to the board one or more of the persons nominated by the organization or organizations. The director of public safety shall designate an employee of the department of public safety to serve as a member of the board at the director's pleasure. This member shall serve as a liaison between the department and the division of emergency medical services in cooperation with the executive director of the board. Initial appointments to the board by the governor and the director of public safety shall be made within ninety days after November 12, 1992. Of the initial appointments by the governor, five shall be for terms ending one year after November 12, 1992, six shall be for terms ending two years after November 12, 1992, and six shall be for terms ending three years after November 12, 1992. Within ninety days after the effective date of this amendment, the governor shall appoint the member of the board who is the chief medical officer of an air medical agency for an initial term ending November 12, 2000. Thereafter, terms of office of all members appointed by the governor shall be for three years, each term ending on the same day of the same month as did the term it succeeds. Each member shall hold office from the date of appointment until the end of the term for which the member was appointed. A member shall continue in office subsequent to the expiration date of the member's term until the member's successor takes office, or until a period of sixty days has elapsed, whichever occurs first. Each vacancy shall be filled in the same manner as the original appointment. A member appointed to fill a vacancy occurring prior to the expiration of the term for which the member's predecessor was appointed shall hold office for the remainder of the unexpired term. The term of a member shall expire if the member ceases to meet any of the requirements to be appointed as that member. The governor may remove any member from office for neglect of duty, malfeasance, misfeasance, or nonfeasance, after an adjudication hearing held in accordance with Chapter 119. of the Revised Code. The members of the board shall serve without compensation but shall be reimbursed for their actual and necessary expenses incurred in carrying out their duties as board members. The board shall organize by annually selecting a chair and vice-chair from among its members. The board may adopt bylaws to regulate its affairs. A majority of all members of the board shall constitute a quorum. No action shall be taken without the concurrence of a majority of all members of the board. The board shall meet at least four times annually and at the call of the chair. The chair shall call a meeting on the request of the executive director or the medical director of the board or on the written request of five members. The board shall maintain written or electronic records of its meetings. Upon twenty-four hours' notice from a member of the board, the member's

employer shall release the member from the member's employment duties to attend meetings of the full board. Nothing in this paragraph requires the employer of a member of the board to compensate the member for time the member is released from employment duties under this paragraph, but any civil immunity, workers' compensation, disability, or similar coverage that applies to a member of the board as a result of the member's employment shall continue to apply while the member is released from employment duties under this paragraph.

Effective Date: 11-03-2000

4765.03 Executive director duties.

(A) The director of public safety shall appoint a full-time executive director for the state board of emergency medical services. The executive director shall be knowledgeable in emergency medical services and trauma care and shall serve at the pleasure of the director of public safety. The director of public safety shall appoint the executive director from among three persons nominated by the board. The director of public safety may refuse, for cause, to appoint any of the board's nominees. If the director fails to appoint any of the board's nominees, the board shall continue to nominate groups of three persons until the director does appoint one of the board's nominees. The executive director shall serve as the chief executive officer of the board and as the executive director of the division of emergency medical services. The executive director shall attend each meeting of the board, except the board may exclude the executive director from discussions concerning the employment or performance of the executive director or medical director of the board. The executive director shall give a surety bond to the state in such sum as the board determines, conditioned on the faithful performance of the duties of the executive director's office. The executive director shall receive a salary from the board and shall be reimbursed for actual and necessary expenses incurred in carrying out duties as executive director. The executive director shall submit a report to the director of public safety at least every three months regarding the status of emergency medical services in this state. The executive director shall meet with the director of public safety at the director's request.

(B) The board shall appoint a medical director, who shall serve at the pleasure of the board. The medical director shall be a physician certified by the American board of emergency medicine or the American osteopathic board of emergency medicine who is active in the practice of emergency medicine and has been actively involved with an emergency medical service organization for at least five years prior to being appointed. The board shall consider any recommendations for this appointment from the Ohio chapter of the American college of emergency physicians, the Ohio chapter of the American college of surgeons, the Ohio chapter of the American academy of pediatrics, the Ohio osteopathic association, and the Ohio state medical association. The medical director shall direct the executive director and advise the board with regard to adult and pediatric trauma and emergency medical services issues. The medical director shall attend each meeting of the board, except the board may exclude the medical director from discussions concerning the appointment or performance of the medical director or executive director of the board. The medical director shall be employed and paid by the board and shall be reimbursed for actual and necessary expenses incurred in carrying out duties as medical director.

(C) The board may appoint employees as it determines necessary. The board shall prescribe the duties and titles of its employees.

4765.04 Firefighter and fire safety inspector training committee - trauma committee - other committees and subcommittees.

(A) The firefighter and fire safety inspector training committee of the state board of emergency medical services is hereby created and shall consist of the members of the board who are chiefs of fire departments, and the members of the board who are emergency medical technicians-basic, emergency medical technicians-intermediate, and emergency medical technicians-paramedic appointed from among persons nominated by the Ohio association of professional fire fighters or the northern Ohio fire fighters and from among persons nominated by the Ohio state firefighter's association. Each member of the committee, except the chairperson, may designate a person with fire experience to serve in that member's place. The members of the committee or their designees shall select a chairperson from among the members or their designees. The committee may conduct investigations in the course of discharging its duties under this chapter. In the course of an investigation, the committee may issue subpoenas. If a person subpoenaed fails to comply with the subpoena, the committee may authorize its chairperson to apply to the court of common pleas in the county where the person to be subpoenaed resides for an order compelling compliance in the same manner as compliance with a subpoena issued by the court is compelled.

(B) The trauma committee of the state board of emergency medical services is hereby created and shall consist of the following members appointed by the director of public safety:

(1) A physician who is certified by the American board of surgery or American osteopathic board of surgery and actively practices general trauma surgery, appointed from among three persons nominated by the Ohio chapter of the American college of surgeons, three persons nominated by the Ohio state medical association, and three persons nominated by the Ohio osteopathic association;

(2) A physician who is certified by the American board of surgery or the American osteopathic board of surgery and actively practices orthopedic trauma surgery, appointed from among three persons nominated by the Ohio orthopedic society and three persons nominated by the Ohio osteopathic association;

(3) A physician who is certified by the American board of neurological surgeons or the American osteopathic board of surgery and actively practices neurosurgery on trauma victims, appointed from among three persons nominated by the Ohio state neurological society and three persons nominated by the Ohio osteopathic association;

(4) A physician who is certified by the American board of surgeons or American osteopathic board of surgeons and actively specializes in treating burn victims, appointed from among three persons nominated by the Ohio chapter of the American college of surgeons and three persons nominated by the Ohio osteopathic association;

(5) A dentist who is certified by the American board of oral and maxillofacial surgery and actively practices oral and maxillofacial surgery, appointed from among three persons nominated by the Ohio dental association;

- (6) A physician who is certified by the American board of physical medicine and rehabilitation or American osteopathic board of rehabilitation medicine and actively provides rehabilitative care to trauma victims, appointed from among three persons nominated by the Ohio society of physical medicine and rehabilitation and three persons nominated by the Ohio osteopathic association;
- (7) A physician who is certified by the American board of surgery or American osteopathic board of surgery with special qualifications in pediatric surgery and actively practices pediatric trauma surgery, appointed from among three persons nominated by the Ohio chapter of the American academy of pediatrics and three persons nominated by the Ohio osteopathic association;
- (8) A physician who is certified by the American board of emergency medicine or American osteopathic board of emergency medicine, actively practices emergency medicine, and is actively involved in emergency medical services, appointed from among three persons nominated by the Ohio chapter of the American college of emergency physicians and three persons nominated by the Ohio osteopathic association;
- (9) A physician who is certified by the American board of pediatrics, American osteopathic board of pediatrics, or American board of emergency medicine, is sub-boarded in pediatric emergency medicine, actively practices pediatric emergency medicine, and is actively involved in emergency medical services, appointed from among three persons nominated by the Ohio chapter of the American academy of pediatrics, three persons nominated by the Ohio chapter of the American college of emergency physicians, and three persons nominated by the Ohio osteopathic association;
- (10) A physician who is certified by the American board of surgery, American osteopathic board of surgery, or American board of emergency medicine and is the chief medical officer of an air medical organization, appointed from among three persons nominated by the Ohio association of air medical services;
- (11) A coroner or medical examiner appointed from among three people nominated by the Ohio state coroners' association;
- (12) A registered nurse who actively practices trauma nursing at an adult or pediatric trauma center, appointed from among three persons nominated by the Ohio association of trauma nurse coordinators;
- (13) A registered nurse who actively practices emergency nursing and is actively involved in emergency medical services, appointed from among three persons nominated by the Ohio chapter of the emergency nurses' association;
- (14) The chief trauma registrar of an adult or pediatric trauma center, appointed from among three persons nominated by the alliance of Ohio trauma registrars;
- (15) The administrator of an adult or pediatric trauma center, appointed from among three persons nominated by OHA: the association for hospitals and health systems, three persons nominated by the Ohio osteopathic association, three persons nominated by the association of Ohio children's hospitals, and three persons nominated by the health forum of Ohio;

(16) The administrator of a hospital that is not a trauma center and actively provides emergency care to adult or pediatric trauma patients, appointed from among three persons nominated by OHA: the association for hospitals and health systems, three persons nominated by the Ohio osteopathic association, three persons nominated by the association of Ohio children's hospitals, and three persons nominated by the health forum of Ohio;

(17) The operator of an ambulance company that actively provides trauma care to emergency patients, appointed from among three persons nominated by the Ohio ambulance association;

(18) The chief of a fire department that actively provides trauma care to emergency patients, appointed from among three persons nominated by the Ohio fire chiefs' association;

(19) An EMT or paramedic who is certified under this chapter and actively provides trauma care to emergency patients, appointed from among three persons nominated by the Ohio association of professional firefighters, three persons nominated by the northern Ohio fire fighters, three persons nominated by the Ohio state firefighters' association, and three persons nominated by the Ohio association of emergency medical services;

(20) A person who actively advocates for trauma victims, appointed from three persons nominated by the Ohio brain injury association and three persons nominated by the governor's council on people with disabilities;

(21) A physician or nurse who has substantial administrative responsibility for trauma care provided in or by an adult or pediatric trauma center, appointed from among three persons nominated by OHA: the association for hospitals and health systems, three persons nominated by the Ohio osteopathic association, three persons nominated by the association of Ohio children's hospitals, and three persons nominated by the health forum of Ohio;

(22) Three representatives of hospitals that are not trauma centers and actively provide emergency care to trauma patients, appointed from among three persons nominated by OHA: the association for hospitals and health systems, three persons nominated by the Ohio osteopathic association, three persons nominated by the association of Ohio children's hospitals, and three persons nominated by the health forum of Ohio. The representatives may be hospital administrators, physicians, nurses, or other clinical professionals. Members of the committee shall have substantial experience in the categories they represent, shall be residents of this state, and may be members of the state board of emergency medical services. In appointing members of the committee, the director shall attempt to include members representing urban and rural areas, various geographical areas of the state, and various schools of training. The director shall not appoint to the committee more than one member who is employed by or practices at the same hospital, health system, or emergency medical service organization. The director may refuse to appoint any of the persons nominated by an organization or organizations under this division. In that event, the organization or organizations shall continue to nominate the required number of persons until the director appoints to the committee one or more of the persons nominated by the organization or organizations. Initial appointments to the committee shall be made by the director not later than ninety days after November 3, 2000. Members of the committee shall serve at the pleasure of the director, except that any member of the committee who ceases to be qualified for the position to which the member was appointed shall cease to be a member of the committee. Vacancies on the committee shall be filled in the same manner as original appointments. The members of the committee shall serve without compensation but shall be reimbursed for actual and

necessary expenses incurred in carrying out duties as members of the committee. The committee shall select a chairperson and vice-chairperson from among its members. A majority of all members of the committee shall constitute a quorum. No action shall be taken without the concurrence of a majority of all members of the committee. The committee shall meet at the call of the chair, upon written request of five members of the committee, and at the direction of the state board of emergency medical services. The committee shall not meet at times or locations that conflict with meetings of the board. The executive director and medical director of the state board of emergency medical services may participate in any meeting of the committee and shall do so at the request of the committee. The committee shall advise and assist the state board of emergency medical services in matters related to adult and pediatric trauma care and the establishment and operation of the state trauma registry. In matters relating to the state trauma registry, the board and the committee shall consult with trauma registrars from adult and pediatric trauma centers in the state. The committee may appoint a subcommittee to advise and assist with the trauma registry. The subcommittee may include persons with expertise relevant to the trauma registry who are not members of the board or committee.

(C) The state board of emergency medical services may appoint other committees and subcommittees as it considers necessary.

(D) The state board of emergency medical services, and any of its committees or subcommittees, may request assistance from any state agency. The board and its committees and subcommittees may permit persons who are not members of those bodies to participate in deliberations of those bodies, but no person who is not a member of the board shall vote on the board and no person who is not a member of a committee created under division (A) or (B) of this section shall vote on that committee.

(E) Sections 101.82 to 101.87 of the Revised Code do not apply to the committees established under division (A) or (B) of this section.

Effective Date: 03-22-2001; 04-05-2007

4765.05 Prehospital emergency medical services regions.

(A) As used in this section, “prehospital emergency medical services” means an emergency medical services system that provides medical services to patients who require immediate assistance, because of illness or injury, prior to their arrival at an emergency medical facility.

(B) The state board of emergency medical services shall divide the state geographically into prehospital emergency medical services regions for purposes of overseeing the delivery of adult and pediatric prehospital emergency medical services. For each prehospital emergency medical services region, the state board of emergency medical services shall appoint either a physician to serve as the regional director or a physician advisory board to serve as the regional advisory board. The state board of emergency medical services shall specify the duties of each regional director and regional advisory board. Regional directors and members of regional advisory boards shall serve without compensation, but shall be reimbursed for actual and necessary expenses incurred in carrying out duties as regional directors and members of regional advisory boards.

(C) Nothing in this section shall be construed to limit in any way the ability of a hospital to determine the market area of that hospital.

4765.06 Emergency medical services incidence reporting system - state trauma registry.

(A) The state board of emergency medical services shall establish an emergency medical services incidence reporting system for the collection of information regarding the delivery of emergency medical services in this state and the frequency at which the services are provided. All emergency medical service organizations shall submit to the board any information that the board determines is necessary for maintaining the incidence reporting system.

(B) The board shall establish a state trauma registry to be used for the collection of information regarding the care of adult and pediatric trauma victims in this state. The registry shall provide for the reporting of adult and pediatric trauma-related deaths, identification of adult and pediatric trauma patients, monitoring of adult and pediatric trauma patient care data, determination of the total amount of uncompensated adult and pediatric trauma care provided annually by each facility that provides care to trauma victims, and collection of any other information specified by the board. All persons designated by the board shall submit to the board any information it determines is necessary for maintaining the state trauma registry. At the request of the board any state agency possessing information regarding adult or pediatric trauma care shall provide the information to the board. The board shall maintain the state trauma registry in accordance with rules adopted under section 4765.11 of the Revised Code.

Rules relating to the state trauma registry adopted under this section and section 4765.11 of the Revised Code shall not prohibit the operation of other trauma registries and may provide for the reporting of information to the state trauma registry by or through other trauma registries in a manner consistent with information otherwise reported to the state trauma registry. Other trauma registries may report aggregate information to the state trauma registry, provided the information can be matched to the person that reported it. Information maintained by another trauma registry and reported to the state trauma registry in lieu of being reported directly to the state trauma registry is a public record and shall be maintained, made available to the public, held in confidence, risk adjusted, and not subject to discovery or introduction into evidence in a civil action as provided in section 149.43 of the Revised Code and this section. Any person who provides, maintains, or risk adjusts such information shall comply with this section and rules adopted under it in performing that function and has the same immunities with respect to that function as a person who performs that function with respect to the state trauma registry.

(C) The board and any employee or contractor of the board or the department of public safety shall not make public information it receives under Chapter 4765. of the Revised Code that identifies or would tend to identify a specific recipient of emergency medical services or adult or pediatric trauma care.

(D) Not later than two years after November 3, 2000, the board shall adopt and implement rules under section 4765.11 of the Revised Code that provide written standards and procedures for risk adjustment of information received by the board under Chapter 4765. of the Revised Code. The rules shall be developed in consultation with appropriate medical, hospital, and emergency medical service organizations and may provide for risk adjustment by a contractor of the board. Except as provided in division (G) of this section, before risk adjustment standards and procedures are implemented, no member of the board and no employee or contractor of the board or the department of public safety shall make public information received by the board under Chapter 4765. of the Revised Code that

identifies or would tend to identify a specific provider of emergency medical services or adult or pediatric trauma care. Except as provided in division (G) of this section, after risk adjustment standards and procedures are implemented, the board shall make public such information only on a risk adjusted basis.

(E) The board shall adopt rules under section 4765.11 of the Revised Code that specify procedures for ensuring the confidentiality of information that is not to be made public under this section. The rules shall specify the circumstances in which deliberations of the persons performing risk adjustment functions under this section are not open to the public and records of those deliberations are maintained in confidence. Nothing in this section prohibits the board from making public statistical information that does not identify or tend to identify a specific recipient or provider of emergency medical services or adult or pediatric trauma care.

(F) No provider that furnishes information to the board with respect to any patient the provider examined or treated shall, because of this furnishing, be deemed liable in damages to any person or be held to answer for betrayal of a professional confidence in the absence of willful or wanton misconduct. No such information shall be subject to introduction in evidence in any civil action against the provider. No provider that furnishes information to the board shall be liable for the misuse or improper release of the information by the board or any other person.

No person who performs risk adjustment functions under this section shall, because of performing such functions, be held liable in a civil action for betrayal of professional confidence or otherwise in the absence of willful or wanton misconduct.

(G) The board may transmit data that identifies or tends to identify a specific provider of emergency medical services care and has not been risk-adjusted from the emergency medical services incident reporting system directly to the national emergency medical services information system, pursuant to a written contract between the board and the federal agency that administers the national emergency medical services information system, which shall ensure to the maximum extent permitted by federal law that such agency shall use such data solely for inclusion in the national emergency medical services information system and shall not disclose such data to the public, through legal discovery, a freedom of information request, or otherwise, in a manner that identifies or tends to identify a specific provider of emergency medical services care.

Amended by 129th General Assembly File No. 95, SB 243, § 1, eff. 7/3/2012. Effective Date: 11-03-2000
4765.07 Administrative rules for grant program.

(A) The state board of emergency medical services shall adopt rules under section 4765.11 of the Revised Code to establish and administer a grant program under which grants are distributed according to the following priorities:

(1) First priority shall be given to emergency medical service organizations for the training of personnel, for the purchase of equipment and vehicles, and to improve the availability, accessibility, and quality of emergency medical services in this state. In this category, the board shall give priority to grants that fund training and equipping of emergency medical service personnel.

(2) Second priority shall be given to entities that research, test, and evaluate medical procedures and systems related to adult and pediatric trauma care.

(3) Third priority shall be given to entities that research the causes, nature, and effects of traumatic injuries, educate the public about injury prevention, and implement, test, and evaluate injury prevention strategies.

(4) Fourth priority shall be given to entities that research, test, and evaluate procedures that promote the rehabilitation, retraining, and reemployment of adult or pediatric trauma victims and social service support mechanisms for adult or pediatric trauma victims and their families.

(5) Fifth priority shall be given to entities that conduct research on, test, or evaluate one or more of the following: (a) Procedures governing the performance of emergency medical services in this state; (b) The training of emergency medical service personnel;

(c) The staffing of emergency medical service organizations.

(6) For grants distributed for the grant award years occurring not later than the award year ending June 30, 2017, sixth priority shall be given to entities that operate paramedic training programs and are seeking national accreditation of the programs.

(B) To be eligible for a grant distributed pursuant to division (A)(6) of this section, an applicant for the grant shall meet all of the following conditions:

(1) Hold a certificate of accreditation issued by the board under section 4765.17 of the Revised Code to operate a paramedic training program;

(2) Be seeking initial national accreditation of the program from an accrediting organization approved by the board; (3) Apply for the national accreditation on or after February 25, 2010.

(C) The grant program shall be funded from the trauma and emergency medical services fund created by section 4513.263 of the Revised Code.

Amended by 129th General Assembly File No. 127, HB 487, § 101.01, eff. 9/10/2012.

Amended by 129th General Assembly File No. 27, HB 128, § 1, eff. 9/23/2011. Effective Date: 11-03-2000

4765.08 Statewide emergency medical services plan - statewide regulation of emergency medical services during periods of disaster.

The state board of emergency medical services shall prepare a statewide emergency medical services plan and shall revise the plan as necessary. The board shall prepare a plan for the statewide regulation of emergency medical services during periods of disaster. The plan shall be consistent with the statewide emergency medical services plan required under this section and with the statewide emergency operations plan required under section 5502.22 of the Revised Code. The board shall submit the plan to the emergency management agency created under section 5502.22 of the Revised Code. The board shall cooperate with the agency in any other manner the agency considers necessary to develop and implement the statewide emergency operations plan.

Effective Date: 12-02-1996

4765.09 Recommendations for operation of ambulance and emergency medical service organizations.

The state board of emergency medical services shall prepare recommendations for the operation of ambulance service organizations, air medical organizations, and emergency medical service organizations. Within thirty days following the preparation or modification of recommendations, the board shall notify the board of county commissioners of any county, the board of township trustees of any township, the board of trustees of any joint ambulance district, or the board of trustees of any joint emergency medical services district in which there exist ambulance service organizations, air medical organizations, or emergency medical service organizations of any board recommendations for the operation of such organizations. The recommendations shall include, but not be limited to:

- (A) The definition and classification of ambulances and medical aircraft;
- (B) The design, equipment, and supplies for ambulances and medical aircraft, including special equipment, supplies, training, and staffing required to assist pediatric and geriatric emergency victims;
- (C) The minimum number and type of personnel for the operation of ambulances and medical aircraft;
- (D) The communication systems necessary for the operation of ambulances and medical aircraft;
- (E) Reports to be made by persons holding certificates of accreditation or approval issued under section 4765.17 of the Revised Code and certificates to practice issued under section 4765.30 of the Revised Code to ascertain compliance with this chapter and the rules and recommendations adopted thereunder and to ascertain the quantity and quality of ambulance service organizations, air medical organizations, and emergency medical service organizations throughout the state.

Effective Date: 11-03-2000

4765.10 State board - powers and duties.

- (A) The state board of emergency medical services shall do all of the following:
 - (1) Administer and enforce the provisions of this chapter and the rules adopted under it;
 - (2) Approve, in accordance with procedures established in rules adopted under section 4765.11 of the Revised Code, examinations that demonstrate competence to have a certificate to practice renewed without completing a continuing education program;
 - (3) Advise applicants for state or federal emergency medical services funds, review and comment on applications for these funds, and approve the use of all state and federal funds designated solely for emergency medical service programs unless federal law requires another state agency to approve the use of all such federal funds;
 - (4) Serve as a statewide clearinghouse for discussion, inquiry, and complaints concerning emergency medical services;
 - (5) Make recommendations to the general assembly on legislation to improve the delivery of emergency medical services;

(6) Maintain a toll-free long distance telephone number through which it shall respond to questions about emergency medical services;

(7) Work with appropriate state offices in coordinating the training of firefighters and emergency medical service personnel. Other state offices that are involved in the training of firefighters or emergency medical service personnel shall cooperate with the board and its committees and subcommittees to achieve this goal.

(8) Provide a liaison to the state emergency operation center during those periods when a disaster, as defined in section 5502.21 of the Revised Code, has occurred in this state and the governor has declared an emergency as defined in that section.

(B) The board may do any of the following:

(1) Investigate complaints concerning emergency medical services and emergency medical service organizations as it determines necessary;

(2) Enter into reciprocal agreements with other states that have standards for accreditation of emergency medical services training programs and for certification of first responders, EMTs-basic, EMTs-I, paramedics, firefighters, or fire safety inspectors that are substantially similar to those established under this chapter and the rules adopted under it;

(3) Establish a statewide public information system and public education programs regarding emergency medical services; (4) Establish an injury prevention program.

Effective Date: 11-03-2000

4765.101 Complaint and investigation of violations.

(A) The state board of emergency medical services shall investigate any allegation that a person has violated this chapter or a rule adopted under it. Any person may submit to the board a written complaint regarding an alleged violation of this chapter or a rule adopted under it. In the absence of fraud or bad faith, no person submitting a complaint to the board or testifying in an adjudication hearing conducted in accordance with Chapter 119. of the Revised Code with regard to such an alleged violation shall be liable to any person in damages in a civil action as a result of submitting the complaint or providing testimony.

(B) In investigating an allegation, the board may do any of the following: (1) Administer oaths; (2) Order the taking of depositions; (3) Issue subpoenas; (4) Compel the attendance of witnesses and production of books, accounts, papers, records, documents, and testimony.

(C) A subpoena for patient record information shall not be issued without consultation with the attorney general's office and approval of the executive director of the board. Before issuance of a subpoena for patient record information, the executive director shall determine whether there is probable cause to believe that the complaint filed alleges a violation of this chapter or any rule adopted under it and that the records sought are relevant to the alleged violation and material to the investigation. The subpoena may apply only to records that cover a reasonable period of time surrounding the alleged violation.

(D) On failure to comply with any subpoena issued by the board and after reasonable notice to the person being subpoenaed, the board may move, pursuant to the Rules of Civil Procedure, for an order compelling the production of persons or records.

(E) A subpoena issued by the board may be served by a sheriff, the sheriff's deputy, or an investigator for the division of emergency medical services of the department of public safety. Service of a subpoena issued by the board may be made by delivering a copy of the subpoena to the person named in it, reading it to the person, or leaving it at the person's usual place of residence. When the person being served is an individual authorized by this chapter to practice emergency medical services, service of the subpoena may be made by certified mail, restricted delivery, return receipt requested, and the subpoena shall be deemed served on the date delivery is made or on the date that the person refuses to accept delivery.

Effective Date: 01-18-2007

4765.102 Investigative information confidential.

(A) As used in this section, "licensing agency" means any entity that has the authority pursuant to Title XLVII of the Revised Code to issue a license, and any other agency of this or another state, other than the Ohio supreme court, that has the authority to issue a license that authorizes an individual to engage in an occupation or profession. "Licensing agency" includes an administrative officer that has authority to issue a license that authorizes an individual to engage in an occupation or profession.

(B) Except as provided in divisions (C) and (D) of this section and section 4765.111 of the Revised Code, all information the state board of emergency medical services receives pursuant to an investigation, including information regarding an alleged violation of this chapter or rules adopted under it or a complaint submitted under division (A) of section 4765.101 of the Revised Code, is confidential, and is not subject to discovery in any civil action, during the course of the investigation and any adjudication proceedings that result from the investigation. Upon completion of the investigation and any resulting adjudication proceedings, the information is a matter of public record for purposes of section 149.43 of the Revised Code.

(C) The board may release information otherwise made confidential by division (B) of this section to law enforcement officers or licensing agencies of this or another state that are prosecuting, adjudicating, or investigating the holder of a certificate issued under this chapter or a person who allegedly engaged in the unauthorized provision of emergency medical services. A law enforcement officer or licensing agency with information disclosed by the board under this division shall not divulge the information other than for the purpose of an adjudication by a court or licensing agency to which the subject of the adjudication is a party.

(D) If an investigation conducted under section 4765.101 of the Revised Code requires a review of patient records, the investigation and proceedings related to it shall be conducted in such a manner as to protect patient confidentiality. The board shall not make public the name or any other identifying information about a patient unless proper consent is given in accordance with rules adopted by the board. If the patient is less than eighteen years of age, the board shall obtain consent from the patient's parent, guardian, or custodian.

Effective Date: 01-18-2007

4765.11 Administrative rules for administration.

(A) The state board of emergency medical services shall adopt, and may amend and rescind, rules in accordance with Chapter 119. of the Revised Code and division (C) of this section that establish all of the following: (1) Procedures for its governance and the control of its actions and business affairs;

(2) Standards for the performance of emergency medical services by first responders, emergency medical technicians-basic, emergency medical technicians-intermediate, and emergency medical technicians-paramedic;

(3) Application fees for certificates of accreditation, certificates of approval, certificates to teach, and certificates to practice, which shall be deposited into the trauma and emergency medical services fund created in section 4513.263 of the Revised Code;

(4) Criteria for determining when the application or renewal fee for a certificate to practice may be waived because an applicant cannot afford to pay the fee;

(5) Procedures for issuance and renewal of certificates of accreditation, certificates of approval, certificates to teach, and certificates to practice, including any procedures necessary to ensure that adequate notice of renewal is provided in accordance with division (D) of section 4765.30 of the Revised Code;

(6) Procedures for suspending or revoking certificates of accreditation, certificates of approval, certificates to teach, and certificates to practice;

(7) Grounds for suspension or revocation of a certificate to practice issued under section 4765.30 of the Revised Code and for taking any other disciplinary action against a first responder, EMT-basic, EMT-I, or paramedic;

(8) Procedures for taking disciplinary action against a first responder, EMT-basic, EMT-I, or paramedic;

(9) Standards for certificates of accreditation and certificates of approval;

(10) Qualifications for certificates to teach;

(11) Requirements for a certificate to practice;

(12) The curricula, number of hours of instruction and training, and instructional materials to be used in adult and pediatric emergency medical services training programs and adult and pediatric emergency medical services continuing education programs;

(13) Procedures for conducting courses in recognizing symptoms of life-threatening allergic reactions and in calculating proper dosage levels and administering injections of epinephrine to adult and pediatric patients who suffer life-threatening allergic reactions;

(14) Examinations for certificates to practice;

- (15) Procedures for administering examinations for certificates to practice;
- (16) Procedures for approving examinations that demonstrate competence to have a certificate to practice renewed without completing an emergency medical services continuing education program;
- (17) Procedures for granting extensions and exemptions of emergency medical services continuing education requirements;
- (18) Procedures for approving the additional emergency medical services first responders are authorized by division (C) of section 4765.35 of the Revised Code to perform, EMTs-basic are authorized by division (C) of section 4765.37 of the Revised Code to perform, EMTs-I are authorized by division (B)(5) of section 4765.38 of the Revised Code to perform, and paramedics are authorized by division (B)(6) of section 4765.39 of the Revised Code to perform;
- (19) Standards and procedures for implementing the requirements of section 4765.06 of the Revised Code, including designations of the persons who are required to report information to the board and the types of information to be reported;
- (20) Procedures for administering the emergency medical services grant program established under section 4765.07 of the Revised Code;
- (21) Procedures consistent with Chapter 119. of the Revised Code for appealing decisions of the board;
- (22) Minimum qualifications and peer review and quality improvement requirements for persons who provide medical direction to emergency medical service personnel;
- (23) The manner in which a patient, or a patient's parent, guardian, or custodian may consent to the board releasing identifying information about the patient under division (D) of section 4765.102 of the Revised Code;
- (24) Circumstances under which a training program or continuing education program, or portion of either type of program, may be taught by a person who does not hold a certificate to teach issued under section 4765.23 of the Revised Code;
- (25) Certification cycles for certificates issued under sections 4765.23 and 4765.30 of the Revised Code and certificates issued by the executive director of the state board of emergency medical services under section 4765.55 of the Revised Code that establish a common expiration date for all certificates.
- (B) The board may adopt, and may amend and rescind, rules in accordance with Chapter 119. of the Revised Code and division (C) of this section that establish the following: (1) Specifications of information that may be collected under the trauma system registry and incidence reporting system created under section 4765.06 of the Revised Code; (2) Standards and procedures for implementing any of the recommendations made by any committees of the board or under section 4765.04 of the Revised Code; (3) Requirements that a person must meet to receive a certificate to practice as a first responder pursuant to division (A)(2) of section 4765.30 of the Revised Code; (4) Any other rules necessary to implement this chapter.

(C) In developing and administering rules adopted under this chapter, the state board of emergency medical services shall consult with regional directors and regional physician advisory boards created by section 4765.05 of the Revised Code and emphasize the special needs of pediatric and geriatric patients.

(D) Except as otherwise provided in this division, before adopting, amending, or rescinding any rule under this chapter, the board shall submit the proposed rule to the director of public safety for review. The director may review the proposed rule for not more than sixty days after the date it is submitted. If, within this sixty-day period, the director approves the proposed rule or does not notify the board that the rule is disapproved, the board may adopt, amend, or rescind the rule as proposed. If, within this sixty-day period, the director notifies the board that the proposed rule is disapproved, the board shall not adopt, amend, or rescind the rule as proposed unless at least twelve members of the board vote to adopt, amend, or rescind it.

This division does not apply to an emergency rule adopted in accordance with section 119.03 of the Revised Code.

Amended by 128th General Assembly File No. 9, HB 1, § 101.01, eff. 10/16/2009. Effective Date: 11-03-2000; 01-18-2007; 2008 SB175 09-12-2008
4765.111 Disciplinary proceedings.

Except as provided in this section or sections 4765.112 to 4765.116 of the Revised Code, the state board of emergency medical services shall conduct disciplinary proceedings regarding the holder of a certificate issued under this chapter in accordance with rules adopted by the board under section 4765.11 of the Revised Code. The board and a holder of a certificate are the parties to a hearing conducted under this chapter. Either party may submit a written request to the other party for a list of witnesses and copies of documents intended to be introduced at the hearing. The request shall be in writing and shall be served not less than thirty-seven days prior to the commencement of the hearing, unless the hearing officer or presiding board member grants an extension of time to make the request. Not later than thirty days before the hearing, the responding party shall provide the requested list of witnesses and copies of documents to the requesting party, unless the hearing officer or presiding board member grants an extension of time to provide the list and copies. Failure to timely provide a list or copies requested in accordance with this section shall result in exclusion from the hearing of the witnesses, testimony, or documents.

Effective Date: 01-18-2007

4765.112 Suspension of certificate without hearing.

(A) The state board of emergency medical services, by an affirmative vote of the majority of its members, may suspend without a prior hearing a certificate to practice issued under this chapter if the board determines that there is clear and convincing evidence that continued practice by the certificate holder presents a danger of immediate and serious harm to the public and that the certificate holder has done any of the following:

- (1) Furnished false, fraudulent, or misleading information to the board;
- (2) Engaged in activities that exceed those permitted by the individual's certificate;

(3) In a court of this or any other state or federal court been convicted of, pleaded guilty to, or been the subject of a judicial finding of guilt of, a judicial finding of guilt resulting from a plea of no contest to, or a judicial finding of eligibility for intervention in lieu of conviction for, a felony or for a misdemeanor committed in the course of practice or involving gross immorality or moral turpitude.

(B) Immediately following the decision to impose a summary suspension, the board, in accordance with section 119.07 of the Revised Code, shall issue a written order of suspension, cause it to be delivered to the certificate holder, and notify the certificate holder of the opportunity for a hearing. If timely requested by the certificate holder, a hearing shall be conducted in accordance with section 4765.115 of the Revised Code.

Effective Date: 01-18-2007

4765.113 Reconsideration of suspension based on conviction.

If the state board of emergency medical services imposes a suspension on the basis of a conviction, judicial finding, or plea as described in division (A)(3) of section 4765.112 of the Revised Code that is overturned on appeal, the certificate holder, on exhaustion of the criminal appeal process, may file with the board a petition for reconsideration of the suspension along with appropriate court documents. On receipt of the petition and documents, the board shall reinstate the certificate holder's certificate to practice.

Effective Date: 01-18-2007

4765.114 Certificate automatically suspended for certain offenses.

(A) A certificate to practice emergency medical services issued under this chapter is automatically suspended on the certificate holder's conviction of, plea of guilty to, or judicial finding of guilt of any of the following: aggravated murder, murder, voluntary manslaughter, felonious assault, kidnapping, rape, sexual battery, gross sexual imposition, aggravated arson, aggravated burglary, aggravated robbery, or a substantially equivalent offense committed in this or another jurisdiction. Continued practice after the suspension is practicing without a certificate.

(B) If the state board of emergency medical services has knowledge that an automatic suspension has occurred, it shall notify, in accordance with section 119.07 of the Revised Code, the certificate holder of the suspension and of the opportunity for a hearing. If timely requested by the certificate holder, a hearing shall be conducted in accordance with section 4765.115 of the Revised Code.

Effective Date: 01-18-2007

4765.115 Suspension orders - administrative hearing - disposition.

(A) A suspension order issued under section 4765.112 or automatic suspension under section 4765.114 of the Revised Code is not subject to suspension by a court prior to a hearing under this section or during the pendency of any appeal filed under section 119.12 of the Revised Code.

(B) A suspension order issued under section 4765.112 or automatic suspension under section 4765.114 of the Revised Code remains in effect, unless reversed by the state board of emergency medical services, until a final adjudication order issued by the board pursuant to this section becomes effective.

(C) Hearings requested pursuant to section 4765.112 or 4765.114 of the Revised Code shall be conducted under this section in accordance with Chapter 119. of the Revised Code.

(D) A hearing under this section shall be held not later than forty-five days but not earlier than forty days after the certificate holder requests it, unless another date is agreed to by the certificate holder and the board.

(E) After completion of an adjudication hearing, the board may adopt, by an affirmative vote of the majority of its members, a final adjudication order that imposes any of the following sanctions:

(1) Suspension of the holder's certificate to practice; (2) Revocation of the holder's certificate to practice; (3) Issuance of a written reprimand;

(4) A refusal to renew or a limitation on the holder's certificate to practice. The board shall issue its final adjudication order not later than forty-five days after completion of an adjudication hearing. If the board does not issue a final order within that time period, the suspension order is void, but any final adjudication order subsequently issued is not affected.

(F) Any action taken by the board under this section resulting in a suspension from practice shall be accompanied by a written statement of the conditions under which the certificate to practice may be reinstated. Reinstatement of a certificate suspended under this section requires an affirmative vote by the majority of the members of the board.

(G) When the board revokes or refuses to reinstate a certificate to practice, the board may specify that its action is permanent. An individual subject to permanent action taken by the board is forever ineligible to hold a certificate of the type revoked or refused, and the board shall not accept from the individual an application for reinstatement of the certificate or for a new certificate.

Effective Date: 01-18-2007

4765.116 Procedure where hearing not timely requested.

If a certificate holder subject to a suspension order issued by the state board of emergency medical services under section 4765.112 or an automatic suspension order under section 4765.114 of the Revised Code fails to make a timely request for a hearing, the following apply:

(A) In the case of a certificate holder subject to a summary suspension order, the board is not required to hold a hearing, but may adopt, by an affirmative vote of a majority of its members, a final order that contains the board's findings. In the final order, the board may order any of the sanctions listed in division (E) of section 4765.115 of the Revised Code.

(B) In the case of a certificate holder subject to an automatic suspension order, the board may adopt, by an affirmative vote of a majority of its members, a final order that permanently revokes the holder's certificate to practice.

Effective Date: 01-18-2007

4765.12 Guidelines for care of trauma victims by emergency medical service personnel - conduct of peer review and quality assurance programs by emergency medical service organizations.

(A) Not later than two years after the effective date of this section, the state board of emergency medical services shall develop and distribute guidelines for the care of trauma victims by emergency medical service personnel and for the conduct of peer review and quality assurance programs by emergency medical service organizations. The guidelines shall be consistent with the state trauma triage protocols adopted in rules under sections 4765.11 and 4765.40 of the Revised Code and shall place emphasis on the special needs of pediatric and geriatric trauma victims. In developing the guidelines, the board shall consult with entities with interests in trauma and emergency medical services and shall consider any relevant guidelines adopted by national organizations, including the American college of surgeons, American college of emergency physicians, and American academy of pediatrics. The board shall distribute the guidelines, and amendments to the guidelines, to each emergency medical service organization, regional director, regional physician advisory board, certified emergency medical service instructor, and person who regularly provides medical direction to emergency medical service personnel in this state.

(B) Not later than three years after the effective date of this section, each emergency medical service organization in this state shall implement ongoing peer review and quality assurance programs designed to improve the availability and quality of the emergency medical services it provides. The form and content of the programs shall be determined by each emergency medical service organization. In implementing the programs, each emergency medical service organization shall consider how to improve its ability to provide effective trauma care, particularly for pediatric and geriatric trauma victims, and shall take into account the trauma care guidelines developed by the state board of emergency medical services under this section. Information generated solely for use in a peer review or quality assurance program conducted on behalf of an emergency medical service organization is not a public record under section 149.43 of the Revised Code. Such information, and any discussion conducted in the course of a peer review or quality assurance program conducted on behalf of an emergency medical service organization, is not subject to discovery in a civil action and shall not be introduced into evidence in a civil action against the emergency medical service organization on whose behalf the information was generated or the discussion occurred. No emergency medical service organization on whose behalf a peer review or quality assurance program is conducted, and no person who conducts such a program, because of performing such functions, shall be liable in a civil action for betrayal of professional confidence or otherwise in the absence of willful or wanton misconduct.

Effective Date: 11-03-2000

4765.15 Continuing education - approval and accreditation.

A person seeking to operate an emergency medical services training program shall submit a completed application for accreditation to the state board of emergency medical services on a form the board shall prescribe and furnish. The application shall be accompanied by the appropriate application fee established in rules adopted under section 4765.11 of the Revised Code. A person seeking to operate an emergency medical services continuing education program shall submit a completed application for approval to the board on a form the board shall prescribe and furnish. The application shall be

accompanied by the appropriate application fee established in rules adopted under section 4765.11 of the Revised Code. The board shall administer the accreditation and approval processes pursuant to rules adopted under section 4765.11 of the Revised Code. In administering these processes, the board may authorize other persons to evaluate applications for accreditation or approval and may accept the recommendations made by those persons. The board may cause an investigation to be made into the accuracy of the information submitted in any application for accreditation or approval. If an investigation indicates that false, misleading, or incomplete information has been submitted to the board in connection with any application for accreditation or approval, the board shall conduct a hearing on the matter in accordance with Chapter 119. of the Revised Code.

Effective Date: 11-03-2000

4765.16 Continuing education - development.

(A) All courses offered through an emergency medical services training program or an emergency medical services continuing education program, other than ambulance driving, shall be developed under the direction of a physician who specializes in emergency medicine. Each course that deals with trauma care shall be developed in consultation with a physician who specializes in trauma surgery. Except as specified by the state board of emergency medical services pursuant to rules adopted under section 4765.11 of the Revised Code, each course offered through a training program or continuing education program shall be taught by a person who holds the appropriate certificate to teach issued under section 4765.23 of the Revised Code.

(B) A training program for first responders shall meet the standards established in rules adopted by the board under section 4765.11 of the Revised Code. The program shall include courses in both of the following areas for at least the number of hours established by the board's rules:

- (1) Emergency victim care;
- (2) Reading and interpreting a trauma victim's vital signs.

(C) A training program for emergency medical technicians-basic shall meet the standards established in rules adopted by the board under section 4765.11 of the Revised Code. The program shall include courses in each of the following areas for at least the number of hours established by the board's rules: (1) Emergency victim care; (2) Reading and interpreting a trauma victim's vital signs; (3) Triage protocols for adult and pediatric trauma victims; (4) In-hospital training; (5) Clinical training; (6) Training as an ambulance driver. Each operator of a training program for emergency medical technicians-basic shall allow any pupil in the twelfth grade in a secondary school who is at least seventeen years old and who otherwise meets the requirements for admission into such a training program to be admitted to and complete the program and, as part of the training, to ride in an ambulance with emergency medical technicians-basic, emergency medical technicians-intermediate, and emergency medical technicians-paramedic. Each emergency medical service organization shall allow pupils participating in training programs to ride in an ambulance with emergency medical technicians-basic, advanced emergency medical technicians-intermediate, and emergency medical technicians-paramedic.

(D) A training program for emergency medical technicians-intermediate shall meet the standards established in rules adopted by the board under section 4765.11 of the Revised Code. The program shall include, or require as a prerequisite, the training specified in division (C) of this section and courses in each of the following areas for at least the number of hours established by the board's rules: (1) Recognizing symptoms of life-threatening allergic reactions and in calculating proper dosage levels and administering injections of epinephrine to persons who suffer life-threatening allergic reactions, conducted in accordance with rules adopted by the board under section 4765.11 of the Revised Code; (2) Venous access procedures; (3) Cardiac monitoring and electrical interventions to support or correct the cardiac function.

(E) A training program for emergency medical technicians-paramedic shall meet the standards established in rules adopted by the board under section 4765.11 of the Revised Code. The program shall include, or require as a prerequisite, the training specified in divisions (C) and (D) of this section and courses in each of the following areas for at least the number of hours established by the board's rules: (1) Medical terminology; (2) Venous access procedures; (3) Airway procedures; (4) Patient assessment and triage; (5) Acute cardiac care, including administration of parenteral injections, electrical interventions, and other emergency medical services; (6) Emergency and trauma victim care beyond that required under division (C) of this section; (7) Clinical training beyond that required under division (C) of this section.

(F) A continuing education program for first responders, EMTs-basic, EMTs-I, or paramedics shall meet the standards established in rules adopted by the board under section 4765.11 of the Revised Code. A continuing education program shall include instruction and training in subjects established by the board's rules for at least the number of hours established by the board's rules.

Effective Date: 11-03-2000; 01-18-2007

4765.17 Issuing certificate of accreditation or certificate of approval.

(A) The state board of emergency medical services shall issue the appropriate certificate of accreditation or certificate of approval to an applicant who is of good reputation and meets the requirements of section 4765.16 of the Revised Code. The board shall grant or deny a certificate of accreditation or certificate of approval within one hundred twenty days of receipt of the application. The board may issue or renew a certificate of accreditation or certificate of approval on a provisional basis to an applicant who is of good reputation and is in substantial compliance with the requirements of section 4765.16 of the Revised Code. The board shall inform an applicant receiving such a certificate of the conditions that must be met to complete compliance with section 4765.16 of the Revised Code.

(B) Except as provided in division (C) of this section, a certificate of accreditation or certificate of approval is valid for up to five years and may be renewed by the board pursuant to procedures and standards established in rules adopted under section 4765.11 of the Revised Code. An application for renewal shall be accompanied by the appropriate renewal fee established in rules adopted under section 4765.11 of the Revised Code.

(C) A certificate of accreditation or certificate of approval issued on a provisional basis is valid for the length of time established by the board. If the board finds that the holder of such a certificate has met the conditions it specifies under division (A) of this section, the board shall issue the appropriate certificate of accreditation or certificate of approval.

(D) A certificate of accreditation is valid only for the emergency medical services training program or programs for which it is issued. The holder of a certificate of accreditation may apply to operate additional training programs in accordance with rules adopted by the board under section 4765.11 of the Revised Code. Any additional training programs shall expire on the expiration date of the applicant's current certificate. A certificate of approval is valid only for the emergency medical services continuing education program for which it is issued. Neither is transferable.

(E) The holder of a certificate of accreditation or a certificate of approval may offer courses at more than one location in accordance with rules adopted under section 4765.11 of the Revised Code.

Amended by 128th General Assembly File No. 9, HB 1, § 101.01, eff. 10/16/2009. Effective Date: 01-14-1993

4765.18 Grounds for suspension or revocation of certificate.

The state board of emergency medical services may suspend or revoke a certificate of accreditation or a certificate of approval issued under section 4765.17 of the Revised Code for any of the following reasons:

(A) Violation of this chapter or any rule adopted under it;

(B) Furnishing of false, misleading, or incomplete information to the board;

(C) The signing of an application or the holding of a certificate of accreditation by a person who has pleaded guilty to or has been convicted of a felony, or has pleaded guilty to or been convicted of a crime involving moral turpitude;

(D) The signing of an application or the holding of a certificate of accreditation by a person who is addicted to the use of any controlled substance or has been adjudicated incompetent for that purpose by a court, as provided in section 5122.301 of the Revised Code;

(E) Violation of any commitment made in an application for a certificate of accreditation or certificate of approval;

(F) Presentation to prospective students of misleading, false, or fraudulent information relating to the emergency medical services training program or emergency medical services continuing education program, employment opportunities, or opportunities for enrollment in accredited institutions of higher education after entering or completing courses offered by the operator of a program;

(G) Failure to maintain in a safe and sanitary condition premises and equipment used in conducting courses of study;

(H) Failure to maintain financial resources adequate for the satisfactory conduct of courses of study or to retain a sufficient number of certified instructors;

(I) Discrimination in the acceptance of students upon the basis of race, color, religion, sex, or national origin. Effective Date: 11-12-1992

4765.22 Applying to teach in emergency medical services training program or
emergency medical services continuing education program.

A person seeking a certificate to teach in an emergency medical services training program or an emergency medical services continuing education program shall submit a completed application for certification to the state board of emergency medical services on a form the board shall prescribe and furnish. The application shall be accompanied by the appropriate application fee established in rules adopted under section 4765.11 of the Revised Code.

Effective Date: 11-12-1992

4765.23 Teaching certificate - issuance - renewal - suspension or revocation.

The state board of emergency medical services shall issue a certificate to teach in an emergency medical services training program or an emergency medical services continuing education program to any applicant who it determines meets the qualifications established in rules adopted under section 4765.11 of the Revised Code. The certificate shall indicate each type of instruction and training the certificate holder may teach under the certificate.

A certificate to teach shall have a certification cycle established by the board and may be renewed by the board pursuant to rules adopted under section 4765.11 of the Revised Code. An application for renewal shall be accompanied by the appropriate renewal fee established in rules adopted under section 4765.11 of the Revised Code.

The board may suspend or revoke a certificate to teach pursuant to rules adopted under section 4765.11 of the Revised Code.

Amended by 128th General Assembly File No. 9, HB 1, § 101.01, eff. 10/16/2009. Effective Date: 11-12-1992

4765.24 Continuing education - certificate of completion.

The operator of an accredited training program for first responders shall issue a certificate of completion in first responder training to each student who successfully completes the training program described in division (B) of section 4765.16 of the Revised Code. The operator of an accredited training program for emergency medical technicians-basic shall issue a certificate of completion in emergency medical services training-basic to each student who successfully completes the EMT- basic program described in division (C) of section 4765.16 of the Revised Code. The operator of an accredited training program for emergency medical technicians-intermediate shall issue a certificate of completion in emergency medical services training-intermediate to each student who successfully completes the EMT-I program described in division (D) of section 4765.16 of the Revised Code. The operator of an accredited training program for emergency medical technicians- paramedic shall issue a certificate of completion in emergency medical services training-paramedic to each student who successfully completes the training program described in division (E) of section 4765.16 of the Revised Code. The operator of an approved emergency medical services continuing education program shall issue the appropriate certificate of completion in emergency medical services continuing education to each student who successfully completes a continuing education program described in division (F) of section 4765.16 of the Revised Code.

Effective Date: 10-01-1996

4765.28 Applying for certificate to practice.

A person seeking a certificate to practice as a first responder, emergency medical technician-basic, emergency medical technician-intermediate, or emergency medical technician-paramedic shall submit a completed application for certification to the state board of emergency medical services on a form the board shall prescribe and furnish. Except as provided in division (B) of section 4765.29 of the Revised Code, the application shall include evidence that the applicant received the appropriate certificate of completion pursuant to section 4765.24 of the Revised Code. The application shall be accompanied by the appropriate application fee established in rules adopted under section 4765.11 of the Revised Code, unless the board waives the fee on determining pursuant to those rules that the applicant cannot afford to pay the fee.

Effective Date: 10-01-1996

4765.29 Examination.

(A) The state board of emergency medical services shall provide for the examination of applicants for certification to practice as first responders, emergency medical technicians-basic, emergency medical technicians-intermediate, and emergency medical technicians-paramedic. The examinations shall be established by the board in rules adopted under section 4765.11 of the Revised Code. The board may administer the examinations or contract with other persons to administer the examinations. In either case, the examinations shall be administered pursuant to procedures established in rules adopted under section 4765.11 of the Revised Code and shall be offered at various locations in the state selected by the board. Except as provided in division (B) of this section, an applicant shall not be permitted to take an examination for the same certificate to practice more than three times since last receiving the certificate of completion pursuant to section 4765.24 of the Revised Code that qualifies the applicant to take the examination unless the applicant receives another certificate of completion that qualifies the applicant to take the examination.

(B) On request of an applicant who fails three examinations for the same certificate to practice, the board may direct the applicant to complete a specific portion of an accredited emergency medical services training program. If the applicant provides satisfactory proof to the board that the applicant has successfully completed that portion of the program, the applicant shall be permitted to take the examination.

Effective Date: 10-01-1996

4765.30 Qualifications for certificate to practice.

(1) The state board of emergency medical services shall issue a certificate to practice as a first responder to an applicant who meets all of the following conditions: (a) Except as provided in division (A)(2) of this section, is a volunteer for a nonprofit emergency medical service organization or a nonprofit fire department; (b) Holds the appropriate certificate of completion issued in accordance with section 4765.24 of the Revised Code; (c) Passes the appropriate examination conducted under section 4765.29 of the Revised Code; (d) Is not in violation of any provision of this chapter or the rules adopted under it; (e) Meets any other certification requirements established in rules adopted under section 4765.11 of the Revised Code.

(2) The board may waive the requirement to be a volunteer for a nonprofit entity if the applicant meets other requirements established in rules adopted under division (B)(3) of section 4765.11 of the Revised Code relative to a person's eligibility to practice as a first responder.

(B) The state board of emergency medical services shall issue a certificate to practice as an emergency medical technician- basic to an applicant who meets all of the following conditions: (1) Holds a certificate of completion in emergency medical services training-basic issued in accordance with section 4765.24 of the Revised Code; (2) Passes the examination for emergency medical technicians-basic conducted under section 4765.29 of the Revised Code; (3) Is not in violation of any provision of this chapter or the rules adopted under it; (4) Meets any other certification requirements established in rules adopted under section 4765.11 of the Revised Code.

(C) The state board of emergency medical services shall issue a certificate to practice as an emergency medical technician- intermediate or emergency medical technician-paramedic to an applicant who meets all of the following conditions: (1) Holds a certificate to practice as an emergency medical technician-basic; (2) Holds the appropriate certificate of completion issued in accordance with section 4765.24 of the Revised Code; (3) Passes the appropriate examination conducted under section 4765.29 of the Revised Code; (4) Is not in violation of any provision of this chapter or the rules adopted under it; (5) Meets any other certification requirements established in rules adopted under section 4765.11 of the Revised Code.

(D) A certificate to practice shall have a certification cycle established by the board and may be renewed by the board pursuant to rules adopted under section 4765.11 of the Revised Code. Not later than sixty days prior to the expiration date of an individual's certificate to practice, the board shall notify the individual of the scheduled expiration. An application for renewal shall be accompanied by the appropriate renewal fee established in rules adopted under section 4765.11 of the Revised Code, unless the board waives the fee on determining pursuant to those rules that the applicant cannot afford to pay the fee. Except as provided in division (B) of section 4765.31 of the Revised Code, the application shall include evidence of either of the following: (1) That the applicant received a certificate of completion from the appropriate emergency medical services continuing education program pursuant to section 4765.24 of the Revised Code; (2) That the applicant has successfully passed an examination that demonstrates the competence to have a certificate renewed without completing an emergency medical services continuing education program. The board shall approve such examinations in accordance with rules adopted under section 4765.11 of the Revised Code.

(E) The board shall not require an applicant for renewal of a certificate to practice to take an examination as a condition of renewing the certificate. This division does not preclude the use of examinations by operators of approved emergency medical services continuing education programs as a condition for issuance of a certificate of completion in emergency medical services continuing education.

4765.301 Criminal records check.

(A) An appointing authority may request the superintendent of BCII to conduct a criminal records check with respect to any person who is under consideration for appointment or employment as an emergency medical technician-basic, an emergency medical technician-intermediate, or an emergency medical technician-paramedic.

(B) (1) The appointing authority may request that the superintendent of BCII obtain information from the federal bureau of investigation as a part of the criminal records check requested pursuant to division (A) of this section. (2) An appointing authority authorized by division (A) of this section to request a criminal records check shall provide to each person for whom the appointing authority intends to request a criminal records check a copy of the form prescribed pursuant to division (C)(1) of section 109.578 of the Revised Code and a standard impression sheet to obtain fingerprint impressions prescribed pursuant to division (C)(2) of section 109.578 of the Revised Code, obtain the completed form and impression sheet from the person, and forward the completed form and impression sheet to the superintendent of BCII at the time the criminal records check is requested. (3) Any person subject to a criminal records check who receives a copy of the form and a copy of the impression sheet pursuant to division (B)(2) of this section and who is requested to complete the form and provide a set of fingerprint impressions shall complete the form or provide all the information necessary to complete the form and shall provide the impression sheet with the impressions of the person's fingerprints. If a person fails to provide the information necessary to complete the form or fails to provide impressions of the person's fingerprints, the appointing authority shall not appoint or employ the person as an emergency medical technician-basic, an emergency medical technician-intermediate, or an emergency medical technician-paramedic.

(C) (1) Except as otherwise provided in division (C)(2) of this section, an appointing authority shall not appoint or employ a person as an emergency medical technician-basic, an emergency medical technician-intermediate, or an emergency medical technician-paramedic if the appointing authority has requested a criminal records check pursuant to division (A) of this section and the criminal records check indicates that the person previously has been convicted of or pleaded guilty to any of the following: (a) A felony; (b) A violation of section 2909.03 of the Revised Code; (c) A violation of an existing or former law of this state, any other state, or the United States that is substantially equivalent to any of the offenses described in division (C)(1)(a) or (b) of this section. (2) Notwithstanding division (C)(1) of this section, an appointing authority may appoint or employ a person as an emergency medical technician-basic, an emergency medical technician-intermediate, or an emergency medical technician-paramedic if all of the following apply: (a) The appointing authority has requested a criminal records check pursuant to division (A) of this section. (b) The criminal records check indicates that the person previously has been convicted of or pleaded guilty to any of the offenses described in division (C)(1) of this section. (c) The person meets rehabilitation standards established in rules adopted under division (E) of this section. (3) If an appointing authority requests a criminal records check pursuant to division (A) of this section, the appointing authority may appoint or employ a person as an emergency medical technician-basic, an emergency medical technician-intermediate, or an emergency medical technician-paramedic conditionally until the criminal records check is completed and the appointing authority receives the results. If the results of the criminal records check indicate that, pursuant to division (C)(1) of this section, the person subject to the criminal records check is disqualified from appointment or employment, the appointing authority shall release the person from appointment or employment.

(D) The appointing authority shall pay to the bureau of criminal identification and investigation the fee prescribed pursuant to division (C)(3) of section 109.578 of the Revised Code for each criminal records check conducted in accordance with that section. The appointing authority may charge the applicant who is subject to the criminal records check a fee for the costs the appointing authority incurs in obtaining the criminal records check. A fee charged under this division shall not exceed the amount of fees the appointing authority pays for the criminal records check. If a fee is charged under this division, the appointing authority shall notify the applicant at the time of the applicant's initial application for appointment or employment of the amount of the fee and that, unless the fee is paid, the applicant will not be considered for appointment or employment.

(E) The appointing authority shall adopt rules in accordance with Chapter 119. of the Revised Code to implement this section. The rules shall include rehabilitation standards a person who has been convicted of or pleaded guilty to an offense listed in division (C)(1) of this section must meet for the appointing authority to appoint or employ the person as an emergency medical technician-basic, an emergency medical technician-intermediate, or an emergency medical technician- paramedic.

(F) An appointing authority that intends to request a criminal records check for an applicant shall inform each applicant, at the time of the person's initial application for appointment or employment, that the applicant is required to provide a set of impressions of the person's fingerprints and that the appointing authority requires a criminal records check to be conducted and satisfactorily completed in accordance with section 109.578 of the Revised Code.

(G) As used in this section: (1) "Appointing authority" means any person or body that has the authority to hire, appoint, or employ emergency medical technicians-basic, emergency medical technicians-intermediate, or emergency medical technicians-paramedic. (2) "Criminal records check" has the same meaning as in section 109.578 of the Revised Code. (3) "Superintendent of BCII" has the same meaning as in section 2151.86 of the Revised Code.

Effective Date: 04-09-2003

4765.31 Continuing education - extension or exemption.

(A) Except as provided in division (B) of this section, a first responder, emergency medical technician-basic, emergency medical technician-intermediate, and emergency medical technician-paramedic shall complete an emergency medical services continuing education program or pass an examination approved by the state board of emergency medical services under division (A) of section 4765.10 of the Revised Code prior to the expiration of the individual's certificate to practice. Completion of the continuing education requirements for EMTs-I or paramedics satisfies the continuing education requirements for renewing the certificate to practice as an EMT-basic held by an EMT-I or paramedic.

(B) (1) An applicant for renewal of a certificate to practice may apply to the board, in writing, for an extension to complete the continuing education requirements established under division (A) of this section. The board may grant such an extension and determine the length of the extension. The board may authorize the applicant to continue to practice during the extension as if the certificate to practice had not expired. (2) An applicant for renewal of a certificate to practice may apply to the board, in writing, for an exemption from the continuing education requirements established under division (A) of this section. The board may exempt an individual or a group of individuals from all or any part of the

continuing education requirements due to active military service, unusual circumstance, emergency, special hardship, or any other cause considered reasonable by the board.

(C) Decisions of whether to grant an extension or exemption under division (B) of this section shall be made by the board pursuant to procedures established in rules adopted under section 4765.11 of the Revised Code.

Effective Date: 10-01-1996

4765.32 Certificates issued under prior law.

A current, valid certificate of accreditation issued under the provisions of former section 3303.11 or 3303.23 of the Revised Code shall remain valid until one year after the expiration date of the certificate as determined by the provisions of those sections and shall confer the same privileges and impose the same responsibilities and requirements as a certificate of accreditation issued by the state board of emergency medical services under section 4765.17 of the Revised Code. A certificate to practice as an emergency medical technician-ambulance that is valid on November 24, 1995, shall be considered a certificate to practice as an emergency medical technician-basic. A certificate to practice as an advanced emergency medical technician-ambulance that is valid on November 24, 1995, shall be considered a certificate to practice as an emergency medical technician-intermediate.

Effective Date: 11-03-2000

4765.33 Disciplinary actions.

The state board of emergency medical services may suspend or revoke certificates to practice issued under section 4765.30 of the Revised Code, and may take other disciplinary action against first responders, emergency medical technicians-basic, emergency medical technicians-intermediate, and emergency medical technicians-paramedic pursuant to rules adopted under section 4765.11 of the Revised Code.

Effective Date: 10-01-1996

4765.35 [Effective Until 3/22/2013] Authorized services by first responders.

(A) A first responder shall perform the emergency medical services described in this section in accordance with this chapter and any rules adopted under it.

(B) A first responder may provide limited emergency medical services to patients until the arrival of an emergency medical technician-basic, emergency medical technician-intermediate, or emergency medical technician-paramedic. In an emergency, a first responder may render emergency medical services such as opening and maintaining an airway, giving mouth to barrier ventilation, chest compressions, electrical interventions with automated defibrillators to support or correct the cardiac function and other methods determined by the board, controlling of hemorrhage, manual stabilization of fractures, bandaging, assisting in childbirth, and determining triage of trauma victims.

(C) A first responder may perform any other emergency medical services approved pursuant to rules adopted under section 765.11 of the Revised Code. The board shall determine whether the nature of any such service requires that a first responder receive authorization prior to performing the service.

(D) (1) Except as provided in division (D)(2) of this section, if the board determines under division (C) of this section that a service requires prior authorization, the service shall be performed only pursuant to the written or verbal authorization of a physician or of the cooperating physician advisory board, or pursuant to an authorization transmitted through a direct communication device by a physician or registered nurse designated by a physician. (2) If communications fail during an emergency situation or the required response time prohibits communication, a first responder may perform services subject to this division, if, in the judgment of the first responder, the life of the patient is in immediate danger. Services performed under these circumstances shall be performed in accordance with the written protocols for triage of adult and pediatric trauma victims established in rules adopted under sections 4765.11 and 4765.40 of the Revised Code and any applicable protocols adopted by the emergency medical service organization with which the first responder is affiliated.

Effective Date: 11-03-2000

4765.35 [Effective 3/22/2013] Authorized services by first responders

(A) A first responder shall perform the emergency medical services described in this section in accordance with this chapter and any rules adopted under it.

(B) A first responder may provide limited emergency medical services to patients until the arrival of an emergency medical technician-basic, emergency medical technician-intermediate, or emergency medical technician-paramedic. In an emergency, a first responder may render emergency medical services such as opening and maintaining an airway, giving mouth to barrier ventilation, chest compressions, electrical interventions with automated defibrillators to support or correct the cardiac function and other methods determined by the board, controlling of hemorrhage, manual stabilization of fractures, bandaging, assisting in childbirth, and determining triage of trauma victims.

(C) A first responder may perform any other emergency medical services approved pursuant to rules adopted under section 4765.11 of the Revised Code. The board shall determine whether the nature of any such service requires that a first responder receive authorization prior to performing the service.

(D) (1) Except as provided in division (D)(2) of this section, if the board determines under division (C) of this section that a service requires prior authorization, the service shall be performed only pursuant to the written or verbal authorization of a physician or of the cooperating physician advisory board, or pursuant to an authorization transmitted through a direct communication device by a physician, physician assistant designated by a physician, or registered nurse designated by a physician. (2) If communications fail during an emergency situation or the required response time prohibits communication, a first responder may perform services subject to this division, if, in the judgment of the first responder, the life of the patient is in immediate danger. Services performed under these circumstances shall be performed in accordance with the written protocols for triage of adult and pediatric trauma victims established in rules adopted under sections 4765.11 and 4765.40 of the Revised Code and any applicable protocols adopted by the emergency medical service organization with which the first responder is affiliated.

Amended by 129th General Assembly File No. 161, HB 284, § 1, eff. 3/22/2013. Effective Date: 11-03-2000

4765.36 [Effective Until 3/22/2013] Authorized services in hospital.

In a hospital, an emergency medical technician-basic, emergency medical technician-intermediate, or emergency medical technician-paramedic may perform emergency medical services only under the direction and supervision of a physician or registered nurse designated by a physician and only in the hospital's emergency department or while moving a patient between the emergency department and another part of the hospital.

Effective Date: 11-24-1995

4765.36 [Effective 3/22/2013] Authorized services in hospital

In a hospital, an emergency medical technician-basic, emergency medical technician-intermediate, or emergency medical technician-paramedic may perform emergency medical services if the services are performed in accordance with both of the following conditions:

(A) Only in the hospital's emergency department or while moving a patient between the emergency department and another part of the hospital;

(B) Only under the direction and supervision of one of the following: (1) A physician;

(2) A physician assistant designated by a physician; (3) A registered nurse designated by a physician.

Amended by 129th General Assembly File No. 161, HB 284, § 1, eff. 3/22/2013. Effective Date: 11-24-1995

4765.37 [Effective Until 3/22/2013] Authorized services by EMT-basic.

(A) An emergency medical technician-basic shall perform the emergency medical services described in this section in accordance with this chapter and any rules adopted under it by the state board of emergency medical services.

(B) An emergency medical technician-basic may operate, or be responsible for operation of, an ambulance and may provide emergency medical services to patients. In an emergency, an EMT-basic may determine the nature and extent of illness or injury and establish priority for required emergency medical services. An EMT-basic may render emergency medical services such as opening and maintaining an airway, giving positive pressure ventilation, cardiac resuscitation, electrical interventions with automated defibrillators to support or correct the cardiac function and other methods determined by the board, controlling of hemorrhage, treatment of shock, immobilization of fractures, bandaging, assisting in childbirth, management of mentally disturbed patients, initial care of poison and burn patients, and determining triage of adult and pediatric trauma victims. Where patients must in an emergency be extricated from entrapment, an EMT-basic may assess the extent of injury and render all possible emergency medical services and protection to the entrapped patient; provide light rescue services if an ambulance has not been accompanied by a specialized unit; and after extrication, provide additional care in sorting of the injured in accordance with standard emergency procedures.

(C) An EMT-basic may perform any other emergency medical services approved pursuant to rules adopted under section 4765.11 of the Revised Code. The board shall determine whether the nature of any such service requires that an EMT-basic receive authorization prior to performing the service.

(D) (1) Except as provided in division (D)(2) of this section, if the board determines under division (C) of this section that a service requires prior authorization, the service shall be performed only pursuant to the written or verbal authorization of a physician or of the cooperating physician advisory board, or pursuant to an authorization transmitted through a direct communication device by a physician or registered nurse designated by a physician. (2) If communications fail during an emergency situation or the required response time prohibits communication, an EMT- basic may perform services subject to this division, if, in the judgment of the EMT-basic, the life of the patient is in immediate danger. Services performed under these circumstances shall be performed in accordance with the protocols for triage of adult and pediatric trauma victims established in rules adopted under sections 4765.11 and 4765.40 of the Revised Code and any applicable protocols adopted by the emergency medical service organization with which the EMT-basic is affiliated.

Effective Date: 11-03-2000

4765.37 [Effective 3/22/2013] Authorized services by EMT-basic

(A) An emergency medical technician-basic shall perform the emergency medical services described in this section in accordance with this chapter and any rules adopted under it by the state board of emergency medical services.

(B) An emergency medical technician-basic may operate, or be responsible for operation of, an ambulance and may provide emergency medical services to patients. In an emergency, an EMT-basic may determine the nature and extent of illness or injury and establish priority for required emergency medical services. An EMT-basic may render emergency medical services such as opening and maintaining an airway, giving positive pressure ventilation, cardiac resuscitation, electrical interventions with automated defibrillators to support or correct the cardiac function and other methods determined by the board, controlling of hemorrhage, treatment of shock, immobilization of fractures, bandaging, assisting in childbirth, management of mentally disturbed patients, initial care of poison and burn patients, and determining triage of adult and pediatric trauma victims. Where patients must in an emergency be extricated from entrapment, an EMT-basic may assess the extent of injury and render all possible emergency medical services and protection to the entrapped patient; provide light rescue services if an ambulance has not been accompanied by a specialized unit; and after extrication, provide additional care in sorting of the injured in accordance with standard emergency procedures.

(C) An EMT-basic may perform any other emergency medical services approved pursuant to rules adopted under section 4765.11 of the Revised Code. The board shall determine whether the nature of any such service requires that an EMT-basic receive authorization prior to performing the service.

(D) (1) Except as provided in division (D)(2) of this section, if the board determines under division (C) of this section that a service requires prior authorization, the service shall be performed only pursuant to the written or verbal authorization of a physician or of the cooperating physician advisory board, or pursuant to an authorization transmitted through a direct communication device by a physician, physician assistant designated by a physician, or registered nurse designated by a physician.

(2) If communications fail during an emergency situation or the required response time prohibits communication, an EMT- basic may perform services subject to this division, if, in the judgment of the EMT-basic, the life of the patient is in immediate danger. Services performed under these circumstances shall be performed in accordance with the protocols for triage of adult and pediatric trauma victims established in rules adopted under sections 4765.11 and 4765.40 of the Revised Code and any applicable protocols adopted by the emergency medical service organization with which the EMT-basic is affiliated.

Amended by 129th General Assembly File No. 161, HB 284, § 1, eff. 3/22/2013. Effective Date: 11-03-2000

4765.38 [Effective Until 3/22/2013] Authorized services by EMT-intermediate.

(A) An emergency medical technician-intermediate shall perform the emergency medical services described in this section in accordance with this chapter and any rules adopted under it.

(B) An EMT-I may do any of the following: (1) Establish and maintain an intravenous lifeline that has been approved by a cooperating physician or physician advisory board; (2) Perform cardiac monitoring; (3) Perform electrical interventions to support or correct the cardiac function; (4) Administer epinephrine; (5) Determine triage of adult and pediatric trauma victims; (6) Perform any other emergency medical services approved pursuant to rules adopted under section 4765.11 of the Revised Code.

(C) (1) Except as provided in division (C)(2) of this section, the services described in division (B) of this section shall be performed by an EMT-I only pursuant to the written or verbal authorization of a physician or of the cooperating physician advisory board, or pursuant to an authorization transmitted through a direct communication device by a physician or registered nurse designated by a physician. (2) If communications fail during an emergency situation or the required response time prohibits communication, an EMT-I may perform any of the services described in division (B) of this section, if, in the judgment of the EMT-I, the life of the patient is in immediate danger. Services performed under these circumstances shall be performed in accordance with the protocols for triage of adult and pediatric trauma victims established in rules adopted under sections 4765.11 and 4765.40 of the Revised Code and any applicable protocols adopted by the emergency medical service organization with which the EMT-I is affiliated.

(D) In addition to, and in the course of, providing emergency medical treatment, an emergency medical technician- intermediate may withdraw blood as provided under sections 1547.11, 4506.17, and 4511.19 of the Revised Code. An emergency medical technician-intermediate shall withdraw blood in accordance with this chapter and any rules adopted under it by the state board of emergency medical services.

Amended by 128th General Assembly File No. 50, SB 58, § 1, eff. 9/17/2010. Effective Date: 11-03-2000
4765.38 [Effective 3/22/2013] Authorized services by EMT-intermediate

(A) An emergency medical technician-intermediate shall perform the emergency medical services described in this section in accordance with this chapter and any rules adopted under it.

(B) An EMT-I may do any of the following: (1) Establish and maintain an intravenous lifeline that has been approved by a cooperating physician or physician advisory board; (2) Perform cardiac monitoring; (3) Perform electrical interventions to support or correct the cardiac function; (4) Administer epinephrine; (5) Determine triage of adult and pediatric trauma victims; (6) Perform any other emergency medical services approved pursuant to rules adopted under section 4765.11 of the Revised Code.

(C) (1) Except as provided in division (C)(2) of this section, the services described in division (B) of this section shall be performed by an EMT-I only pursuant to the written or verbal authorization of a physician or of the cooperating physician advisory board, or pursuant to an authorization transmitted through a direct communication device by a physician, physician assistant designated by a physician, or registered nurse designated by a physician. (2) If communications fail during an emergency situation or the required response time prohibits communication, an EMT-I may perform any of the services described in division (B) of this section, if, in the judgment of the EMT-I, the life of the patient is in immediate danger. Services performed under these circumstances shall be performed in accordance with the protocols for triage of adult and pediatric trauma victims established in rules adopted under sections 4765.11 and 4765.40 of the Revised Code and any applicable protocols adopted by the emergency medical service organization with which the EMT-I is affiliated.

(D) In addition to, and in the course of, providing emergency medical treatment, an emergency medical technician- intermediate may withdraw blood as provided under sections 1547.11, 4506.17, and 4511.19 of the Revised Code. An emergency medical technician-intermediate shall withdraw blood in accordance with this chapter and any rules adopted under it by the state board of emergency medical services.

Amended by 129th General Assembly File No. 161, HB 284, § 1, eff. 3/22/2013. Amended by 128th General Assembly File No. 50, SB 58, § 1, eff. 9/17/2010. Effective Date: 11-03-2000
4765.39 [Effective Until 3/22/2013] Authorized services by emergency medical technician-paramedic.

(A) An emergency medical technician-paramedic shall perform the emergency medical services described in this section in accordance with this chapter and any rules adopted under it.

(B) A paramedic may do any of the following: (1) Perform cardiac monitoring; (2) Perform electrical interventions to support or correct the cardiac function; (3) Perform airway procedures; (4) Perform relief of pneumothorax; (5) Administer appropriate drugs and intravenous fluids; (6) Determine triage of adult and pediatric trauma victims; (7) Perform any other emergency medical services, including life support or intensive care techniques, approved pursuant to rules adopted under section 4765.11 of the Revised Code.

(C) (1) Except as provided in division (C)(2) of this section, the services described in division (B) of this section shall be performed by a paramedic only pursuant to the written or verbal authorization of a physician or of the cooperating physician advisory board, or pursuant to an authorization transmitted through a direct communication device by a physician or registered nurse designated by a physician. (2) If communications fail during an emergency situation or the required response time prohibits communication, a paramedic may perform any of the services described in division (B) of this section, if, in the paramedic's judgment, the life of the patient is in immediate danger. Services performed under these circumstances shall be performed in accordance with the protocols for triage of adult and

pediatric trauma victims established in rules adopted under sections 4765.11 and 4765.40 of the Revised Code and any applicable protocols adopted by the emergency medical service organization with which the paramedic is affiliated.

(D) In addition to, and in the course of, providing emergency medical treatment, emergency medical technician-paramedic may withdraw blood as provided under sections 1547.11, 4506.17, and 4511.19 of the Revised Code. An emergency medical technician-paramedic shall withdraw blood in accordance with this chapter and any rules adopted under it by the state board of emergency medical services.

Amended by 128th General Assembly File No. 50, SB 58, § 1, eff. 9/17/2010. Effective Date: 11-03-2000
4765.39 [Effective 3/22/2013] Authorized services by emergency medical technician-paramedic

(A) An emergency medical technician-paramedic shall perform the emergency medical services described in this section in accordance with this chapter and any rules adopted under it.

(B) A paramedic may do any of the following: (1) Perform cardiac monitoring; (2) Perform electrical interventions to support or correct the cardiac function; (3) Perform airway procedures; (4) Perform relief of pneumothorax; (5) Administer appropriate drugs and intravenous fluids; (6) Determine triage of adult and pediatric trauma victims; (7) Perform any other emergency medical services, including life support or intensive care techniques, approved pursuant to rules adopted under section 4765.11 of the Revised Code.

(C) (1) Except as provided in division (C)(2) of this section, the services described in division (B) of this section shall be performed by a paramedic only pursuant to the written or verbal authorization of a physician or of the cooperating physician advisory board, or pursuant to an authorization transmitted through a direct communication device by a physician, physician assistant designated by a physician, or registered nurse designated by a physician. (2) If communications fail during an emergency situation or the required response time prohibits communication, a paramedic may perform any of the services described in division (B) of this section, if, in the paramedic's judgment, the life of the patient is in immediate danger. Services performed under these circumstances shall be performed in accordance with the protocols for triage of adult and pediatric trauma victims established in rules adopted under sections 4765.11 and 4765.40 of the Revised Code and any applicable protocols adopted by the emergency medical service organization with which the paramedic is affiliated.

(D) In addition to, and in the course of, providing emergency medical treatment, an emergency medical technician-paramedic may withdraw blood as provided under sections 1547.11, 4506.17, and 4511.19 of the Revised Code. An emergency medical technician-paramedic shall withdraw blood in accordance with this chapter and any rules adopted under it by the state board of emergency medical services.

Amended by 129th General Assembly File No. 161, HB 284, § 1, eff. 3/22/2013. Amended by 128th General Assembly File No. 50, SB 58, § 1, eff. 9/17/2010. Effective Date: 11-03-2000
4765.391 Administration of immunizations for influenza to firefighters or emts.

(A) The medical director or cooperating physician advisory board of each emergency medical service organization may authorize one or more emergency medical technicians-paramedic within the organization to administer immunizations for influenza to either of the following: (1) A full-time paid firefighter, part-time paid firefighter, or volunteer firefighter; (2) An emergency medical technician-basic, emergency medical technician-intermediate, or paramedic.

(B) The medical director or cooperating physician advisory board of each emergency medical service organization shall establish written protocols and training necessary for a paramedic to administer an immunization for influenza under this section. A paramedic administering an immunization under this section shall do so in accordance with the protocols and training.

(C) For each immunization administered under this section, the paramedic administering the immunization shall, not later than thirty days after the immunization is administered, do either of the following: (1) Provide notice of the immunization administration to the board of health of the city or general health district in which the individual receiving the immunization resides or, if there is no board of health for that district, the authority having the duties of a board of health under section 3709.05 of the Revised Code; (2) Submit the immunization administration information to the state immunization registry maintained by the department of health.

Added by 129th General Assembly File No. 104, HB 244, § 1, eff. 8/15/2012.

4765.40 Written protocols for triage of adult and pediatric trauma victims.

(A) (1) Not later than two years after the effective date of this amendment, the state board of emergency medical services shall adopt rules under section 4765.11 of the Revised Code establishing written protocols for the triage of adult and pediatric trauma victims. The rules shall define adult and pediatric trauma in a manner that is consistent with section 4765.01 of the Revised Code, minimizes overtriage and undertriage, and emphasizes the special needs of pediatric and geriatric trauma patients. (2) The state triage protocols adopted under division (A) of this section shall require a trauma victim to be transported directly to an adult or pediatric trauma center that is qualified to provide appropriate adult or pediatric trauma care, unless one or more of the following exceptions applies: (a) It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an adult or pediatric trauma center; (b) It is unsafe or medically inappropriate to transport the victim directly to an adult or pediatric trauma center due to adverse weather or ground conditions or excessive transport time; (c) Transporting the victim to an adult or pediatric trauma center would cause a shortage of local emergency medical service resources; (d) No appropriate adult or pediatric trauma center is able to receive and provide adult or pediatric trauma care to the trauma victim without undue delay; (e) Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than eighteen years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient. (3) (a) The state triage protocols adopted under division (A) of this section shall require trauma patients to be transported to an adult or pediatric trauma center that is able to provide appropriate adult or pediatric trauma care, but shall not require a trauma patient to be transported to a particular trauma center. The state triage protocols shall establish one or more procedures for evaluating whether an injury victim requires or would benefit from adult or pediatric trauma care, which procedures shall be applied by emergency medical service personnel based on the patient's medical needs. In developing state trauma triage protocols, the board shall consider relevant model triage rules and shall consult with the commission on minority health, regional directors, regional physician advisory boards, and appropriate medical, hospital, and emergency medical service organizations. (b) Before the joint committee on agency rule review considers state triage protocols for trauma victims proposed by the state board of emergency medical services, or amendments thereto, the board shall send a copy of the proposal to the Ohio chapter of the American college of emergency physicians, the Ohio chapter of the American college of surgeons, the Ohio chapter of the American

academy of pediatrics, OHA: the association for hospitals and health systems, the Ohio osteopathic association, and the association of Ohio children's hospitals and shall hold a public hearing at which it must consider the appropriateness of the protocols to minimize overtriage and undertriage of trauma victims. (c) The board shall provide copies of the state triage protocols, and amendments to the protocols, to each emergency medical service organization, regional director, regional physician advisory board, certified emergency medical service instructor, and person who regularly provides medical direction to emergency medical service personnel in the state; to each medical service organization in other jurisdictions that regularly provide emergency medical services in this state; and to others upon request.

(B) (1) The state board of emergency medical services shall approve regional protocols for the triage of adult and pediatric trauma victims, and amendments to such protocols, that are submitted to the board as provided in division (B)(2) of this section and provide a level of adult and pediatric trauma care comparable to the state triage protocols adopted under division (A) of this section. The board shall not otherwise approve regional triage protocols for trauma victims. The board shall not approve regional triage protocols for regions that overlap and shall resolve any such disputes by apportioning the overlapping territory among appropriate regions in a manner that best serves the medical needs of the residents of that territory. The trauma committee of the board shall have reasonable opportunity to review and comment on regional triage protocols and amendments to such protocols before the board approves or disapproves them. (2) Regional protocols for the triage of adult and pediatric trauma victims, and amendments to such protocols, shall be submitted in writing to the state board of emergency medical services by the regional physician advisory board or regional director, as appropriate, that serves a majority of the population in the region in which the protocols apply. Prior to submitting regional triage protocols, or an amendment to such protocols, to the state board of emergency medical services, a regional physician advisory board or regional director shall consult with each of the following that regularly serves the region in which the protocols apply: (a) Other regional physician advisory boards and regional directors; (b) Hospitals that operate an emergency facility; (c) Adult and pediatric trauma centers; (d) Professional societies of physicians who specialize in adult or pediatric emergency medicine or adult or pediatric trauma surgery; (e) Professional societies of nurses who specialize in adult or pediatric emergency nursing or adult or pediatric trauma surgery; (f) Professional associations or labor organizations of emergency medical service personnel; (g) Emergency medical service organizations and medical directors of such organizations; (h) Certified emergency medical service instructors. (3) Regional protocols for the triage of adult and pediatric trauma victims approved under division (B)(2) of this section shall require patients to be transported to a trauma center that is able to provide an appropriate level of adult or pediatric trauma care; shall not discriminate among trauma centers for reasons not related to a patient's medical needs; shall seek to minimize undertriage and overtriage; may include any of the exceptions in division (A)(2) of this section; and supersede the state triage protocols adopted under division (A) of this section in the region in which the regional protocols apply. (4) Upon approval of regional protocols for the triage of adult and pediatric trauma victims under division (B)(2) of this section, or an amendment to such protocols, the state board of emergency medical services shall provide written notice of the approval and a copy of the protocols or amendment to each entity in the region in which the protocols apply to which the board is required to send a copy of the state triage protocols adopted under division (A) of this section.

(C) (1) The state board of emergency medical services shall review the state triage protocols adopted under division (A) of this section at least every three years to determine if they are causing overtriage or undertriage of trauma patients, and shall modify them as necessary to minimize overtriage and undertriage. (2) Each regional physician advisory board or regional director that has had regional triage

protocols approved under division (B)(2) of this section shall review the protocols at least every three years to determine if they are causing overtriage or undertriage of trauma patients and shall submit an appropriate amendment to the state board, as provided in division (B) of this section, as necessary to minimize overtriage and undertriage. The state board shall approve the amendment if it will reduce overtriage or undertriage while complying with division (B) of this section, and shall not otherwise approve the amendment.

(D) No provider of emergency medical services or person who provides medical direction to emergency medical service personnel in this state shall fail to comply with the state triage protocols adopted under division (A) of this section or applicable regional triage protocols approved under division (B)(2) of this section.

(E) The state board of emergency medical services shall adopt rules under section 4765.11 of the Revised Code that provide for enforcement of the state triage protocols adopted under division (A) of this section and regional triage protocols approved under division (B)(2) of this section, and for education regarding those protocols for emergency medical service organizations and personnel, regional directors and regional physician advisory boards, emergency medical service instructors, and persons who regularly provide medical direction to emergency medical service personnel in this state.

Effective Date: 11-03-2000

4765.41 Local written protocols.

The medical director or cooperating physician advisory board of each emergency medical service organization shall establish written protocols to be followed by first responders, emergency medical technicians-basic, emergency medical technicians- intermediate, and emergency medical technicians-paramedic in performing emergency medical services when communications have failed or the required response prevents communication and the life of the patient is in immediate danger. Those protocols shall be consistent with applicable trauma triage protocols adopted under division (A) or approved under division (B)(2) of section 4765.40 of the Revised Code, but may direct to an adult or pediatric trauma center emergency victims that the applicable trauma triage protocols do not require to be transported to an adult or pediatric trauma center.

Effective Date: 11-03-2000

4765.42 Names of medical director or members of cooperating physician advisory board.

Each emergency medical service organization shall give notice of the name of its medical director or the names of the members of its cooperating physician advisory board to the state board of emergency medical services. The notice shall be made in writing.

Effective Date: 11-12-1992

4765.43 Ambulance staffing.

(A) During each emergency run made by an ambulance that is equipped for emergency medical services, the emergency medical service organization operating the ambulance shall staff the ambulance in accordance with this section. For purposes of determining the applicable staffing requirements, both of the following apply: (1) An emergency run consists of components that are distinguished between the period during which the ambulance is traveling to the scene of an emergency and, if applicable, the period during which the ambulance is transporting a patient from the scene of the emergency. (2) In the case of an emergency medical service organization that utilizes a combination of volunteer and paid first responders, emergency medical service technicians-basic, emergency medical service technicians-intermediate, or emergency medical service technicians-paramedic, the organization is considered to be substantially utilizing volunteers in a particular week when the paid individuals, taken as a whole, are scheduled for a total of not more than one hundred ninety-two hours in that week.

(B) With respect to the driver of an ambulance during an emergency run, both of the following apply: (1) The driver must be at least eighteen years of age and hold a valid driver's license. (2) The driver must meet at least one of the following criteria: (a) Hold a valid certificate issued under section 4765.30 of the Revised Code to practice as a medical first responder, EMT, advanced EMT, or paramedic; (b) Hold a valid fire training certificate issued pursuant to section 4765.55 of the Revised Code to provide services as a firefighter; (c) Be employed and in good standing as a sworn sheriff, deputy sheriff, constable, police officer, marshal, deputy marshal, or highway patrol trooper in this state; (d) Have successfully completed either the emergency vehicle operations course approved by the national highway traffic safety administration or an equivalent course approved by the state board of emergency medical services.

(C) With respect to the component of an emergency run during which the ambulance is traveling to the scene of the emergency, the ambulance shall be staffed by at least one EMT, advanced EMT, or paramedic. This individual may serve as the driver.

(D) With respect to the component of an emergency run during which a patient is being transported, the ambulance shall be staffed as follows: (1) If the emergency medical service organization utilizes only paid individuals or utilizes volunteers on a basis that is not considered to be substantially utilizing volunteers, the ambulance shall be staffed by at least two EMTs, advanced EMTs, or paramedics. One of these individuals may serve as the driver. (2) If the emergency medical service organization is substantially utilizing volunteers or utilizes only volunteers, the ambulance shall be staffed by at least two EMTs, advanced EMTs, or paramedics or by at least one first responder and one EMT, advanced EMT, or paramedic. One of these individuals may serve as the driver, but if the staffing requirement is being met by utilizing a medical first responder, the medical first responder shall serve as the driver.

Amended by 129th General Assembly File No. 95, SB 243, § 1, eff. 7/3/2012. Amended by 129th General Assembly File No. 27, HB 128, § 1, eff. 9/23/2011. Effective Date: 11-24-1995; 2008 SB129 12-30-2008 4765.431 [Repealed].

4765.48 Prosecutions - injunctions.

The attorney general, the prosecuting attorney of the county, or the city director of law shall, upon complaint of the state board of emergency medical services, prosecute to termination or bring an action for injunction against any person violating this chapter or the rules adopted under it. The common pleas court in which an action for injunction is filed has the jurisdiction to grant injunctive relief upon a showing that the respondent named in the complaint is in violation of this chapter or the rules adopted under it.

Effective Date: 11-12-1992

4765.49 [Effective Until 3/22/2013] Emergency medical personnel and agencies - immunity.

(A) A first responder, emergency medical technician-basic, emergency medical technician-intermediate, or emergency medical technician-paramedic is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the individual's administration of emergency medical services, unless the services are administered in a manner that constitutes willful or wanton misconduct. A physician or registered nurse designated by a physician, who is advising or assisting in the emergency medical services by means of any communication device or telemetering system, is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the individual's advisory communication or assistance, unless the advisory communication or assistance is provided in a manner that constitutes willful or wanton misconduct. Medical directors and members of cooperating physician advisory boards of emergency medical service organizations are not liable in damages in a civil action for injury, death, or loss to person or property resulting from their acts or omissions in the performance of their duties, unless the act or omission constitutes willful or wanton misconduct.

(B) A political subdivision, joint ambulance district, joint emergency medical services district, or other public agency, and any officer or employee of a public agency or of a private organization operating under contract or in joint agreement with one or more political subdivisions, that provides emergency medical services, or that enters into a joint agreement or a contract with the state, any political subdivision, joint ambulance district, or joint emergency medical services district for the provision of emergency medical services, is not liable in damages in a civil action for injury, death, or loss to person or property arising out of any actions taken by a first responder, EMT-basic, EMT-I, or paramedic working under the officer's or employee's jurisdiction, or for injury, death, or loss to person or property arising out of any actions of licensed medical personnel advising or assisting the first responder, EMT-basic, EMT-I, or paramedic, unless the services are provided in a manner that constitutes willful or wanton misconduct.

(C) A student who is enrolled in an emergency medical services training program accredited under section 4765.17 of the Revised Code or an emergency medical services continuing education program approved under that section is not liable in damages in a civil action for injury, death, or loss to person or property resulting from either of the following: (1) The student's administration of emergency medical services or patient care or treatment, if the services, care, or treatment is administered while the student is under the direct supervision and in the immediate presence of an EMT-basic, EMT-I, paramedic, registered nurse, or physician and while the student is receiving clinical training that is required by the program, unless the services, care, or treatment is provided in a manner that constitutes

willful or wanton misconduct; (2) The student's training as an ambulance driver, unless the driving is done in a manner that constitutes willful or wanton misconduct.

(D) An EMT-basic, EMT-I, paramedic, or other operator, who holds a valid commercial driver's license issued pursuant to Chapter 4506. of the Revised Code or driver's license issued pursuant to Chapter 4507. of the Revised Code and who is employed by an emergency medical service organization that is not owned or operated by a political subdivision as defined in section 2744.01 of the Revised Code, is not liable in damages in a civil action for injury, death, or loss to person or property that is caused by the operation of an ambulance by the EMT-basic, EMT-I, paramedic, or other operator while responding to or completing a call for emergency medical services, unless the operation constitutes willful or wanton misconduct or does not comply with the precautions of section 4511.03 of the Revised Code. An emergency medical service organization is not liable in damages in a civil action for any injury, death, or loss to person or property that is caused by the operation of an ambulance by its employee or agent, if this division grants the employee or agent immunity from civil liability for the injury, death, or loss.

(E) An employee or agent of an emergency medical service organization who receives requests for emergency medical services that are directed to the organization, dispatches first responders, EMTs-basic, EMTs-I, or paramedics in response to those requests, communicates those requests to those employees or agents of the organization who are authorized to dispatch first responders, EMTs-basic, EMTs-I, or paramedics, or performs any combination of these functions for the organization, is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the individual's acts or omissions in the performance of those duties for the organization, unless an act or omission constitutes willful or wanton misconduct.

(F) A person who is performing the functions of a first responder, EMT-basic, EMT-I, or paramedic under the authority of the laws of a state that borders this state and who provides emergency medical services to or transportation of a patient in this state is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the person's administration of emergency medical services, unless the services are administered in a manner that constitutes willful or wanton misconduct. A physician or registered nurse designated by a physician, who is licensed to practice in the adjoining state and who is advising or assisting in the emergency medical services by means of any communication device or telemetering system is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the person's advisory communication or assistance, unless the advisory communication or assistance is provided in a manner that constitutes willful or wanton misconduct.

(G) A person certified under section 4765.23 of the Revised Code to teach in an emergency medical services training program or emergency medical services continuing education program, and a person who teaches at the Ohio fire academy established under section 3737.33 of the Revised Code or in a fire service training program described in division (A) of section 4765.55 of the Revised Code, is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the person's acts or omissions in the performance of the person's duties, unless an act or omission constitutes willful or wanton misconduct.

(H) In the accreditation of emergency medical services training programs or approval of emergency medical services continuing education programs, the state board of emergency medical services and any person or entity authorized by the board to evaluate applications for accreditation or approval are not liable in damages in a civil action for injury, death, or loss to person or property resulting from their

acts or omissions in the performance of their duties, unless an act or omission constitutes willful or wanton misconduct.

(I) A person authorized by an emergency medical service organization to review the performance of first responders, EMTs- basic, EMTs-I, and paramedics or to administer quality assurance programs is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the person's acts or omissions in the performance of the person's duties, unless an act or omission constitutes willful or wanton misconduct.

Effective Date: 03-19-2003; 04-05-2007

4765.49 [Effective 3/22/2013] Emergency medical personnel and agencies – immunity

(A) A first responder, emergency medical technician-basic, emergency medical technician-intermediate, or emergency medical technician-paramedic is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the individual's administration of emergency medical services, unless the services are administered in a manner that constitutes willful or wanton misconduct. A physician, physician assistant designated by a physician, or registered nurse designated by a physician, any of whom is advising or assisting in the emergency medical services by means of any communication device or telemetering system, is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the individual's advisory communication or assistance, unless the advisory communication or assistance is provided in a manner that constitutes willful or wanton misconduct. Medical directors and members of cooperating physician advisory boards of emergency medical service organizations are not liable in damages in a civil action for injury, death, or loss to person or property resulting from their acts or omissions in the performance of their duties, unless the act or omission constitutes willful or wanton misconduct.

(B) A political subdivision, joint ambulance district, joint emergency medical services district, or other public agency, and any officer or employee of a public agency or of a private organization operating under contract or in joint agreement with one or more political subdivisions, that provides emergency medical services, or that enters into a joint agreement or a contract with the state, any political subdivision, joint ambulance district, or joint emergency medical services district for the provision of emergency medical services, is not liable in damages in a civil action for injury, death, or loss to person or property arising out of any actions taken by a first responder, EMT-basic, EMT-I, or paramedic working under the officer's or employee's jurisdiction, or for injury, death, or loss to person or property arising out of any actions of licensed medical personnel advising or assisting the first responder, EMT-basic, EMT-I, or paramedic, unless the services are provided in a manner that constitutes willful or wanton misconduct.

(C) A student who is enrolled in an emergency medical services training program accredited under section 4765.17 of the Revised Code or an emergency medical services continuing education program approved under that section is not liable in damages in a civil action for injury, death, or loss to person or property resulting from either of the following: (1) The student's administration of emergency medical services or patient care or treatment, if the services, care, or treatment is administered while the student is under the direct supervision and in the immediate presence of an EMT-basic, EMT-I, paramedic, registered nurse, physician assistant, or physician and while the student is receiving clinical training that is required by the program, unless the services, care, or treatment is provided in a manner

that constitutes willful or wanton misconduct; (2) The student's training as an ambulance driver, unless the driving is done in a manner that constitutes willful or wanton misconduct.

(D) An EMT-basic, EMT-I, paramedic, or other operator, who holds a valid commercial driver's license issued pursuant to Chapter 4506. of the Revised Code or driver's license issued pursuant to Chapter 4507. of the Revised Code and who is employed by an emergency medical service organization that is not owned or operated by a political subdivision as defined in section 2744.01 of the Revised Code, is not liable in damages in a civil action for injury, death, or loss to person or property that is caused by the operation of an ambulance by the EMT-basic, EMT-I, paramedic, or other operator while responding to or completing a call for emergency medical services, unless the operation constitutes willful or wanton misconduct or does not comply with the precautions of section 4511.03 of the Revised Code. An emergency medical service organization is not liable in damages in a civil action for any injury, death, or loss to person or property that is caused by the operation of an ambulance by its employee or agent, if this division grants the employee or agent immunity from civil liability for the injury, death, or loss.

(E) An employee or agent of an emergency medical service organization who receives requests for emergency medical services that are directed to the organization, dispatches first responders, EMTs-basic, EMTs-I, or paramedics in response to those requests, communicates those requests to those employees or agents of the organization who are authorized to dispatch first responders, EMTs-basic, EMTs-I, or paramedics, or performs any combination of these functions for the organization, is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the individual's acts or omissions in the performance of those duties for the organization, unless an act or omission constitutes willful or wanton misconduct.

(F) A person who is performing the functions of a first responder, EMT-basic, EMT-I, or paramedic under the authority of the laws of a state that borders this state and who provides emergency medical services to or transportation of a patient in this state is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the person's administration of emergency medical services, unless the services are administered in a manner that constitutes willful or wanton misconduct. A physician, physician assistant designated by a physician, or registered nurse designated by a physician, any of whom is licensed to practice in the adjoining state and who is advising or assisting in the emergency medical services by means of any communication device or telemetering system, is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the person's advisory communication or assistance, unless the advisory communication or assistance is provided in a manner that constitutes willful or wanton misconduct.

(G) A person certified under section 4765.23 of the Revised Code to teach in an emergency medical services training program or emergency medical services continuing education program, and a person who teaches at the Ohio fire academy established under section 3737.33 of the Revised Code or in a fire service training program described in division (A) of section 4765.55 of the Revised Code, is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the person's acts or omissions in the performance of the person's duties, unless an act or omission constitutes willful or wanton misconduct.

(H) In the accreditation of emergency medical services training programs or approval of emergency medical services continuing education programs, the state board of emergency medical services and any person or entity authorized by the board to evaluate applications for accreditation or approval are not liable in damages in a civil action for injury, death, or loss to person or property resulting from their acts

or omissions in the performance of their duties, unless an act or omission constitutes willful or wanton misconduct.

(I) A person authorized by an emergency medical service organization to review the performance of first responders, EMTs- basic, EMTs-I, and paramedics or to administer quality assurance programs is not liable in damages in a civil action for injury, death, or loss to person or property resulting from the person's acts or omissions in the performance of the person's duties, unless an act or omission constitutes willful or wanton misconduct.

Amended by 129th General Assembly File No. 161, HB 284, § 1, eff. 3/22/2013. Effective Date: 03-19-2003; 04-05-2007

4765.50 Unauthorized practice.

(A) Except as provided in division (D) of this section, no person shall represent that the person is a first responder, an emergency medical technician-basic or EMT-basic, an emergency medical technician-intermediate or EMT-I, or an emergency medical technician-paramedic or paramedic unless appropriately certified under section 4765.30 of the Revised Code.

(B) (1) No person shall operate an emergency medical services training program without a certificate of accreditation issued under section 4765.17 of the Revised Code. (2) No person shall operate an emergency medical services continuing education program without a certificate of approval issued under section 4765.17 of the Revised Code.

(C) No public or private entity shall advertise or disseminate information leading the public to believe that the entity is an emergency medical service organization, unless that entity actually provides emergency medical services.

(D) A person who is performing the functions of a first responder, EMT-basic, EMT-I, or paramedic under the authority of the laws of a jurisdiction other than this state, who is employed by or serves as a volunteer with an emergency medical service organization based in that state, and provides emergency medical services to or transportation of a patient in this state is not in violation of division (A) of this section. A person who is performing the functions of a first responder, EMT- basic, EMT-I, or paramedic under a reciprocal agreement authorized by section 4765.10 of the Revised Code is not in violation of division (A) of this section.

(E) On and after November 3, 2002, no physician shall purposefully do any of the following: (1) Admit an adult trauma patient to a hospital that is not an adult trauma center for the purpose of providing adult trauma care; (2) Admit a pediatric trauma patient to a hospital that is not a pediatric trauma center for the purpose of providing pediatric trauma care; (3) Fail to transfer an adult or pediatric trauma patient to an adult or pediatric trauma center in accordance with applicable federal law, state law, and adult or pediatric trauma protocols and patient transfer agreements adopted under section 3727.09 of the Revised Code.

Effective Date: 09-17-2002

4765.51 [Effective Until 3/22/2013] Registered nurses.

Nothing in this chapter prevents or restricts the practice, services, or activities of any registered nurse practicing within the scope of his practice.

Effective Date: 11-12-1992

4765.51 [Effective 3/22/2013] Registered nurses and physician assistants

Nothing in this chapter prevents or restricts the practice, services, or activities of any registered nurse practicing within the scope of the registered nurse's practice.

Nothing in this chapter prevents or restricts the practice, services, or activities of any physician assistant practicing in accordance with a physician supervisory plan approved under section 4730.17 of the Revised Code or the policies of the health care facility in which the physician assistant is practicing.

Amended by 129th General Assembly File No. 161, HB 284, § 1, eff. 3/22/2013. Effective Date: 11-12-1992

4765.55 Fire service training programs.

(A) The executive director of the state board of emergency medical services, with the advice and counsel of the firefighter and fire safety inspector training committee of the state board of emergency medical services, shall assist in the establishment and maintenance by any state agency, or any county, township, city, village, school district, or educational service center of a fire service training program for the training of all persons in positions of any fire training certification level approved by the executive director, including full-time paid firefighters, part-time paid firefighters, volunteer firefighters and, fire safety inspectors in this state. The executive director, with the advice and counsel of the committee, shall adopt rules to regulate those firefighter and fire safety inspector training programs, and other training programs approved by the executive director. The rules may include, but need not be limited to, training curriculum, certification examinations, training schedules, minimum hours of instruction, attendance requirements, required equipment and facilities, basic physical requirements, and methods of training for all persons in positions of any fire training certification level approved by the executive director, including full-time paid firefighters, part-time paid firefighters, volunteer firefighters, and fire safety inspectors. The rules adopted to regulate training programs for volunteer firefighters shall not require more than thirty-six hours of training. The executive director, with the advice and counsel of the committee, shall provide for the classification and chartering of fire service training programs in accordance with rules adopted under division (B) of this section, and may take action against any chartered training program or applicant, in accordance with rules adopted under divisions (B)(4) and (5) of this section, for failure to meet standards set by the adopted rules.

(B) The executive director, with the advice and counsel of the firefighter and fire safety inspector training committee of the state board of emergency medical services, shall adopt, and may amend or rescind, rules under Chapter 119. of the Revised Code that establish all of the following: (1) Requirements for, and procedures for chartering, the training programs regulated by this section; (2) Requirements for, and requirements and procedures for obtaining and renewing, an instructor certificate to teach the training programs and continuing education classes regulated by this section; (3) Requirements for, and requirements and procedures for obtaining and renewing, any of the fire training certificates regulated by this section; (4) Grounds and procedures for suspending, revoking, restricting, or refusing to issue or renew any of the certificates or charters regulated by this section, which grounds shall be limited to one of the following: (a) Failure to satisfy the education or training

requirements of this section; (b) Conviction of a felony offense; (c) Conviction of a misdemeanor involving moral turpitude; (d) Conviction of a misdemeanor committed in the course of practice; (e) In the case of a chartered training program or applicant, failure to meet standards set by the rules adopted under this division. (5) Grounds and procedures for imposing and collecting fines, not to exceed one thousand dollars, in relation to actions taken under division (B)(4) of this section against persons holding certificates and charters regulated by this section, the fines to be deposited into the trauma and emergency medical services fund established under section 4513.263 of the Revised Code; (6) Continuing education requirements for certificate holders, including a requirement that credit shall be granted for in- service training programs conducted by local entities; (7) Procedures for considering the granting of an extension or exemption of fire service continuing education requirements; (8) Certification cycles for which the certificates and charters regulated by this section are valid.

(C) The executive director, with the advice and counsel of the firefighter and fire safety inspector training committee of the state board of emergency medical services, shall issue or renew an instructor certificate to teach the training programs and continuing education classes regulated by this section to any applicant that the executive director determines meets the qualifications established in rules adopted under division (B) of this section, and may take disciplinary action against an instructor certificate holder or applicant in accordance with rules adopted under division (B) of this section. The executive director, with the advice and counsel of the committee, shall charter or renew the charter of any training program that the executive director determines meets the qualifications established in rules adopted under division (B) of this section, and may take disciplinary action against the holder of a charter in accordance with rules adopted under division (B) of this section.

(D) The executive director shall issue or renew a fire training certificate for a firefighter, a fire safety inspector, or another position of any fire training certification level approved by the executive director, to any applicant that the executive director determines meets the qualifications established in rules adopted under division (B) of this section and may take disciplinary actions against a certificate holder or applicant in accordance with rules adopted under division (B) of this section.

(E) Certificates issued under this section shall be on a form prescribed by the executive director, with the advice and counsel of the firefighter and fire safety inspector training committee of the state board of emergency medical services.

(F)(1) The executive director, with the advice and counsel of the firefighter and fire safety inspector training committee of the state board of emergency medical services, shall establish criteria for evaluating the standards maintained by other states and the branches of the United States military for firefighter, fire safety inspector, and fire instructor training programs, and other training programs recognized by the executive director, to determine whether the standards are equivalent to those established under this section and shall establish requirements and procedures for issuing a certificate to each person who presents proof to the executive director of having satisfactorily completed a training program that meets those standards. (2) The executive director, with the committee's advice and counsel, shall adopt rules establishing requirements and procedures for issuing a fire training certificate in lieu of completing a chartered training program .

(G) Nothing in this section invalidates any other section of the Revised Code relating to the fire training academy. Section 4765.11 of the Revised Code does not affect any powers and duties granted to the executive director under this section.

Effective Date: 11-03-2000; 04-05-2007

4765.56 Effect of child support default on certificate to practice.

On receipt of a notice pursuant to section 3123.43 of the Revised Code, the state board of emergency medical services shall comply with sections 3123.41 to 3123.50 of the Revised Code and any applicable rules adopted under section 3123.63 of the Revised Code with respect to a certificate to practice issued pursuant to this chapter.

Effective Date: 03-22-2001

4765.57 Disposition of fetal death remains.

(A) As used in this section, “fetal death” has the same meaning as in section 3705.01 of the Revised Code.

(B) Emergency medical service personnel shall dispose of the product of a fetal death in the manner set forth for the disposition of fetal remains in the “emergency medical technician-basic: national standard curriculum.”

Effective Date: 2008 SB175 09-12-2008

4765.58 [Effective 3/22/2013] Compliance with law regarding sanctions for human trafficking.

The state board of emergency medical services shall comply with section 4776.20 of the Revised Code. Added by 129th General Assembly File No. 169, HB 247, § 1, eff. 3/22/2013.

4765.99 Penalty.

Whoever violates division (A), (B), or (C) of section 4765.50 of the Revised Code is guilty of a minor misdemeanor on a first offense. On each subsequent offense, such person is guilty of a misdemeanor of the fourth degree.

Effective Date: 11-12-1992

Appendix B

Ohio Trauma System: Historical Perspective

Date	Action
Prior to 1982	EMS Advisory Panel (EMS personnel and fire chiefs) existed within Ohio Department of Education
1982	Cleveland Medical Association of Medicine introduced resolution to the house of delegates from the Ohio State Medical Association (OSMA) calling for establishment of state-wide trauma system
1983 – 1985	Ohio COT task force developed with collaboration from OSMA; guideline for trauma system development proposed; not adopted
1988	Ohio Society of Trauma Nurse Coordinators (later Ohio Society of Trauma Nurse Leaders) created
1990	NHTSA assessment – recommendations assisted development of SB 98 (1992)
1992	Ohio Alliance of Trauma Registrars (OATR) began meeting
Nov 1992	SB 98 effective, created the Division of EMS under ODPS; created EMS Board; established Trauma Care Advisory Group (TCAG-later Trauma Committee); mandated the formation of a trauma registry; required formation of an EMS incident reporting system; required a report on the development of a state-wide trauma system; development of Regional Physician Advisory Boards (RPAB)
Jan 1993	18 members of EMS Board seated; TCAG members selected with Dr. Richard Fratianne as chair
Oct 1994	ODPS received grant from HRSA for trauma system development
Nov 1994	Trauma Standards and Accreditation Draft Document developed by Trauma Committee, submitted to legislature as required by SB 98
March 1995 – Dec 1996	Trauma Liaison (Sally Jo Zuspan) hired by DEMS to help establish trauma systems
May 1995	Trauma Committee drafted Ohio Trauma Systems Proposal (OTSP) outlining essential components of trauma system
Oct 1995	Trauma forums held throughout Ohio to address trauma concerns
Nov 1995	Development of Trauma Systems seminar held to generate consensus on issues
Dec 1995	16 ACS verified trauma centers (10 level I, 6 level II)
Nov 1995 - Feb 1996	ODPS contracted Udell Research Associates (Dr. John Udell) to analyze Ohio 1993 injury data (via OHA hospital discharge data); OHA partial compliance with request led to incomplete report
April 1996	Columbus Dispatch first published articles on trauma system
May 1996	EMS Board approved OTSP(see May 1995) but supported a voluntary system only
Aug 1996	Trauma Committee membership expanded; work groups developed; second article published in Columbus Dispatch
Nov 1996	Trauma Registry rules passed; Representative Schuck expressed interest in trauma legislation
Dec 1996	Trauma Liaison position of ODPS terminated; new position changed to Trauma Liaison / RAP administrative assistant
1997-1999	DEMS eliminated trauma position; Ohio Committee on Trauma (Ohio COT) hired Sally Jo Zuspan as lobbyist
Feb 1997	Columbus Dispatch published large series of articles on trauma systems; American Medical News published article contrasting the efforts of Oregon vs.

	Ohio in trauma system development
Feb 1997	Representative Schuck pledges to introduce trauma legislation; Rep Schuck meets with several trauma surgeons to start drafting legislation
March 1997	OSTNL, ONA, ENA, AORN develop a joint position paper supporting state trauma legislation
May 1997	Trauma Committee votes to proceed with trauma legislation; EMS Board votes down motion to proceed with trauma legislation
Aug 1997	Governor supports trauma legislation; meets with ODPS, ODH Directors and Rep Schuck
1998	The Central Ohio Trauma System (COTS) was formally established as the first regional trauma consortium
Jan 1998	HB 681 introduced by Rep Schuck
May 1998	HB 681 (Trauma legislation) died in committee.
1999	Ohio Trauma Registry established within ODPS /DEMS (home grown system); scope limited to patients with greater than 48-hour hospital admit
Jan 1999	Letter writing campaign for legislation
	# of Trauma Centers before legislation: 20 ACS verified trauma centers (at least 11 level I)
July 2000	Amended HB 138 (23 rd General Assembly) signed into law. Beginning November 3, 2002, hospitals cannot represent themselves as trauma centers unless they are verified by the ACS; regional protocols for the triage and initial stabilization / treatment of seriously injured patients must be developed; broadened the membership of the EMS Board with trauma representation; revised Trauma Committee to support the EMS Board in its work; integrity of trauma registry data was increased by adding risk adjustment parameters and confidentiality protections; funding thought trauma / EMS grant program; special studies analysis to provide information for further trauma system development
Fall 2000	State Trauma Program Manager within ODPS (Mike Glenn) hired
Nov 2000	Re-organization of Trauma Committee; Joe Luria MD- first chair; Trauma Registry Advisory Subcommittee (TRAS) re-organized and placed as subcommittee under Trauma Committee (approval by EMS Board)
2001	Tri-State Trauma Coalition (TSTC) formally established as regional system in southwest region
June 2001	OHA / Ohio Committee on Trauma collaborated to sponsor a day-long seminar on becoming a Level III trauma center
October 2001	Data Program Manager for EMSIRS / Trauma Registry (Tim Erskine) hired
October 2001	EMS Director Module (on-line education) developed
October 2001	AIS 3 day coding class held for trauma registrars across state
Nov 2001	NTHSA re-assessment done for ODPS
Dec 2001	First Ohio Level III trauma center verified by ACS
Nov 2000 – Nov 2002	Ohio Trauma Committee developed recommendations and placed into legislative rules for field triage to trauma centers and trauma registry risk adjustment.
2002-2003	Regional trauma triage approvals
April - Nov, 2002	Workgroup of representatives from ODH, ODPS, Trauma Committee, EMS Board and OHA developed a Final Report on Provisional Trauma Center Designation. Submitted to ODH (Nick Baird) in Nov 2002
April 2002	5 module EMS Medical Director course developed by ACEP available on line
Oct 2002	OHA developed template of model transfer as required ORC
Nov 2002	Passage of SB 124 which incorporating an eighteen month provisional trauma center designation status that allows hospitals to operate as trauma centers

	while completes the ACS verification process
Nov 2002	HB 138 into effect
July 2003	Seven special studies returned to Trauma Committee with 1-2 page synopsis developed; Grant funding with distribution of funds began
July 2003	Trauma Committee developed State Trauma PI Workgroup to develop system for trauma PI at state level
Sept 2003	State Medical Director with DEMS appointed (JD Polk, DO)
Oct 2003	The EMS Board has approved the proposal to conduct a project collecting trauma data on patients admitted for less than 48 hours; TRAS will be leading this effort in 2004
Nov 2003	7 Commission Reports on EMS and Trauma Topics (7 Special Studies) sent to Governor Taft and the 125 th General Assembly; 1-2 page synopsis / study
March 2004	State PI Indicators (from Trauma Committee PI Workgroup) approved for implementation by Trauma Committee; approved by EMS Board April 2004
July 2004	State Medical Director appointed (Carol Cunningham MD) replacing Dr. Polk
Nov 2004	Ohio's received a federal grant for the CODES (Crash Outcome Data Evaluation System) projects
Nov 2004	Public health council adopted rules require a trauma center to report information to the director of health describing the trauma center's preparedness and capacity to respond to MCI and bioterrorism.
May 2005	Approval by Trauma Committee for regional PI reports to be placed on website
July 2005	Geriatric Workgroup started – chair Howard Werman, MD
Jan 2007	Hiring freeze at state level. Tim Erskine replaced Mike Glenn as ODPS position of Chief, Trauma Systems and Research
2007	Funding of National HRSA Trauma / EMS grants to states eliminated
Sept 2007	Approval of Geriatric Trauma Triage report – Trauma Committee Nov 2007; EMS Board Dec 2007
Oct 2007	2 hour required CE for trauma triage education approved
Nov 2007	Ohio Injury Community Planning Group (now OIPP) under ODH started meeting
March 2008	MTPSE assessment at state level led by OSTNL
Oct 2008	EMS Board accepted recommended changes, to include geriatric trauma triage
Dec 2008	Pre-hospital Geriatric Triage Rules passed and in effect
Jan 2009	Adoption of National EMS Scope of Practice as minimal standards (check on this)
Feb 2009	Subcommittee began meeting to begin development of Trauma System Plan
April 2009	2 hour web-based CE for Trauma Triage Rules available on-line
Sept 2009	4-year grant of \$273,727/year received by the Department of Health's Violence and Injury Prevention Program from the CDC to develop the Ohio Violent Death Reporting System (OH-VDRS). Ohio becomes the 18th state
Dec 2009	Geriatric Task Force Report published, approved by EMS Board
Feb 2010	The following tasks have been assigned by the EMS Board to the Trauma Committee: Work to develop a process for validation of the information in the trauma registry to assure that the data is accurate; make any specific recommendations for change in the handling of data; research the specific opportunities and ways to merge the data in specific registries; and research the staffing of other state's trauma systems.
June 2010	Trauma Visionary Committee started (5 EMS Board, 5 Trauma Committee members)
July 2010	Open forum / comments completed on Ohio Trauma Framework
Oct 2010	Final approval Trauma Framework (i.e. Trauma System Plan) by EMS Board

Feb 2011	NHTSA Technical Team Re-assessment completed
Feb 2011	EMS Board approved grant (priority 2) to fund a state ACS trauma system review (for 2012-13)
March 2011	Initial consideration / work on developing a joint registry (EMS, Trauma, Rehab)
Sept 2011	New titles of Emergency Medical Responder (EMR), EMT, Advanced EMT, and Paramedic will go into effect in Ohio by law.
Nov 2011	3 year required review of trauma triage rules due
Dec 2011	Metrics scorecard approved by Trauma Committee (ie to measure trauma system development)
Jan 2012	EMS Board adopted the Ohio EMS 2015 Strategic Plan, which includes Trauma Framework within content. All committees (with exception of Trauma Committee which is written in ORC) were sunsetted in order for re-organization
Feb 2012	EMS Board voted to realign the RPAB regions to match the current Department of Homeland Security regions
March 2012	New chairs of the 10 trauma workgroups established
July 2012	Grant awarded by state to begin process for ACS Trauma System review

Appendix C

Updated: February 2013

Data Management Timeline: Historical Perspective

OTR (Ohio Trauma Registry) Reporting System)		EMSIRS (EMS Incident
1992	SB 98 established the formation of an Ohio trauma registry (OTR)	SB 98 established formation of EMS incident reporting system
Jan 1997	Consensus conference to define registry inclusion criteria	
1998	TACR (Trauma Acute Care Registry) Data Dictionary (Version 1) developed (Note: TACR = a module within OTR)	
1999	OTR established within EMS Division (home grown system); Data collection started with scope limited to > 48 -hour hospital admits	Systems Management Committee (SMC) began working on data collection system
Jan 1999	Approval of TACR inclusion criteria by EMS Board	
Nov 2000	Trauma Registry Advisory Subcommittee (TRAS) formalized under Trauma Committee; Dr. Barry Knotts chair	
April 2001	Recommendation by TRAS that unique identifier is needed to merge the EMSIRS and OTR databases	
July 2001		Rules for EMSIRS established
Sept 2001	AIS coding class offered for Ohio trauma registrars	EMSIRS-1 entered in beta-testing phase
Oct 2001	Tim Erskine hired as Data Manager within DEMS for OTR / EMSIRS	
Jan 2002	Change of OTR to web-based system	EMSIRS-1 went online; data entry started
April 2002		IRSAC (Incident Reporting Systems Advisory Committee) first meeting
Jan 2003	TACR Data Dictionary (Version2) approval by EMS with changes implemented	Project underway by IRSAC to identify all EMS squads
May 2003	TRR (Trauma Rehabilitation Registry) Data Dictionary (Version 1) developed (Note: TRR = a module within OTR)	
July 2003	Initial attempt at establishment of Trauma PI Committee	NHTSA Uniform Prehospital Data Set (UPDS) released by NEMSIS
Oct 2003	Proposal to conduct a project collecting trauma data on pts admitted less than 48-hours; EMS Board approval	Tentative plan to change to EMSIRS – 2 on January 2005
May 2004	Software (LinkSolve) for probabilistic / data	Consultants from NEDARC conducted

	linkage available for OTR / EMSIRS	a 1-day SWOT analysis of EMSIRS data system
June 2004	< 48-hour LOS (length of stay) project with data collection dates revised to fall 2005; Incomplete data with no report generated from project	Revised EMSIRS-2 data set approved by EMS Board
July 2004	Revision to TACR Data Dictionary (Version 3); EMS Board approval with changes implemented (Jan 2005)	
Sept 2004	TACR Validation Study (funded by Governors Highway Safety Office grant) – data collection by outside consultation completed and sent to ODPS; no further action completed on project by EMS Division grant	
Oct 2004	2001-2002 OTR Annual Data Report approved by the EMS Board; placed on website	
Nov 2004	LinkSolve training (probabilistic linkage) completed by DEMS staff	
Jan 2005	TRR available online with data entry started	Implementation for EMSIRS-2 delayed first to 2006, then changed to 2008
April 2005	48-hour LOS study attempted but terminated due to lack of participation / data	A combined meeting of IRSAC and TRAS.
May 2005	One set of death certificate data received which was determined to be of no value	
March 2006		Decision to keep TRAS and IRSAC separate entities
Nov 2006	NHTSA 408 grant received; funding used to hire programming assistance for probabilistic linkage project and the ICD mapping project	
Jan 2007	ICDMAP-90 noted to be obsolete; DEMS investigating other options to ICDMAP-90 for assigning severity scores.	
Nov 2007	The EMS Board approved Trauma Committee's suggestion to develop a system that a unique identifier for trauma patient be tracked through the data systems	
Jan 2008		EMSIRS-2 online; data entry started
Sept 2008	Plan developed for adding unique identifier, yet ODPS issues with IT bureaucracy slowing progress.	
May 2009	No time frame to implementation of unique identifier project due to 2 reasons: 1) ODPS programming schedule is behind and 2) money is not available	
Nov 2009	TRAS recommended that the 48-hour rule be removed; No vote from Trauma Committee	

	while DEMS staff investigating with OHA.	
Nov 2009	TACR Data Dictionary revisions (Version 4) completed to bring the data elements into alignment with NTDB. Changes to OTR database never implemented at state level	
March 2010	Nancie Bechtel named co-chair of TRAS	
July 2010	Trauma Committee dropped the 48-hour rule from the Trauma Registry inclusion criteria. (Note: not implemented yet due to registry issues)	
Aug 2010	Memo by TRAS leadership demonstrating need for trauma registry staff support	
Oct 2010	Approval by EMS Board to allow DEMS to move forward to acquire NHTSA 408 grant money for the purchase of commercial database software	
Dec 2010	TACR Data Dictionary revision (Version 5) approved. Never implemented into OTR by ODPS.	
Dec 2010	TRAS workgroup assembled to assist with creation of RFP	
Jan 2011	Presentations from 5 commercial software vendors. Scoring system developed by TRAS membership	
March 2011	Recommendation by TRAS made to the Executive Director to contract with Digital Innovations as the commercial software vendor.	
March 2011	Initial list of non-compliant hospitals not submitting TACR information developed and presented to trauma committee	
June 2011	2009 TACR Annual Report completed; placed on website	
Sept 2011	Procedure used to select the software vendor was considered invalid. Letter received from Executive Director EMS Division and EMS Board chair which outlined rationale for delay and need to restart selection process from beginning.	
Sept 2011	Revised policy for addressing non-compliant with data reporting and request for extensions	
Sept 2011	2010 TACR Annual Report released and placed on website	
Oct 2011		IRSAC to begin work on the EMSIRS-3 data dictionary which is needed for NEMSIS.

Dec 2011		IRSAC suggests the software being purchased for the Trauma Registry should include the NEMSIS fields
Jan 2012	TRAS disbanded by EMS Board	
March 2012	Goal # 8 Workgroup with Deb Myers RN- chair of workgroup	
April 2012		IRSAC disbanded. Authority over EMSIRS to reside within the EMS Systems Development committee
July 2012		Legislation change which will allow EMS data to be submitted to NEMSIS
Oct 2012	TACR Data Diction (Version 6) approved.	
Jan 2013		Moved to National EMS Information System (NEMSIS – Version 3) compliant dataset by January 1, 2013.

Ohio
Trauma
Registry

2010

Trauma Acute Care Registry Annual Data Report
Published: September 2011

Contents

Appendices.....	4
Introduction.....	5
Executive Summary	6
Limitations of the Data	7
Registry Characteristics	8
Records by Calendar Year: 1999 - 2010.....	9
Records by Trauma Center Type	10
Patient Characteristics.....	11
Patients by Month: 2010	12
Patients by Age Group: 2010.....	13
Adult, Pediatric, and Geriatric Count: 2010	14
Patients by Age & Sex: 2010.....	15
Incidence of Injury by Age and Sex	16
Patients by Trauma Center Level.....	17
Number of Patients by Population Density: 2010.....	18
Transfers by Trauma Center Level	19
Injury Characteristics	20
Injury Type: 2010	21
Intent of Injury: 2010.....	22
Payor Mix: 2010	23
Mechanisms of Injury: 2010	24
Outcomes	25
Patient Outcome: 2010.....	26
Number of Deaths by Age: 2010	27
Case Fatality Rate by Age: 2010	28
Case Fatality Rate by Age and Sex: 2010.....	29
Mechanisms of Injury for Deaths: 2010	30
Case Fatality Rate by Mechanism of Injury: 2010	31
Case Fatality Rate by Injury Severity Score: 2010.....	32
Case Fatality Rate by Intent of Injury: 2010.....	33
Hospital Days by Mechanism of Injury: 2010.....	34
Hospital Days by Mechanism of Injury: 2010.....	35
Hospital Days by Injury Severity Score: 2010	36
Hospital Days by Injury Severity Score: 2010	37
Emergency Department Disposition: 2010.....	38

Hospital Discharge Disposition: 2010	39
Case Fatality Rate by Population Density: 2010	40
Overall Case Fatality Rate by Year: 1999-2010	41
Trauma Center Case Fatality Rate by Year: 2000-2010	42
Non-Trauma Center Case Fatality Rate by Year: 2000-2010.....	43
ED Deaths at Trauma Centers.....	44
ED Deaths at Level 1 Trauma Centers	45
ED Deaths at Level 2 Trauma Centers	46
ED Deaths at Level 3 Trauma Centers	47
ED Deaths at Non-Trauma Centers	48
Geographic Characteristics	49
Number of Injuries by County	50
Incidence of Injuries by County.....	51
Number of Injury Deaths by County	52
Incidence of Injury Deaths by County	53

Appendices

- Appendix A: OTR Inclusion/Exclusion Criteria
- Appendix B: Ohio County Map with EMS Regions
- Appendix C: E-Code Groupings
- Appendix D: Barell Matrix
- Appendix E: Members of the EMS Board, Trauma Committee, and Trauma Registry Advisory Subcommittee (TRAS)
- Appendix F: Reporting Facilities
- Appendix G: Ohio Trauma Registry Data Element List
- Appendix H: Glossary
- Appendix I: Ohio Revised Code
- Appendix J: Counties by Population Density Designation

Introduction

This annual report from the Ohio Trauma Registry (OTR) presents an overview of the data about traumatic injuries in Ohio in 2010. The purpose of this report is to provide information to healthcare professionals as well as to the public about the current state of care for seriously injured patients treated at hospitals throughout Ohio.

The OTR is operated and maintained by the Ohio Department of Public Safety, Division of Emergency Medical Services. The State of Ohio's Emergency Medical Services (EMS) Board has statutory authority over the OTR and supervises its operation via the EMS Board's Trauma Committee and the Trauma Registry Advisory Subcommittee.

This report was produced by the Ohio Department of Public Safety, Division of Emergency Medical Services, Office of Research and Analysis. Questions or comments concerning the report should be directed to the Office of Research and Analysis at 800-233-0785 (toll free) or EMSData@dps.state.oh.us.

Executive Summary

The Ohio Trauma Registry (OTR) began collecting data on January 1, 1999. This report represents data from the year 2010. This report is intended to give the reader a strong sense of the type and amount of data available in the OTR. The Ohio Revised Code and the Ohio Administrative Code prohibit the release of data that would identify or tend to identify a provider or recipient of trauma care.

- The data in the OTR are prescribed by the Patient Inclusion Criteria (Appendix A). To be included in the OTR, patients must be admitted to the hospital for at least 48 hours or transferred into the hospital, with an injury-related ICD-9 code. Patients that die after receiving any evaluation or treatment while on hospital premises, as well as patients who are transferred out of the hospital, are also included.
- Between January 1, 1999 and December 31, 2010, a total of 396,066 records were submitted to the OTR. This report includes the 36,797 records that were submitted in 2010. Because patients who are transferred between hospitals generate multiple records, the number of records submitted to the OTR is greater than the number of individual patients.
- Of the 28,491 patients included in this report, 95.8% survived to discharge.
- 30.8% of the patients included in this report were geriatric patients (age 70 or older), while 12.5% of the patients were pediatric patients (age 15 or younger).
- 55.4% of the total trauma patients in 2010 were males while 44.6% were females.
- Except for the 0-4 and 10-14 year old age ranges, males had a higher case fatality rate than females of the same age.
- 90.5% of the injuries reported to the OTR in 2010 were the result of blunt trauma.
- 52.9% of the injuries reported to the OTR in 2010 were caused by falls, while an additional 15.3% were caused by motor vehicle collisions. Of the injuries reported to the OTR that resulted in in-hospital death in 2010, 37.7% were caused by falls, 17.2% were caused by motor vehicle collisions, and 13.3% were caused by assault.
- Injuries caused by drowning/submersion or firearms had the highest case fatality rate of 32.5 per 100 patients and 28.2 per 100 patients respectively.
- 89% of the injuries reported to the OTR in 2010 were unintentional. Self-inflicted injuries had the highest case fatality rate at 26%.
- Over time, the overall mortality for patients included in the OTR has remained steady around 4%. After a small drop from 6% in 2003, mortality among patients treated in a trauma center in Ohio has since remained steady around 5%. Mortality among patients treated at non-trauma centers in Ohio has been steadily trending downward from 2.5% in 2000 to 2.2% in 2010.

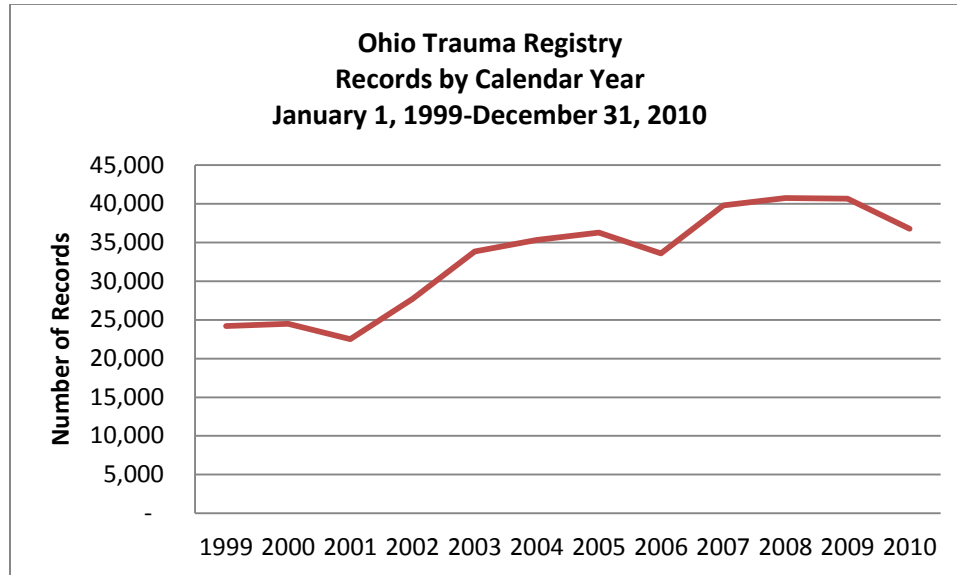
Limitations of the Data

There are a number of issues that need to be considered when reading this report. These are listed here in no specific order.

- **48-Hour Rule:** To be included in the OTR, patients must be admitted to the hospital for at least 48 hours or transferred into the hospital with an injury-related ICD-9 code. Patients that die after receiving any evaluation or treatment while on hospital premises, as well as patients who transfer out of the hospital, are also included.
- **Accuracy:** External validation of the data in OTR has not been performed; therefore, the accuracy of the data contained in this report is limited to the accuracy of the data submitted to OTR by the individual hospitals.
- **Age:** Patient date of birth is reported to OTR, age is not. Age is calculated by the Office of Research and Analysis using the difference between date of birth and date of arrival at the hospital. A very small number of records (n=7) do not have a date of birth recorded. Age is therefore not calculable on these records. Date of arrival at hospital is chosen for this calculation as a substantially larger number of records (n = 86) do not have a date of injury recorded.
- **Death Data:** In OTR, data on patients who die as a result of their injuries is limited to in-hospital deaths. Persons pronounced dead at the scene and not transported to the hospital are not reported to OTR.
- **OTR participation:** Submission of trauma patient data to OTR is statutorily required by Ohio Revised Code §4765.06. However, a small number of hospitals did not contribute data to this report. A list of contributing hospitals can be found in Appendix F.
- **Out-of-state patients:** OTR data includes patients who were injured in neighboring states and transported to an Ohio hospital. These records do not include county of injury data.
- **Records vs. Patients:** Because patients who are transferred between hospitals generate a separate trauma record at each hospital in which they receive treatment, the number of records submitted to the OTR will be greater than the number of individual trauma patients. To account for some patients having multiple records for the same incident, care has been taken to note whether a graph or table is using records or patients as the population.
- **Rounding:** Because of rounding, percentages displayed in graphs and tables will not always total 100%.
- **Trauma Center vs. Non-Trauma Center Data:** This report contains data submitted by all hospitals, regardless of whether or not the hospital is a trauma center. Because they employ specially trained trauma registry personnel, trauma center data tends to be more detailed and precise. However, the data from non-trauma centers gives a broader view of trauma care in Ohio and adds richness and depth to this report. This additional data is something many other states lack; therefore, comparisons with other states should be undertaken with caution.

Registry Characteristics

Records by Calendar Year: 1999 - 2010



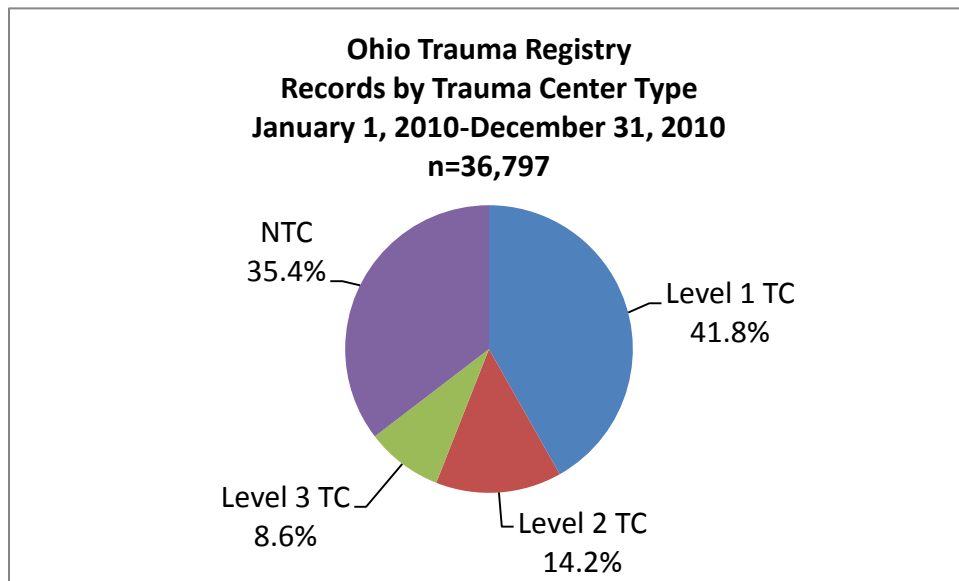
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Records	24,220	24,490	22,516	27,733	33,844	35,347	36,296	33,587	39,820	40,756	40,660	36,797	396,066

Trauma Records by Year

The total number of records reported to the Ohio Trauma Registry (OTR) has increased over time from 24,220 records in 1999 to 36,797. As of December 31, 2010, a total of 396,066 records had been submitted to the OTR.

The overall annual increase in records submitted to OTR is thought to be a result of system maturation, increased hospital participation, as well as increasing computerization of hospital medical records. Such computerization allows for easier and more accurate identification of eligible patients. This supposition has not been verified and requires further study.

Records by Trauma Center Type



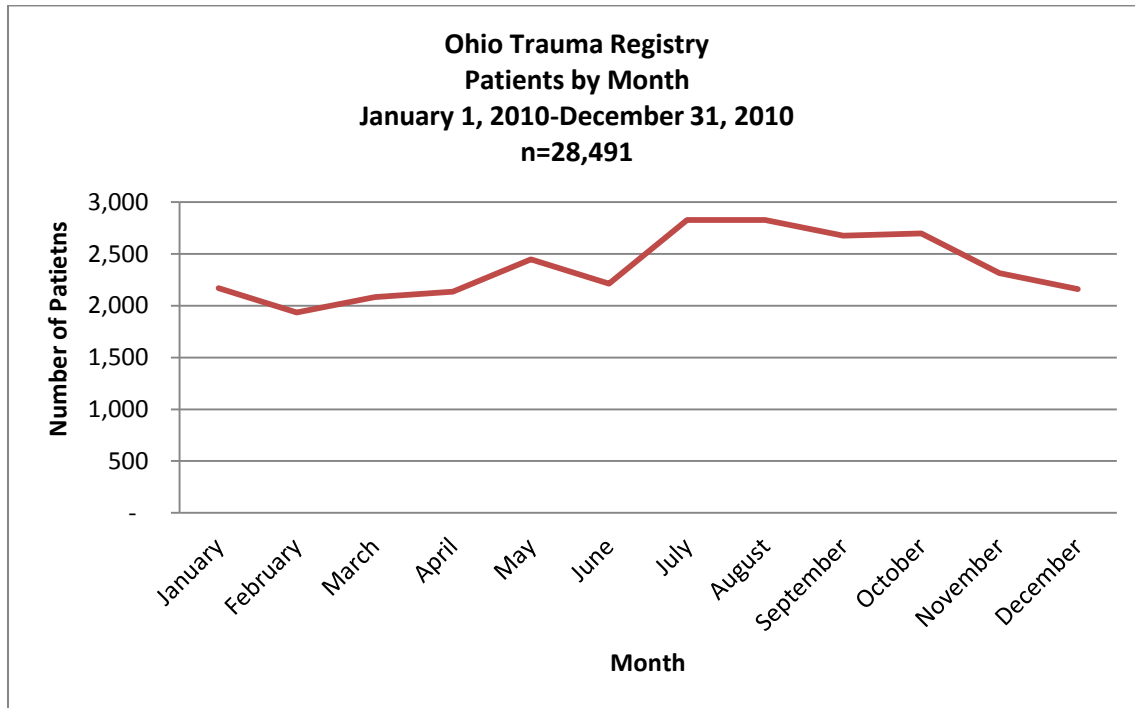
2010		
	# of Records	% of Records
Level 1 TC	15,386	41.8%
Level 2 TC	5,214	14.2%
Level 3 TC	3,172	8.6%
NTC	13,025	35.4%
Total	36,797	100.0%

Records by Trauma Center Type:

In 2010, non-trauma centers accounted for 35.4% of records submitted to the Ohio Trauma Registry. Level 1 trauma centers accounted for the largest portion of records submitted to the Ohio Trauma Registry with 41.8%.

Patient Characteristics

Patients by Month: 2010



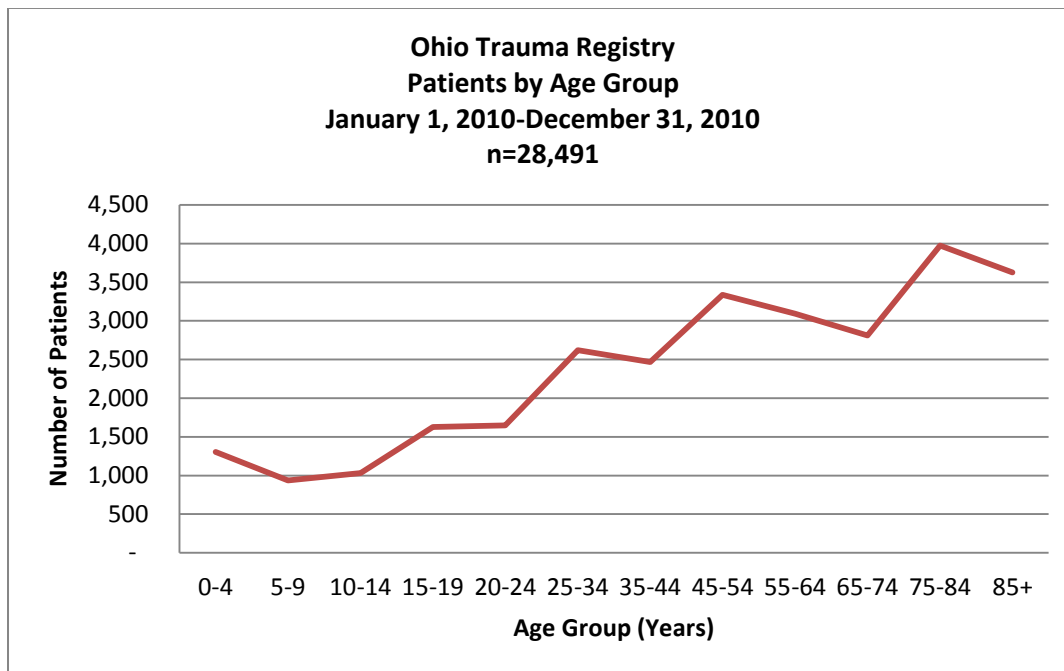
2010		
	# of Patients	% of Patients
January	2,169	7.6%
February	1,934	6.8%
March	2,083	7.3%
April	2,137	7.5%
May	2,449	8.6%
June	2,214	7.8%
July	2,827	9.9%
August	2,828	9.9%
September	2,676	9.4%
October	2,697	9.5%
November	2,316	8.1%
December	2,161	7.6%
Total	28,491	100.0%

Patients by Month:

The month listed in this chart reflects the month that the patient arrived at the hospital and not necessarily the month during which the injury occurred. The number of patients admitted to the hospital in 2010 peaked in July and August and was lowest in February. The number of patients was calculated by subtracting the number of records with the following two classifications from the total number of records submitted:

1. "ED Disposition" equal to "Transfer to another Ohio hospital" or "Transfer to an out-of-state hospital"
2. "Discharge Disposition" equal to "Transfer to another Ohio hospital" or "Transfer to an out-of-state hospital"

Patients by Age Group: 2010



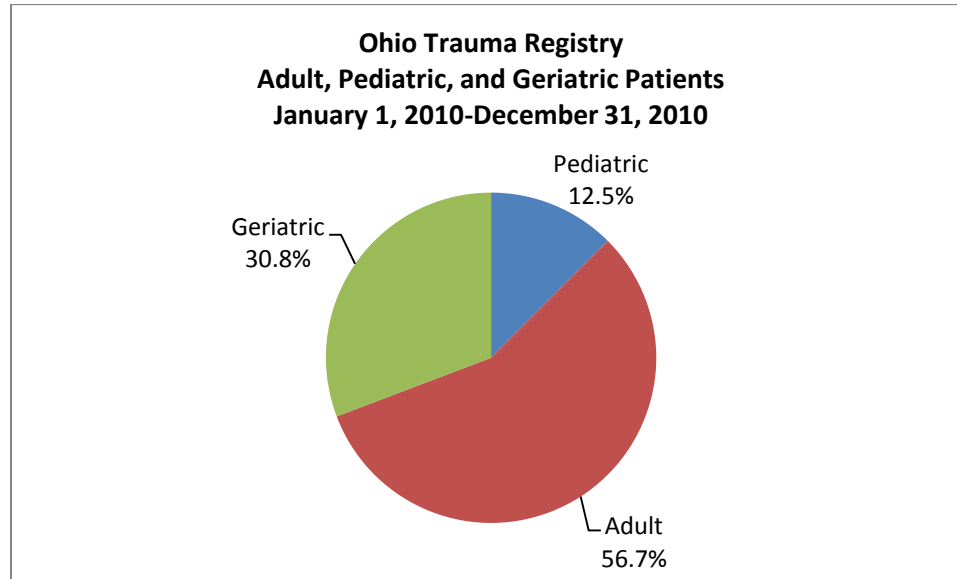
**7 patients were excluded due to lack of calculable age*

2010		
Age	# of Patients	% of Patients
0-4	1,306	4.6%
5-9	937	3.3%
10-14	1,031	3.6%
15-19	1,626	5.7%
20-24	1,649	5.8%
25-34	2,623	9.2%
35-44	2,466	8.7%
45-54	3,339	11.7%
55-64	3,091	10.8%
65-74	2,812	9.9%
75-84	3,976	14.0%
85+	3,628	12.7%
Unknown	7	0.0%
Total	28,491	100.0%

Number of Patients by Age

The 75-84 year old age group, which included 3,976 patients (14.0%), had the most patients reported. As a group, patients 0-14 years of age accounted for 3,274 (11.5%) of the overall patients reported.

Adult, Pediatric, and Geriatric Count: 2010



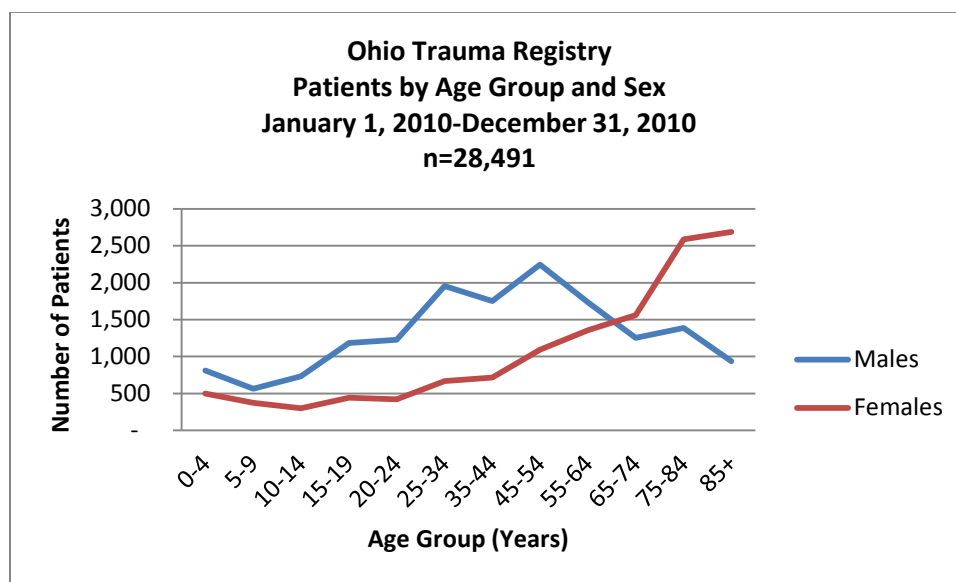
**7 patients were excluded due to lack of a calculable age*

2010		
Age Group	# of Patients	% of Patients
Pediatric	3,560	12.5%
Adult	16,156	56.7%
Geriatric	8,768	30.8%
Unknown	7	0.0%
Total	28,491	100.0%

Adult vs Pediatric vs Geriatric Patients

The Ohio Revised Code has established that pediatric trauma patients are those age 15 or younger and that geriatric patients are those age 70 and older. Trauma patients age 16-69 are considered adults. In 2010, 12.5% of the patients reported were age 15 or younger and 30.8% were age 70 and older.

Patients by Age & Sex: 2010



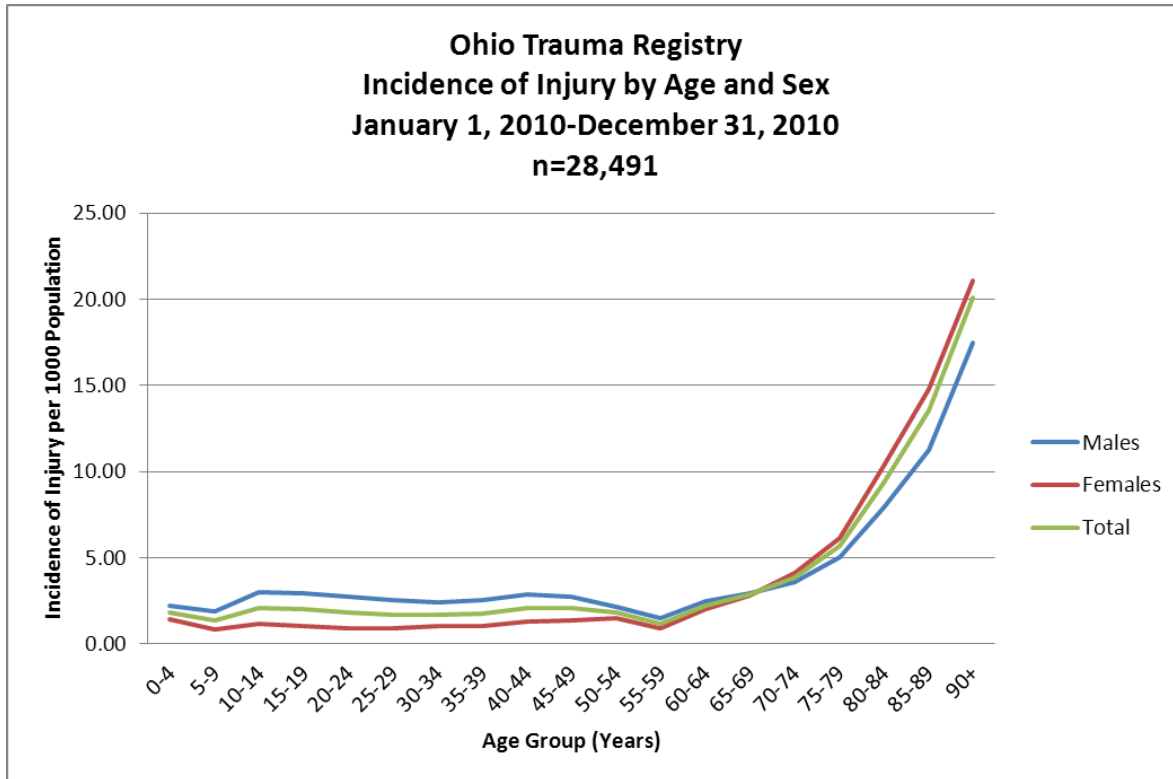
**7 patients were excluded due to unknown age and/or sex*

2010					
Age Group	Males	Females	Male %	Female %	Total # Pts
0-4	810	496	62.0%	38.0%	1,306
5-9	563	374	60.1%	39.9%	937
10-14	731	300	70.9%	29.1%	1,031
15-19	1,184	442	72.8%	27.2%	1,626
20-24	1,227	422	74.4%	25.6%	1,649
25-34	1,956	667	74.6%	25.4%	2,623
35-44	1,752	714	71.0%	29.0%	2,466
45-54	2,246	1,093	67.3%	32.7%	3,339
55-64	1,733	1,358	56.1%	43.9%	3,091
65-74	1,253	1,559	44.6%	55.4%	2,812
75-84	1,388	2,588	34.9%	65.1%	3,976
85+	938	2,690	25.9%	74.1%	3,628
Unknown	6	1	85.7%	14.3%	7
Total	15,787	12,704	55.4%	44.6%	28,491

Patients by Age and Sex

Overall, 55.4% of the patients reported were male, while 44.6% were female. Males accounted for more than 50% of the patients reported up until age 65. At ages greater than 65, females accounted for the majority of the patient population.

Incidence of Injury by Age and Sex



**7 patients were excluded due to unknown age and/or sex*

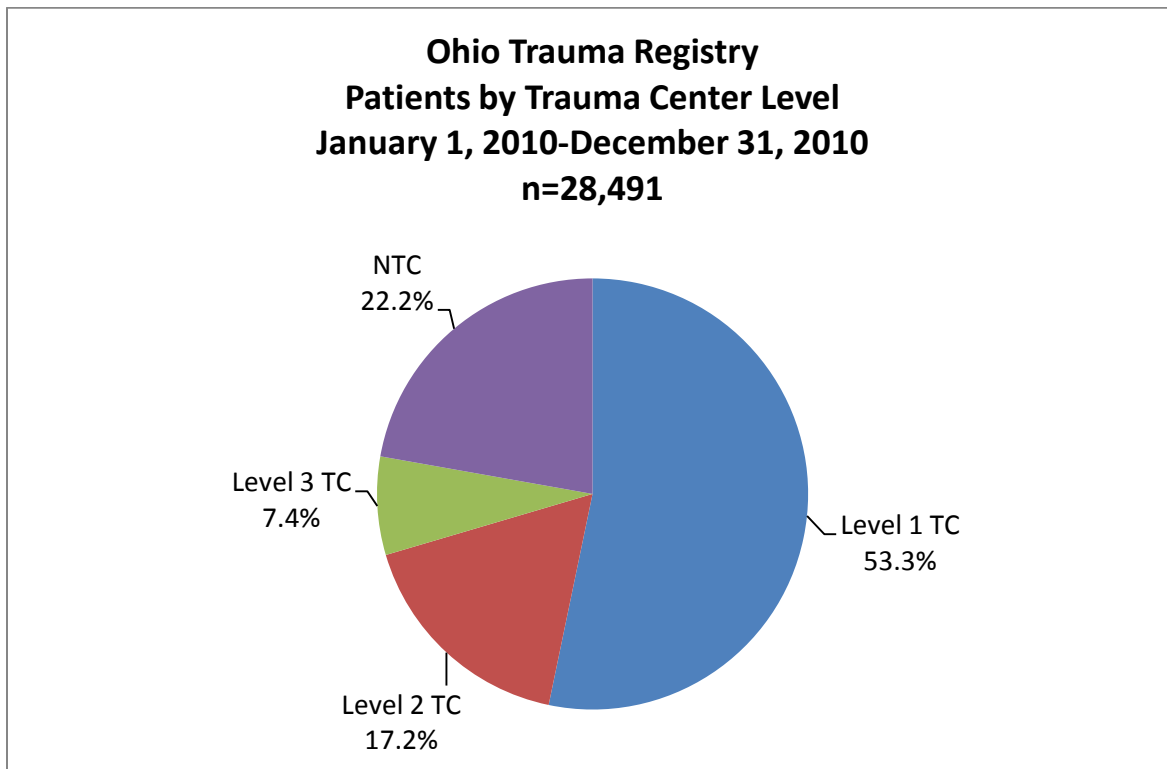
2010

Age Group	Males	Females	Total
0-4	2.20	1.40	1.81
5-9	1.91	0.82	1.38
10-14	2.99	1.17	2.10
15-19	2.91	1.05	2.00
20-24	2.75	0.89	1.83
25-29	2.52	0.91	1.71
30-34	2.43	1.01	1.71
35-39	2.57	1.01	1.78
40-44	2.87	1.29	2.08
45-49	2.76	1.38	2.06
50-54	2.17	1.48	1.82
55-59	1.47	0.93	1.19
60-64	2.47	2.00	2.22
65-69	2.91	2.81	2.86
70-74	3.60	4.12	3.88
75-79	5.01	6.18	5.68
80-84	7.89	10.33	9.38
85-89	11.24	14.77	13.57
90+	17.45	21.06	20.12
Total	2.80	2.15	2.47

Incidence of Injury by Age and Sex:

Incidence of injury is calculated as the number of injuries that occur for every 1000 people at risk. For the purposes of this report, the entire Ohio population is considered the population at risk. The incidence of injury sharply increases in both sexes after age 70. This increase is especially pronounced among females.

Patients by Trauma Center Level

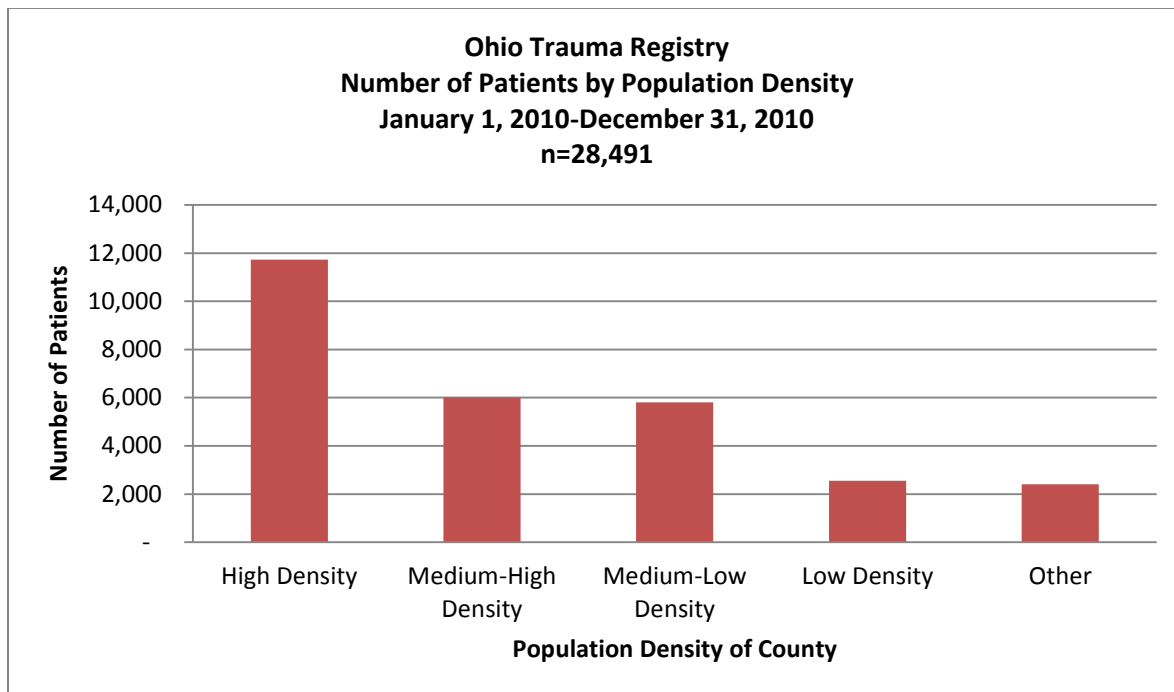


2010					
	Level 1 TC	Level 2 TC	Level 3 TC	NTC	Total
# of Pts.	15,176	4,890	2,098	6,327	28,491

Patients by Trauma Center Level:

In 2010, 77.8% of trauma patients received definitive care at a trauma center. Level 1 trauma centers provided definitive care for 15,176 patients, representing 53.3% of all trauma patients in Ohio in 2010.

Number of Patients by Population Density: 2010



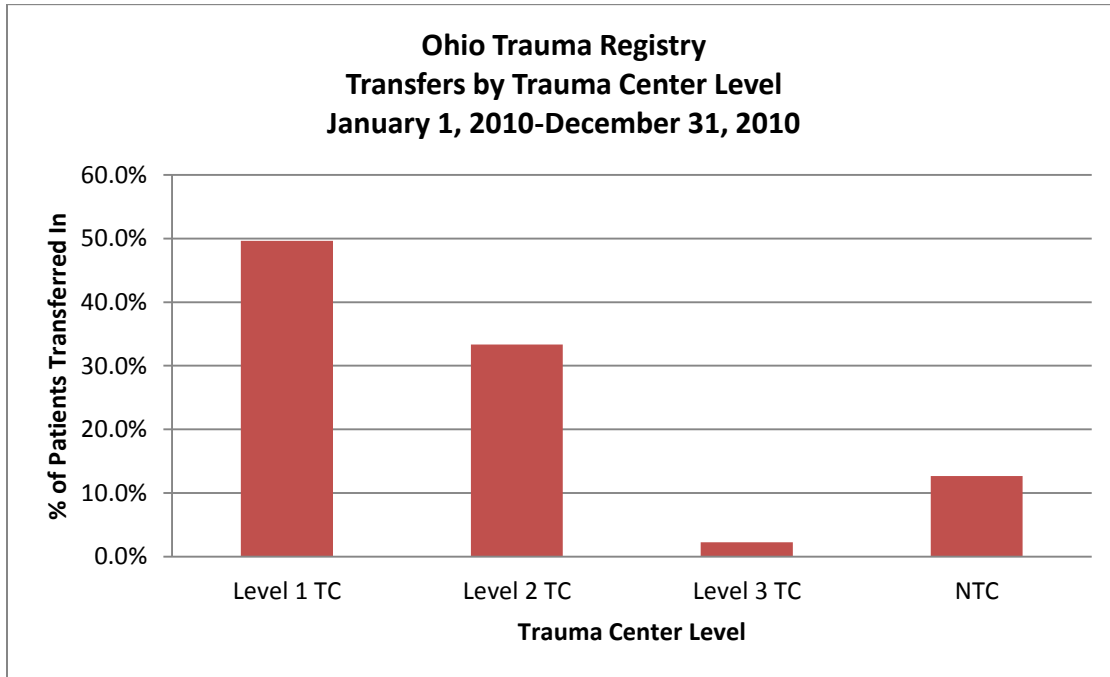
2010	
Population Density	Number of Patients
High Density	11,726
Medium-High Density	6,007
Medium-Low Density	5,812
Low Density	2,545
Other	2,401
Total	28,491

Patients by Population Density:

Counties with a population density >1000 people per square mile were considered “High Density.” Counties with a population density between 300 and 999 people per square mile were considered “Medium-High Density.” Counties with a population density between 100 and 299 people per square mile were considered “Medium-Low Density.” Counties with a population density <100 people per square mile were considered “Low Density.” The “Other” category includes any records with missing county data or out-of-state county data. As expected, the majority of patients come from highly populated counties, while more sparsely populated counties contribute relatively few patients.

The list of counties by population density can be found in Appendix J.

Transfers by Trauma Center Level



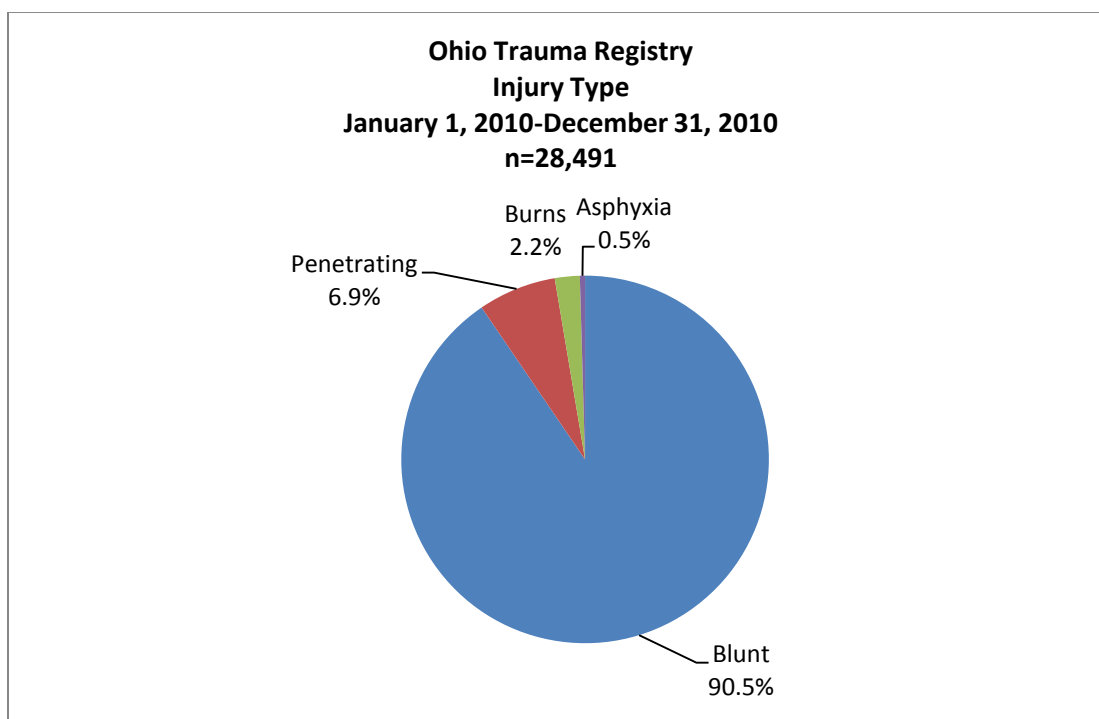
2010				
	Scene	Transfer	Total	% Transferred In
Level 1 TC	7,641	7,535	15,176	49.7%
Level 2 TC	3,260	1,630	4,890	33.3%
Level 3 TC	2,050	48	2,098	2.3%
NTC	5,524	803	6,327	12.7%
Total	18,475	10,016	28,491	35.2%

Transfers by Trauma Center Level:

Almost half of the trauma patients seen at level 1 trauma centers were transferred from another facility. Overall, 35.2% of trauma patients were transferred at least once before receiving definitive care.

Injury Characteristics

Injury Type: 2010

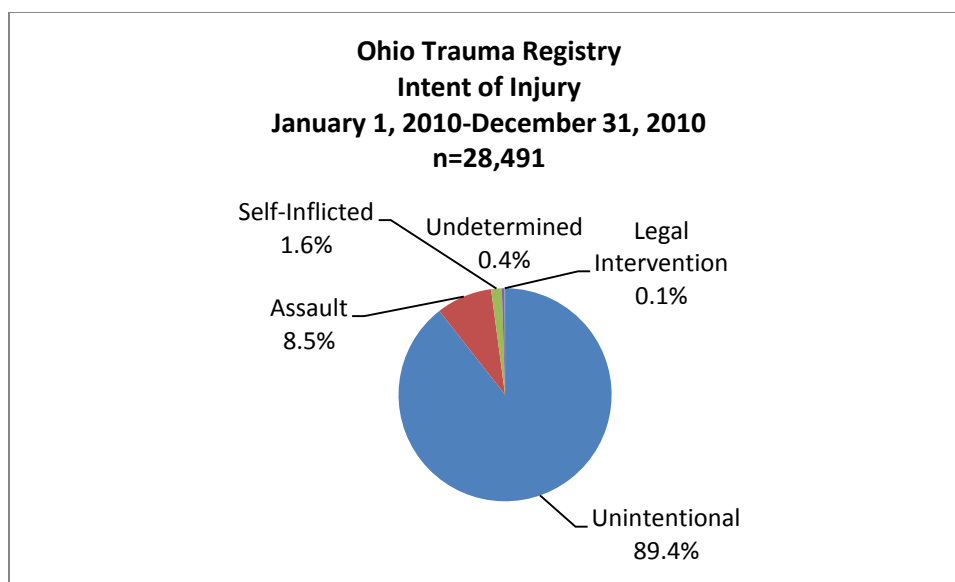


2010		
Injury Type	# of Patients	% of Patients
Blunt	25,780	90.5%
Penetrating	1,957	6.9%
Burns	624	2.2%
Asphyxia	130	0.5%
Total	28,491	100.0%

Injury Type

Blunt injuries accounted for the vast majority of injuries reported to the OTR in 2010 (90.5%), while penetrating injuries only accounted for 6.9% of all injuries and burns accounted for an additional 2.2%.

Intent of Injury: 2010

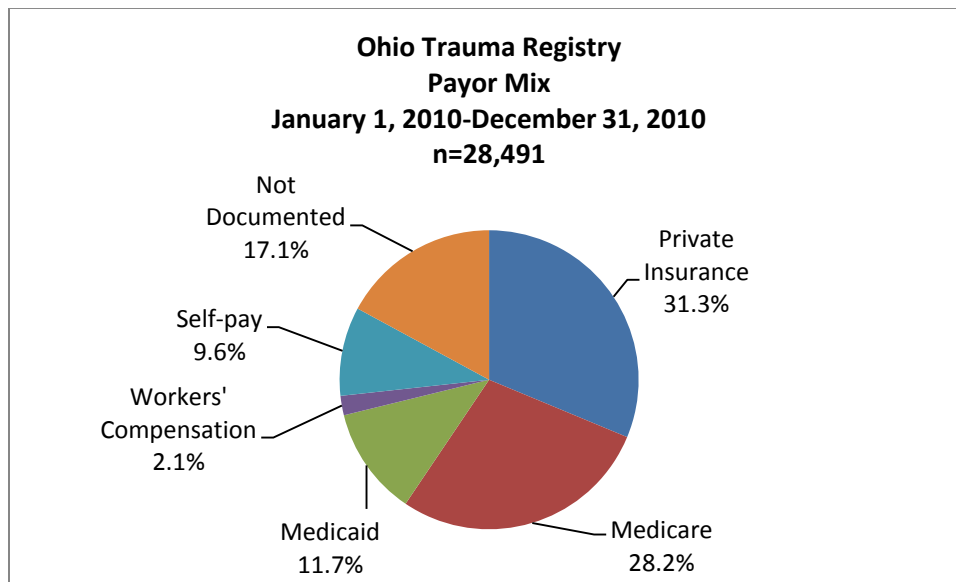


2010		
Intent	# of Patients	% of Patients
Unintentional	25,474	89.4%
Assault	2,417	8.5%
Self-Inflicted	461	1.6%
Undetermined	117	0.4%
Legal Intervention	22	0.1%
Total	28,491	100.0%

Intent of Injury

The intent by which the injury was sustained is derived from the ICD-9-CM *External Cause of Injury Codes* (E-codes) (see Appendix C). Within the total number of patients reported to the OTR in 2010, 89.4% were injured unintentionally.

Payor Mix: 2010

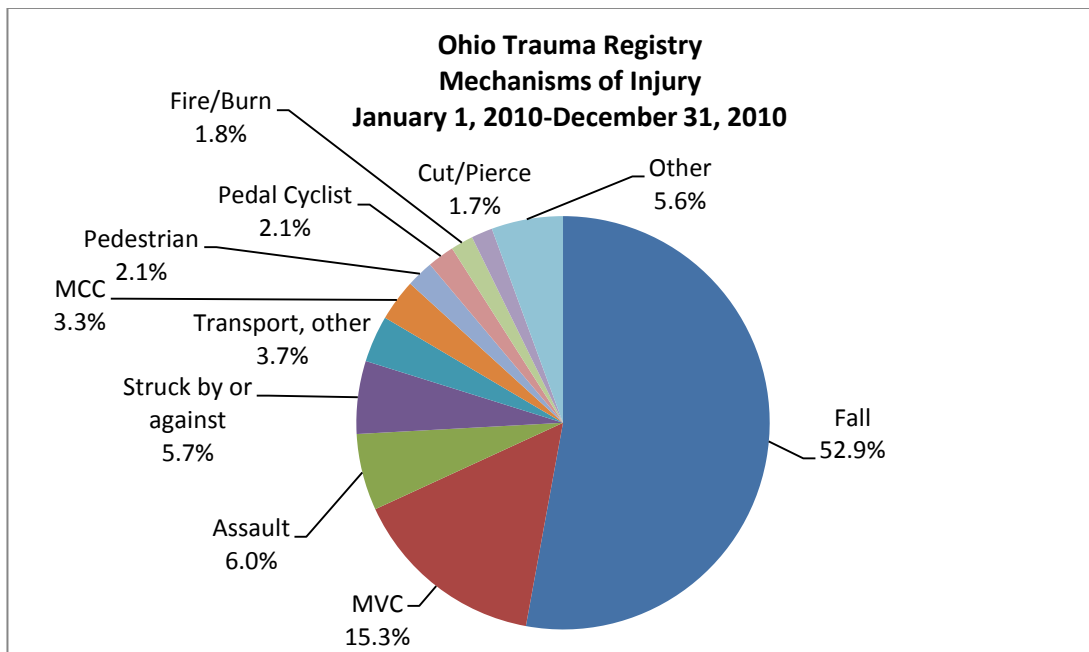


2010		
Payment Source	# of Patients	% of Patients
Private Insurance	8,908	31.3%
Medicare	8,025	28.2%
Medicaid	3,347	11.7%
Workers' Compensation	598	2.1%
Self-pay	2,740	9.6%
Not Documented	4,873	17.1%
Total	28,491	100.0%

Payor Mix

Payor mix is reported as the primary source of payment documented during the patient's hospitalization. It can give a rough estimate of how trauma care is reimbursed, but it does not reflect the final source of revenue to the hospital, as this is sometimes not known for many months post-discharge. Of the total number of records reported to the OTR, 31.3% had commercial insurance coverage. In terms of anticipated reimbursement, 42.0% of the hospitals expected payment from Medicare, Medicaid, or Worker's Compensation, with the vast majority of these reported as Medicare.

Mechanisms of Injury: 2010



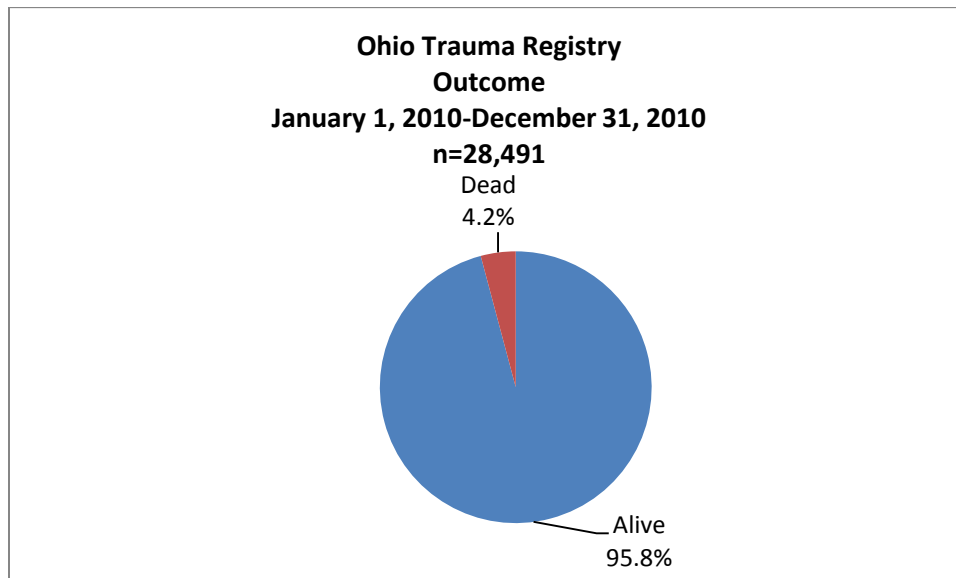
2010		
Mechanism of Injury	# of Patients	% of Patients
Fall	15,065	52.9%
Motor Vehicle Collision (MVC)	4,347	15.3%
Assault	1,709	6.0%
Struck by or against	1,624	5.7%
Transport, other	1,041	3.7%
Motorcycle Collision (MCC)	931	3.3%
Pedestrian	603	2.1%
Pedal Cyclist	602	2.1%
Fire/Burn	503	1.8%
Cut/Pierce	472	1.7%
Other	1,594	5.6%
Total	28,491	100.0%

Mechanism of Injury

Of the patient records submitted, 52.9% of all patients suffered injury due to a fall and 15.3% were injured as a result of a motor vehicle collision. In this graph, the mechanism of injury is reported as the External Cause of Injury code or E-code. The Centers for Disease Control and Prevention place E-codes into groupings reflective of similar causes of injury. More information about E-codes and E-code groupings can be found in Appendix C. The “Other” category consists of a large number of E-codes, including such things as injuries sustained on a train and boating injuries.

Outcomes

Patient Outcome: 2010

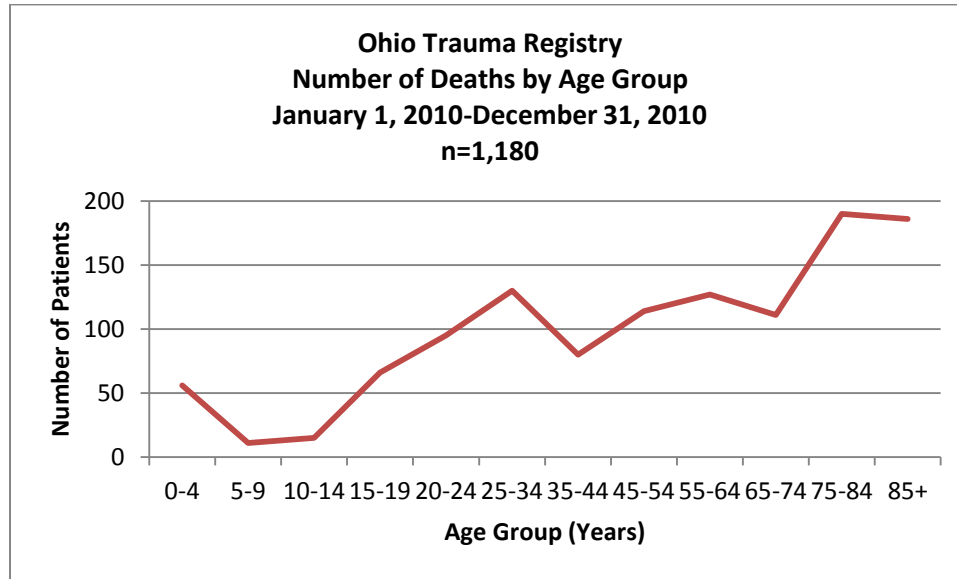


2010		
Outcome	# of Patients	% of Patients
Alive	27,308	95.8%
Dead	1,183	4.2%
Total	28,491	100.0%

Outcome

In 2010, 4.2% of the patients reported to the OTR died. Please note that these data only reflect patients treated in the hospital; deaths occurring outside a medical facility are not included in this analysis.

Number of Deaths by Age: 2010



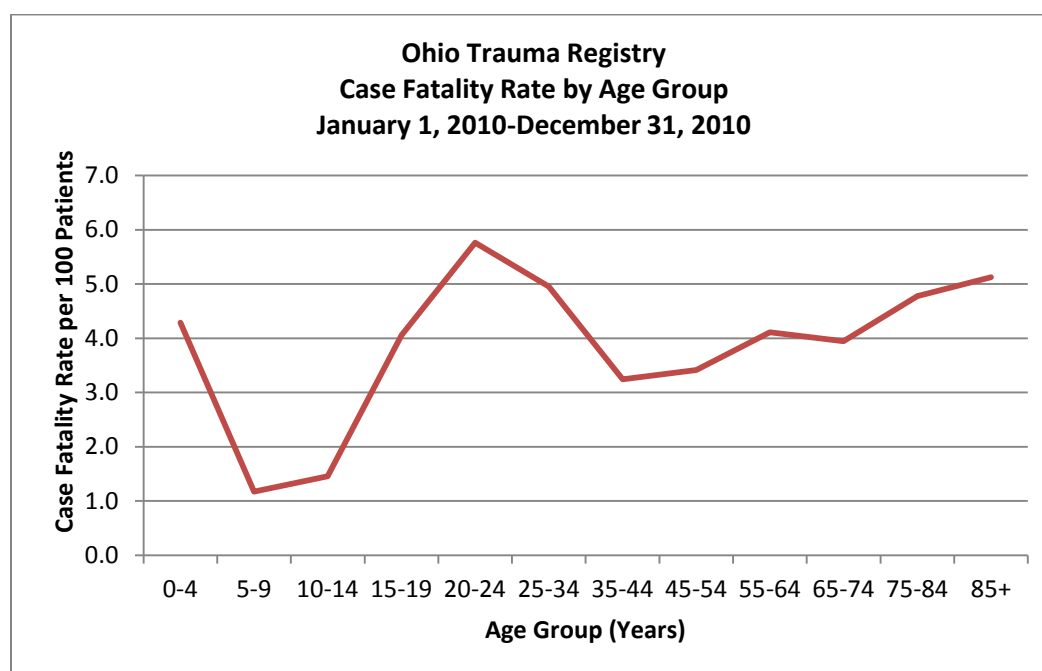
**7 patients were excluded due to lack of a calculable age*

2010		
Age Group	# of Deaths	Total # Patients
0-4	56	1,306
5-9	11	937
10-14	15	1,031
15-19	66	1,626
20-24	95	1,649
25-34	130	2,623
35-44	80	2,466
45-54	114	3,339
55-64	127	3,091
65-74	111	2,812
75-84	190	3,976
85+	186	3,628
Unknown	2	7
Total	1,183	28,491

Deaths by Age

More patients (190) died in the 75-84 year old age group than in any other group. This represents 16.1% of all deaths reported. It should be noted that this data reflects deaths occurring in the hospital setting (ED or inpatient). Trauma patients that die at the scene of an injury or following discharge from the hospital are not included in this report.

Case Fatality Rate by Age: 2010



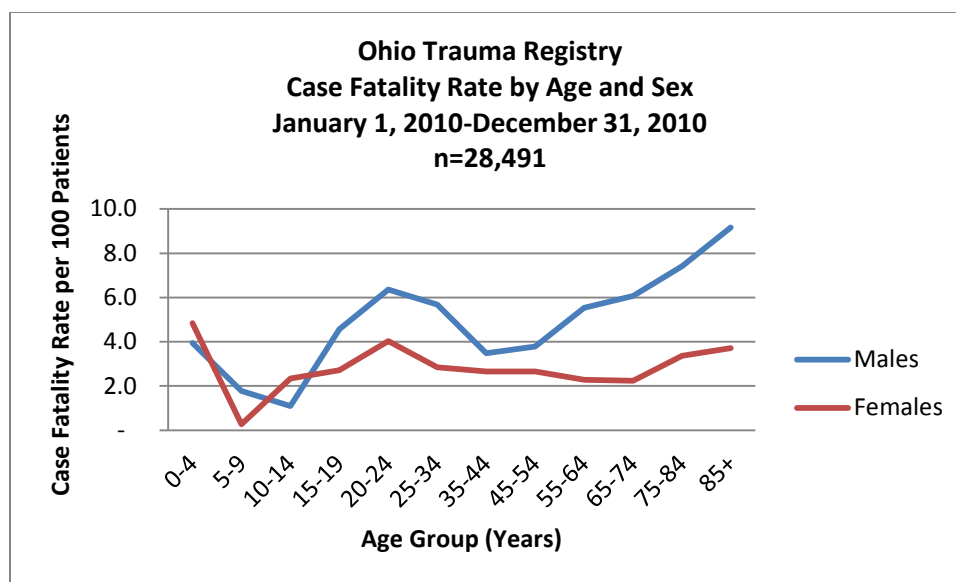
**7 patients were excluded due to lack of a calculable age*

2010			
Age Group	# of Deaths	Total # Patients	Case Fatality Rate
0-4	56	1,306	4.3
5-9	11	937	1.2
10-14	15	1,031	1.5
15-19	66	1,626	4.1
20-24	95	1,649	5.8
25-34	130	2,623	5.0
35-44	80	2,466	3.2
45-54	114	3,339	3.4
55-64	127	3,091	4.1
65-74	111	2,812	3.9
75-84	190	3,976	4.8
85+	186	3,628	5.1
Unknown	2	7	28.6
Total	1,183	28,491	4.2

Case Fatality Rate:

The case fatality rate is calculated as the number of deaths in each age group divided by the total number of patients in each age group, and then multiplied by 100. The case fatality rate represents the number of deaths for every 100 patients. The 5-9 year old age group had the lowest case fatality rate (1.2) while the 20-24 year old age group had the highest case fatality rate (5.8).

Case Fatality Rate by Age and Sex: 2010



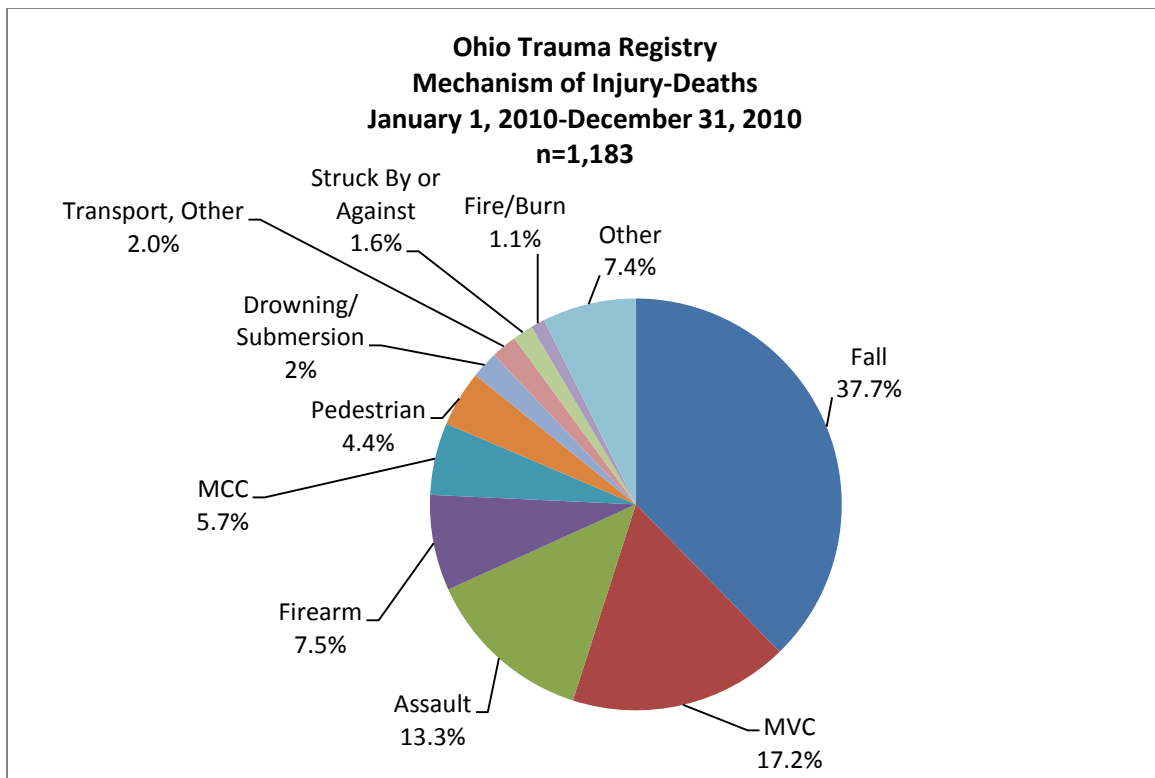
**7 patients were excluded due to unknown age and/or sex*

2010									
Age Group	Males			Females			Total		
	Lived	Died	CFR	Lived	Died	CFR	Lived	Died	CFR
0-4	778	32	4.0	472	24	4.8	1,250	56	4.3
5-9	553	10	1.8	373	1	0.3	926	11	1.2
10-14	723	8	1.1	293	7	2.3	1,016	15	1.5
15-19	1,130	54	4.6	430	12	2.7	1,560	66	4.1
20-24	1,149	78	6.4	405	17	4.0	1,554	95	5.8
25-34	1,845	111	5.7	648	19	2.8	2,493	130	5.0
35-44	1,691	61	3.5	695	19	2.7	2,386	80	3.2
45-54	2,161	85	3.8	1,064	29	2.7	3,225	114	3.4
55-64	1,637	96	5.5	1,327	31	2.3	2,964	127	4.1
65-74	1,177	76	6.1	1,524	35	2.2	2,701	111	3.9
75-84	1,285	103	7.4	2,501	87	3.4	3,786	190	4.8
85+	852	86	9.2	2,590	100	3.7	3,442	186	5.1
Unknown	5	1	16.7	-	1	100.0	5	2	28.6
Total	14,986	801	5.1	12,322	382	0.0	27,308	1183	4.2

Case Fatality Rate:

After age 14, males tend to have a higher case fatality rate, which increases sharply starting at age 45. Women tend to have a lower case fatality rate which remains static until age 74, after which it increases sharply. The case fatality rate presented is a crude rate and does not adjust for any other factors such as injury severity or type.

Mechanisms of Injury for Deaths: 2010

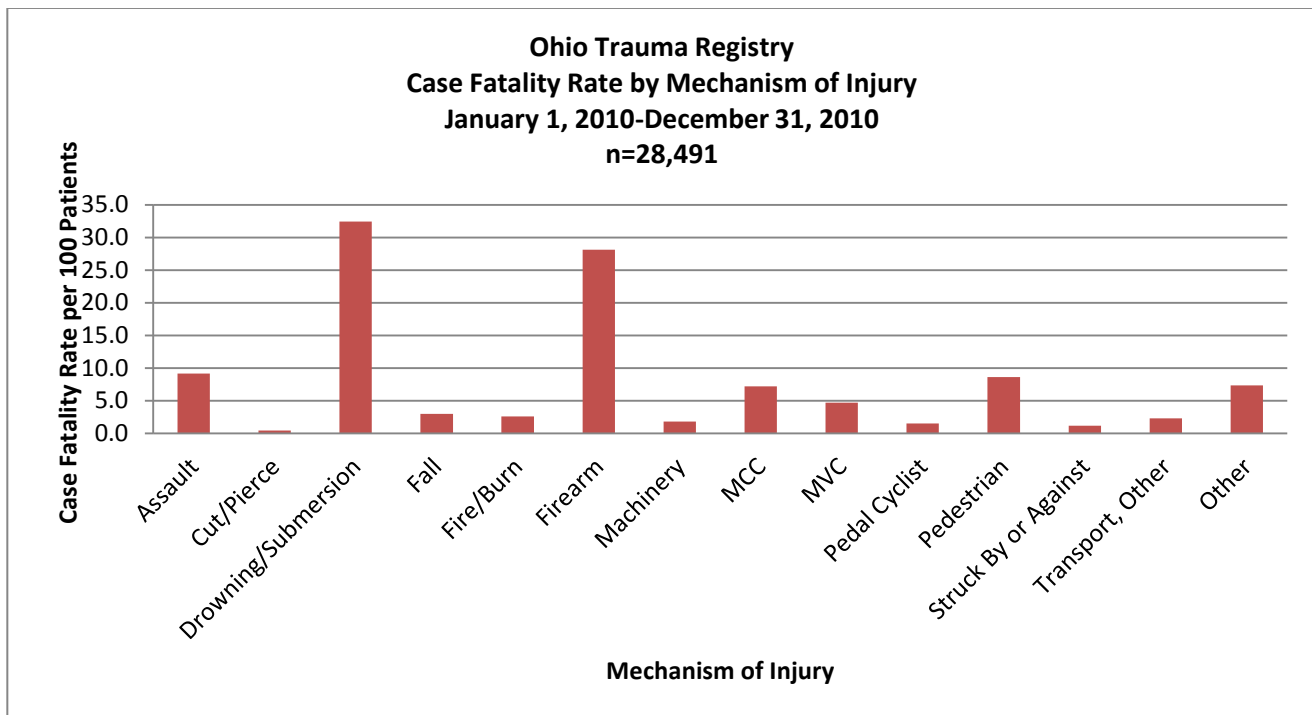


2010		
Mechanism of Injury	# of Patients	% of Patients
Fall	446	37.7%
Motor Vehicle Collision (MVC)	204	17.2%
Assault	157	13.3%
Firearm	89	7.5%
Motorcycle Collision (MCC)	67	5.7%
Pedestrian	52	4.4%
Drowning/Submersion	25	2.1%
Transport, Other	24	2.0%
Struck By or Against	19	1.6%
Fire/Burn	13	1.1%
Other	87	7.4%
Total	1,183	100.0%

Deaths by Mechanism of Injury

Analysis of the patients who died in the hospital in 2010 shows that falls were responsible for 40.0% of in-hospital mortality. Motor vehicle collisions were responsible for 15.4% of in-hospital deaths, and 13.6% of in-hospital mortality was due to assault. It is important to recognize that patients who die at the scene are not reported by the hospitals. These data reflect only patients who died in the hospital.

Case Fatality Rate by Mechanism of Injury: 2010

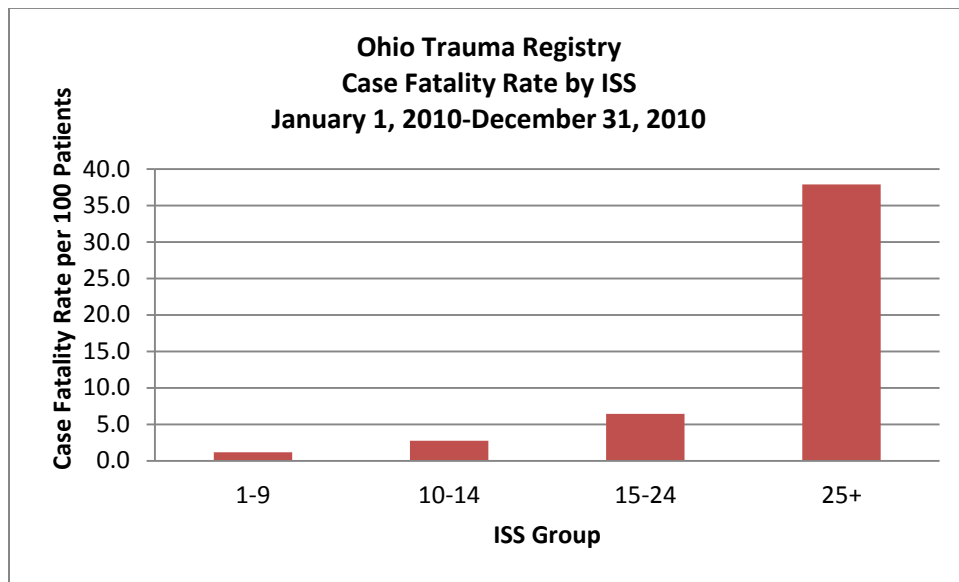


2010				
Mechanism of Injury	Lived	Died	Total	Case Fatality Rate
Assault	1,552	157	1,709	9.2
Cut/Pierce	470	2	472	0.4
Drowning/Submersion	52	25	77	32.5
Fall	14,619	446	15,065	3.0
Fire/Burn	490	13	503	2.6
Firearm	227	89	316	28.2
Machinery	220	4	224	1.8
Motorcycle Collision (MCC)	864	67	931	7.2
Motor Vehicle Collision (MVC)	4,143	204	4,347	4.7
Pedal Cyclist	593	9	602	1.5
Pedestrian	551	52	603	8.6
Struck By or Against	1,605	19	1,624	1.2
Transport, Other	1,017	24	1,041	2.3
Other	905	72	977	7.4
Total	27,308	1,183	28,491	4.2

Case Fatality Rate:

Firearm injuries and injuries due to drowning/submersion had the highest case fatality rates (28.2 per 100 patients and 32.5 per 100 patients respectively). Assault had the next highest case fatality rate (9.2 per 100 patients).

Case Fatality Rate by Injury Severity Score: 2010



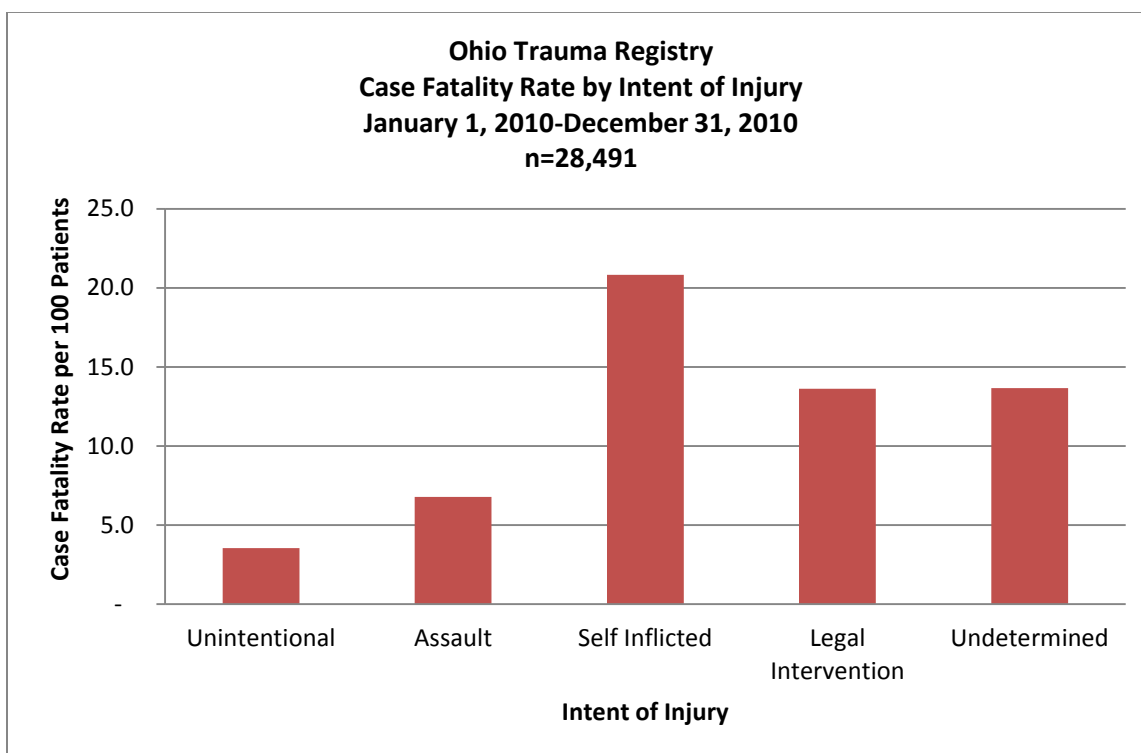
**1477 patients without a reported ISS were excluded*

2010				
ISS	Lived	Died	Total	Case Fatality Rate
1-9	18,648	220	18,868	1.2
10-14	3,801	108	3,909	2.8
15-24	2,375	163	2,538	6.4
25+	1,055	644	1,699	37.9
Unknown	1,429	48	1,477	3.2
Total	27,308	1,183	28,491	4.2

Case Fatality Rate by Injury Severity Score:

This graph primarily reflects patients treated at a trauma center because non-trauma center facilities generally do not report an ISS. As expected, the case fatality rate increases as the severity of the injury increases.

Case Fatality Rate by Intent of Injury: 2010

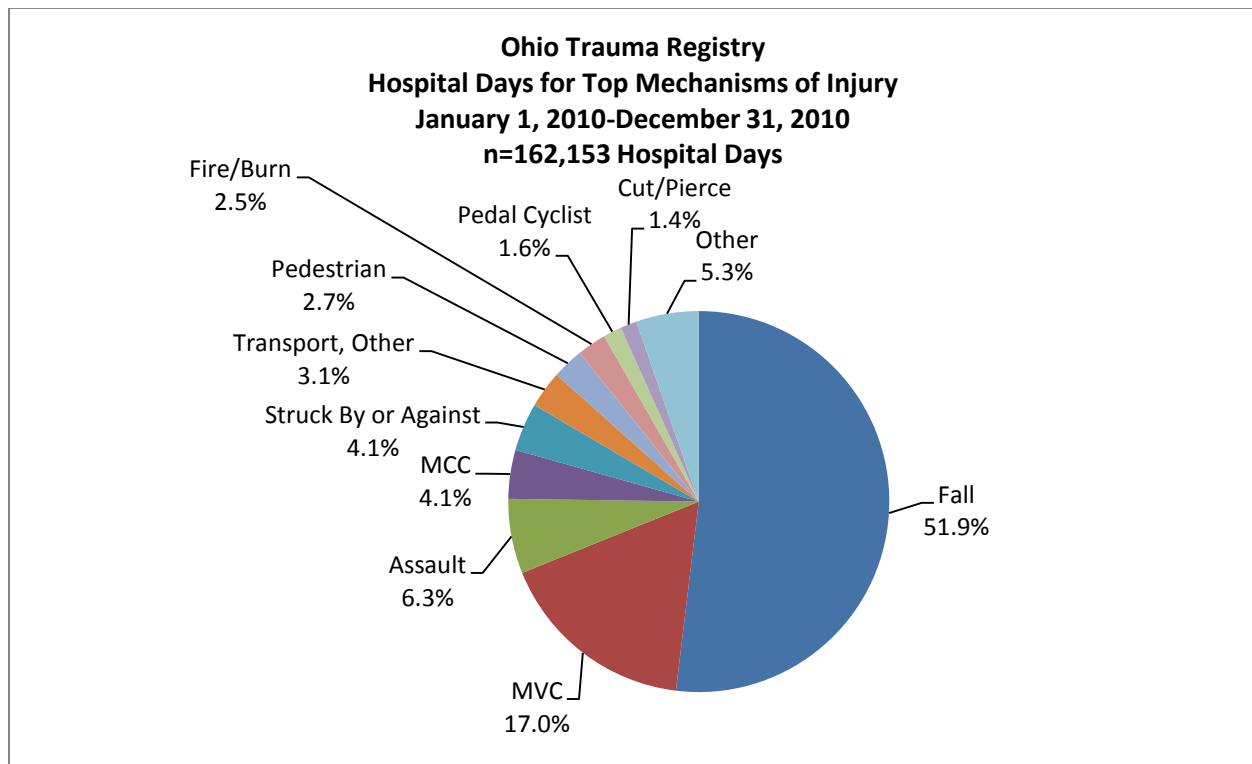


2010				
Intent	Lived	Died	Total	Case Fatality Rate
Unintentional	24,570	904	25,474	3.5
Assault	2,253	164	2,417	6.8
Self Inflicted	365	96	461	20.8
Legal Intervention	19	3	22	13.6
Undetermined	101	16	117	13.7
Total	27,308	1,183	28,491	4.2

Case Fatality Rate by Intent of Injury:

Self-inflicted injuries had the highest case fatality rate (20.8 per 100 patients) while unintentional injuries had the lowest case fatality rate (3.5 per 100 patients).

Hospital Days by Mechanism of Injury: 2010

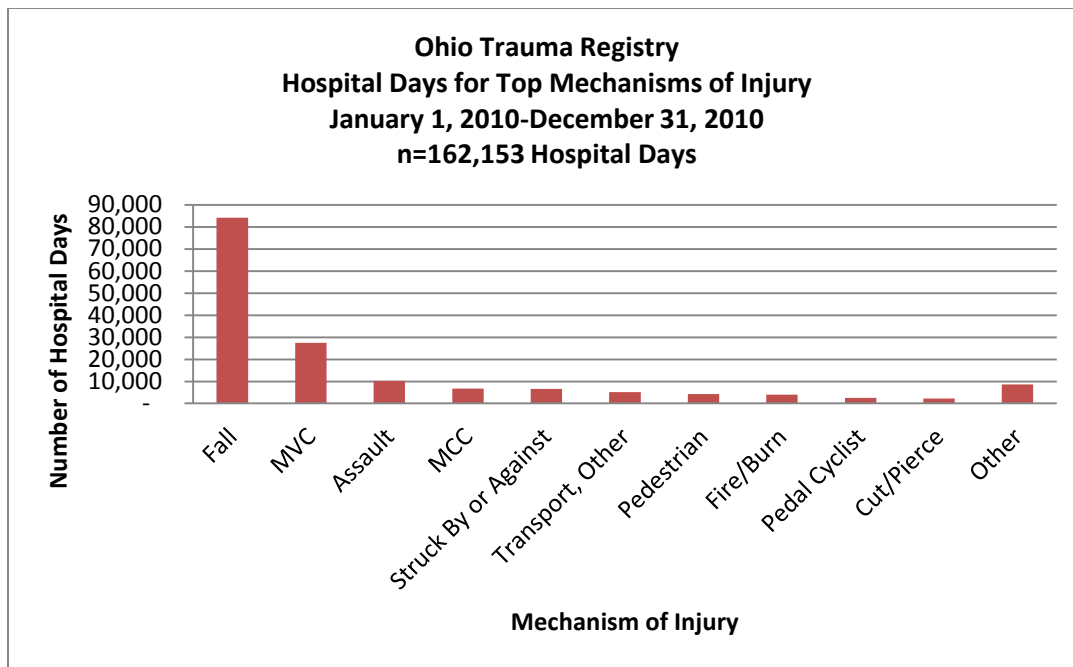


2010		
Mechanism of Injury	# of Hospital Days	% of Total Hospital Days
Fall	84,186	51.9%
MVC	27,523	17.0%
Assault	10,275	6.3%
MCC	6,714	4.1%
Struck By or Against	6,616	4.1%
Transport, Other	5,092	3.1%
Pedestrian	4,317	2.7%
Fire/Burn	4,008	2.5%
Pedal Cyclist	2,541	1.6%
Cut/Pierce	2,249	1.4%
Other	8,632	5.3%
Total	162,153	100.0%

Hospital Days by Mechanism of Injury

The total number of hospital days reported for patients in 2010 was 162,153. Falls accounted for 51.9% of hospital days reported to the OTR and motor vehicle collisions accounted for 17.0%. There were 8,632 hospital days attributed to patient records that were coded with a variety of other Mechanism of Injury codes, which are aggregated here as “Other”.

Hospital Days by Mechanism of Injury: 2010

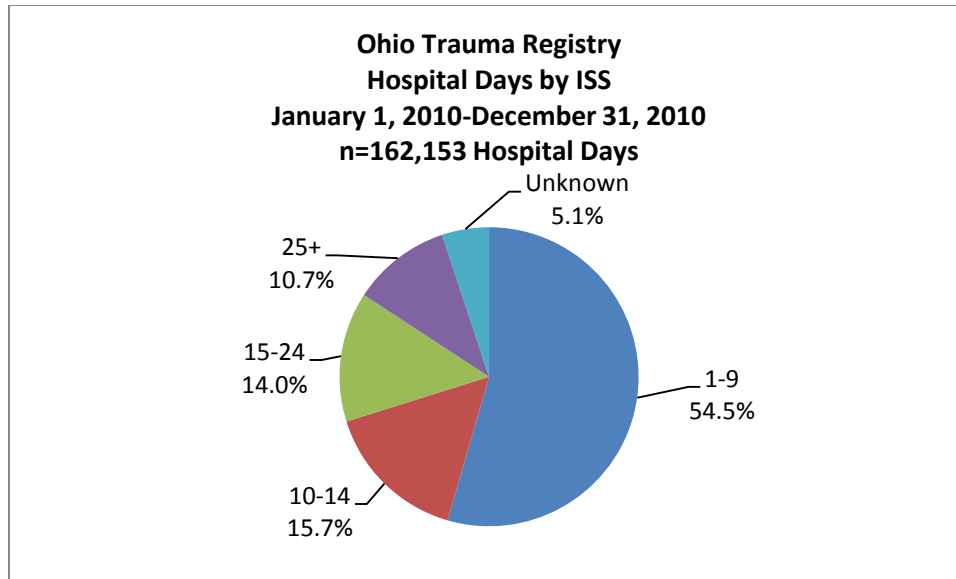


2010		
Mechanism of Injury	# of Hospital Days	% of Total Hospital Days
Fall	84,186	51.9%
MVC	27,523	17.0%
Assault	10,275	6.3%
MCC	6,714	4.1%
Struck By or Against	6,616	4.1%
Transport, Other	5,092	3.1%
Pedestrian	4,317	2.7%
Fire/Burn	4,008	2.5%
Pedal Cyclist	2,541	1.6%
Cut/Pierce	2,249	1.4%
Other	8,632	5.3%
Total	162,153	100.0%

Hospital Days by Mechanism of Injury:

Falls accounted for the highest percentage of hospital days (51.9%), while motor vehicle collisions accounted for the second highest percentage of hospital days (17.0%).

Hospital Days by Injury Severity Score: 2010



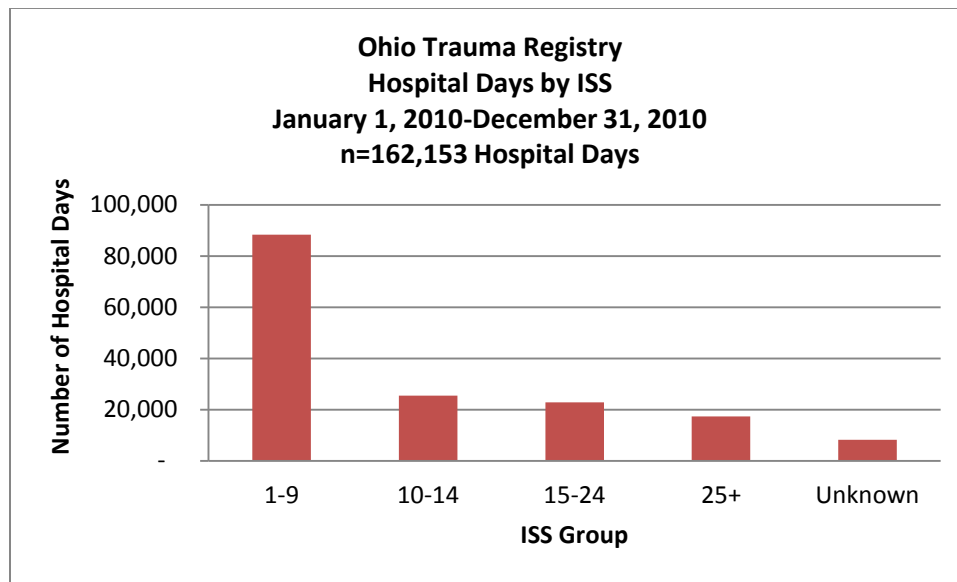
**1477 patients without a reported ISS were excluded
Percentages may not add up to 100% due to rounding

2010		
ISS Group	Hospital Days	% of Total Hospital Days
1-9	88,350	54.5%
10-14	25,419	15.7%
15-24	22,775	14.0%
25+	17,362	10.7%
Unknown	8,247	5.1%
Total	162,153	100.0%

Hospital Days by Injury Severity Score:

Minor injuries accounted for the majority of all hospital days. As the ISS increased, the proportion of total hospital days decreased. There were 1,477 patients for whom an ISS was not recorded, and this accounted for 8,247 hospital days.

Hospital Days by Injury Severity Score: 2010



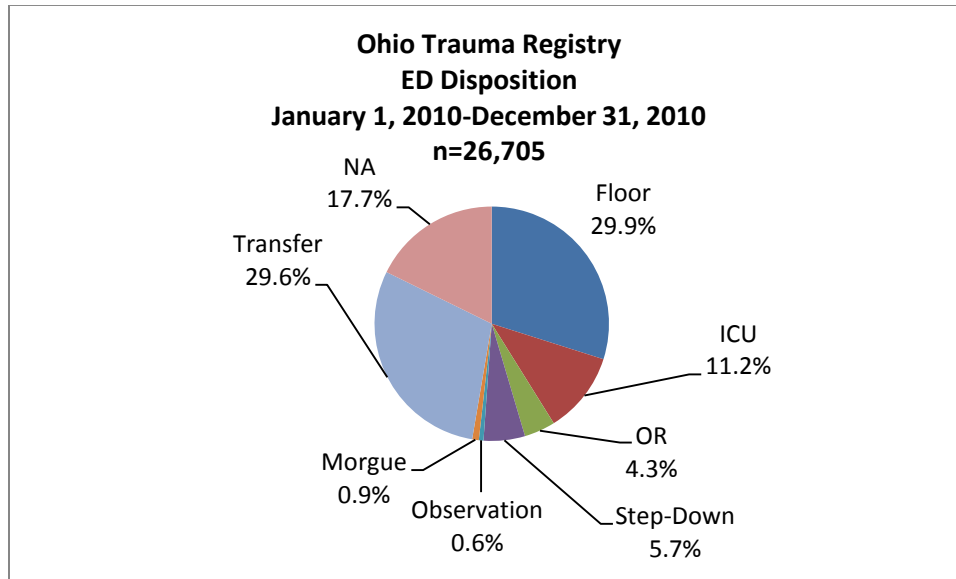
**1477 patients without a reported ISS were excluded*

2010		
ISS Group	Hospital Days	% of Total Hospital Days
1-9	88,350	54.5%
10-14	25,419	15.7%
15-24	22,775	14.0%
25+	17,362	10.7%
Unknown	8,247	5.1%
Total	162,153	100.0%

Hospital Length of Stay by Injury Severity Score:

Minor injuries accounted for the majority of all hospital days. As the ISS increased, the proportion of total hospital days decreased.

Emergency Department Disposition: 2010

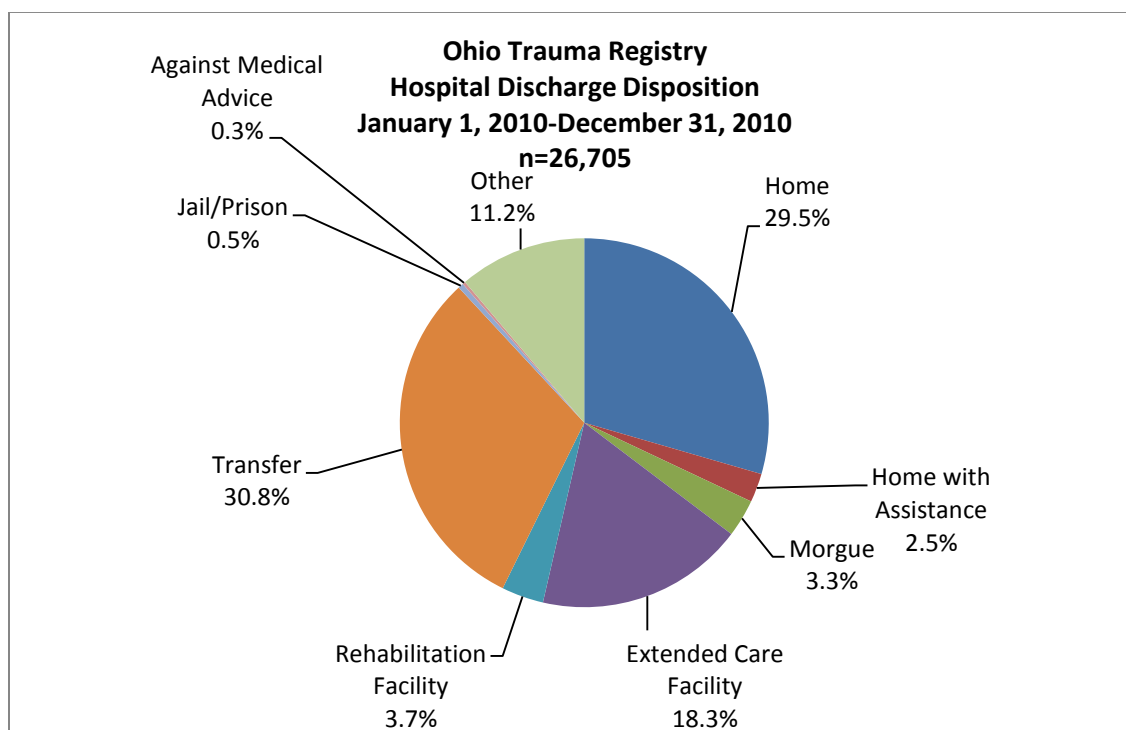


2010		
ED Disposition	# of Patients	% of Patients
Floor	7,983	29.9%
ICU	3,000	11.2%
OR	1,146	4.3%
Step-Down	1,524	5.7%
Observation	170	0.6%
Morgue	245	0.9%
Transfer	7,901	29.6%
NA	4,736	17.7%
Total	26,705	100.0%

Emergency Department Disposition

This graph only includes data for patients who arrived directly from the scene of the injury. It shows the first patient care area to which the patient was sent after they were discharged from the emergency department in the first hospital in which they received treatment. Of the total number of patients, 29.9% were admitted to the floor (i.e. a regular medical/surgical hospital room), 15.5% were sent directly to the operating room or an intensive care unit, and 29.6% were transferred to another hospital. The OTR data reflects that 17.7% were reported as not applicable, indicating that the initial care was not in the emergency department (e.g. a direct admission).

Hospital Discharge Disposition: 2010



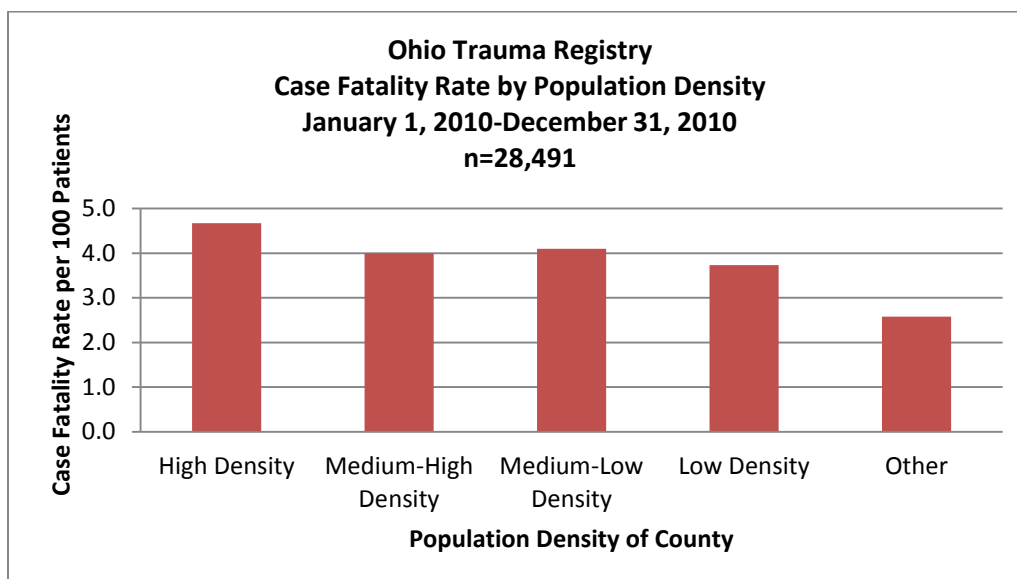
**Percentages may not add up to 100% due to rounding*

2010		
Discharge Disposition	# of Patients	% of Patients
Home	7,875	29.5%
Home with Assistance	675	2.5%
Morgue	879	3.3%
Extended Care Facility	4,885	18.3%
Rehabilitation Facility	984	3.7%
Transfer	8,226	30.8%
Jail/Prison	126	0.5%
Against Medical Advice	67	0.3%
Other	2,988	11.2%
Total	26,705	100.0%

Hospital Disposition

This reflects hospital disposition from the first hospital that provided treatment to the patient. According to the OTR data, 32.0% of patients were discharged home and 30.8% of patients were transferred to another facility. This data reflects where patients were discharged after being admitted to the hospital, in contrast to the previous page, which reflected where patients were discharged from the emergency department.

Case Fatality Rate by Population Density: 2010



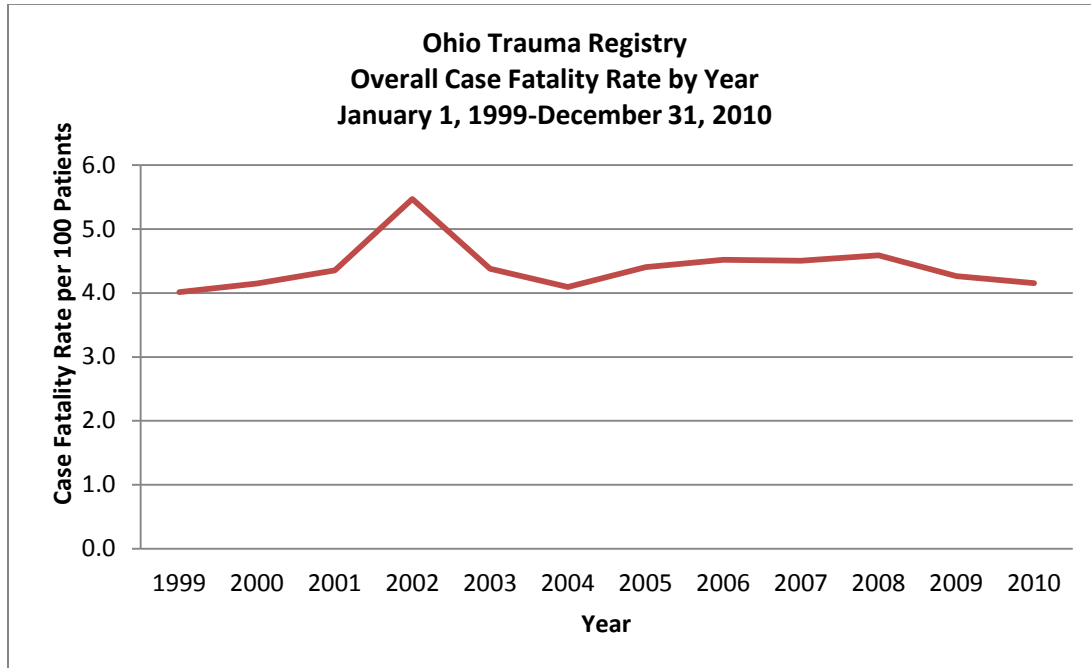
2010				
Population Density	Lived	Died	Total	Case Fatality Rate
High Density	11,178	548	11,726	4.7
Medium-High Density	5,767	240	6,007	4.0
Medium-Low Density	5,574	238	5,812	4.1
Low Density	2,450	95	2,545	3.7
Other	2,339	62	2,401	2.6
Total	27,308	1,183	28,491	4.2

Case Fatality Rate by Population Density:

Patients coming from counties with high population density had the highest case fatality rate (4.7 per 100 pati). Patients coming from counties with medium-low population density had the second highest case fatality rate (4.1 per 100 patients). This chart reflects crude case fatality rates and is unadjusted for severity or any other variables.

The list of counties by population density can be found in Appendix J.

Overall Case Fatality Rate by Year: 1999-2010

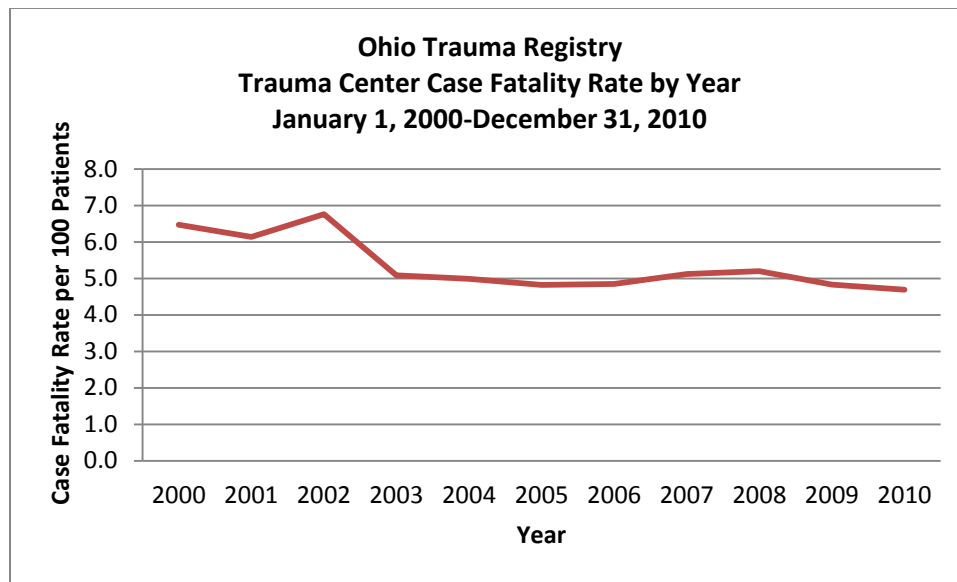


2010				
Year	Lived	Died	Total	Case Fatality Rate
1999	18,750	784	19,534	4.0
2000	19,448	842	20,290	4.1
2001	16,914	770	17,684	4.4
2002	20,860	1,207	22,067	5.5
2003	26,253	1,203	27,456	4.4
2004	26,776	1,143	27,919	4.1
2005	27,151	1,251	28,402	4.4
2006	24,245	1,148	25,393	4.5
2007	29,688	1,401	31,089	4.5
2008	30,603	1,473	32,076	4.6
2009	30,445	1,356	31,801	4.3
2010	27,308	1,183	28,491	4.2
Total	298,441	13,761	312,202	4.4

Overall Case Fatality Rate by Year:

This graph shows the overall crude case fatality rate by year for patient records contained in the OTR. With the exception of a small escalation in 2002, the case fatality rate for trauma patients in Ohio has remained relatively steady.

Trauma Center Case Fatality Rate by Year: 2000-2010

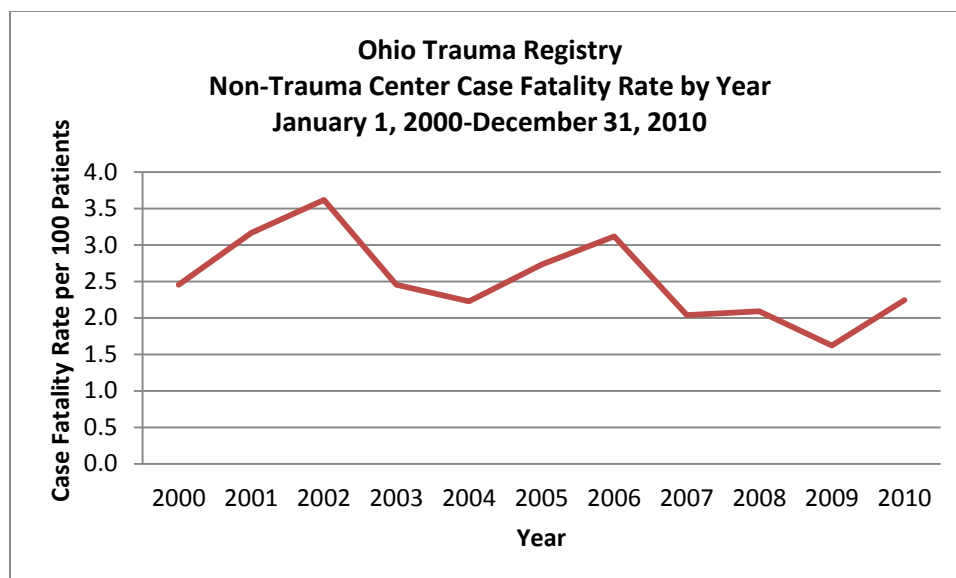


2010				
Year	Lived	Died	Total	Case Fatality Rate
2000	8,008	554	8,562	6.5
2001	6,613	433	7,046	6.1
2002	12,122	879	13,001	6.8
2003	19,071	1,022	20,093	5.1
2004	17,906	941	18,847	5.0
2005	21,597	1,095	22,692	4.8
2006	19,557	997	20,554	4.9
2007	23,592	1,274	24,866	5.1
2008	24,427	1,341	25,768	5.2
2009	24,920	1,265	26,185	4.8
2010	21,123	1,041	22,164	4.7
Total	198,936	10,842	209,778	5.2

Trauma Center Case Fatality Rate by Year:

This graph reflects the crude case fatality rate for all trauma patients seen at a trauma center between 2000 and 2010. The case fatality rate remained steady from 2000-2002 at slightly above 6 per 100 patients. In 2003 there was a drop to approximately 5 per 100 patients and that rate remained steady through 2010.

Non-Trauma Center Case Fatality Rate by Year: 2000-2010

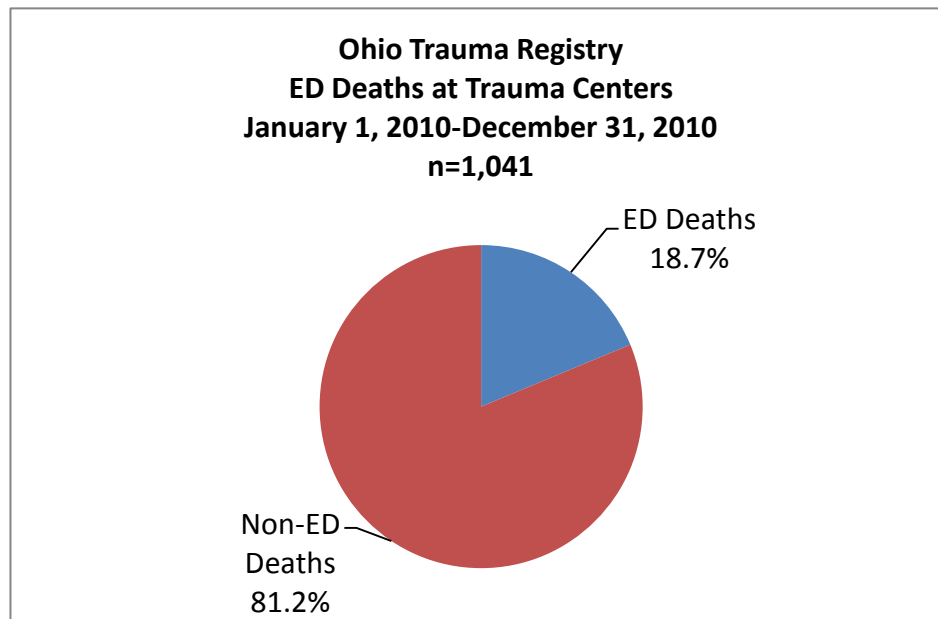


2010				
Year	Lived	Died	Total	Case Fatality Rate
2000	11,440	288	11,728	2.5
2001	10,301	337	10,638	3.2
2002	8,738	328	966	3.6
2003	7,182	181	7,363	2.5
2004	8,870	202	9,072	2.2
2005	5,554	156	5,710	2.7
2006	4,688	151	4,839	3.1
2007	6,096	127	6,223	2.0
2008	6,176	132	6,308	2.1
2009	5,525	91	5,616	1.6
2010	6,185	142	6,327	2.2
Total	80,755	2,135	82,890	2.6

Non-Trauma Center Case Fatality Rate by Year;

This graph reflects the crude case fatality rate for all trauma patients treated at a non-trauma center from 2000-2010. Over time, the mortality rate for non-trauma centers has declined from 2.5 per 100 patients in 1999 to 2.2 per 100 patients in 2010.

ED Deaths at Trauma Centers

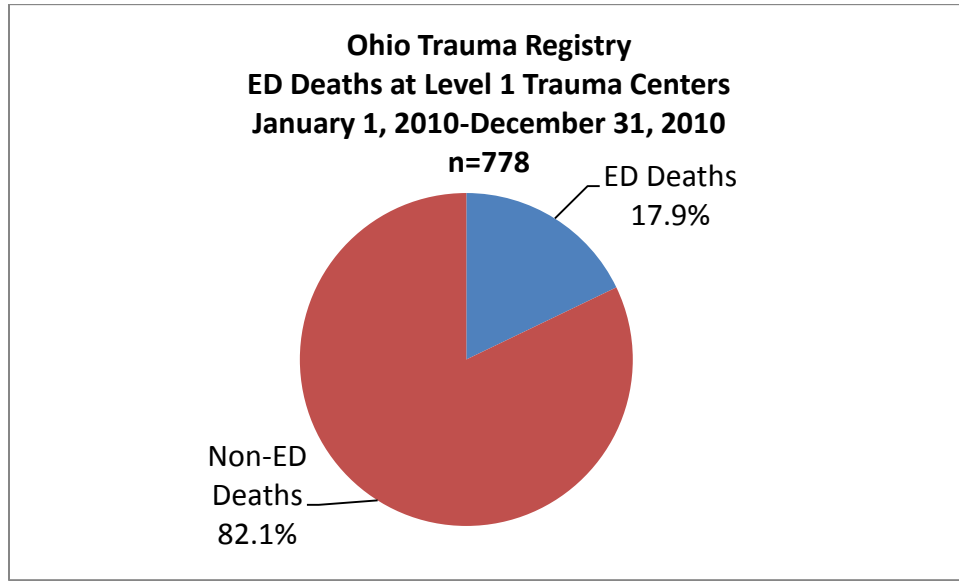


	ED Deaths	Non-ED Deaths	Total Deaths	% Deaths in ED
Level 1 TC	139	639	778	17.9%
Level 2 TC	41	165	206	19.9%
Level 3 TC	15	42	57	26.3%
Total	195	846	1,041	18.7%

ED Deaths at Trauma Centers:

In 2010, 81.3% of inpatient trauma deaths in trauma centers in Ohio occurred outside of the Emergency Department (ED).

ED Deaths at Level 1 Trauma Centers

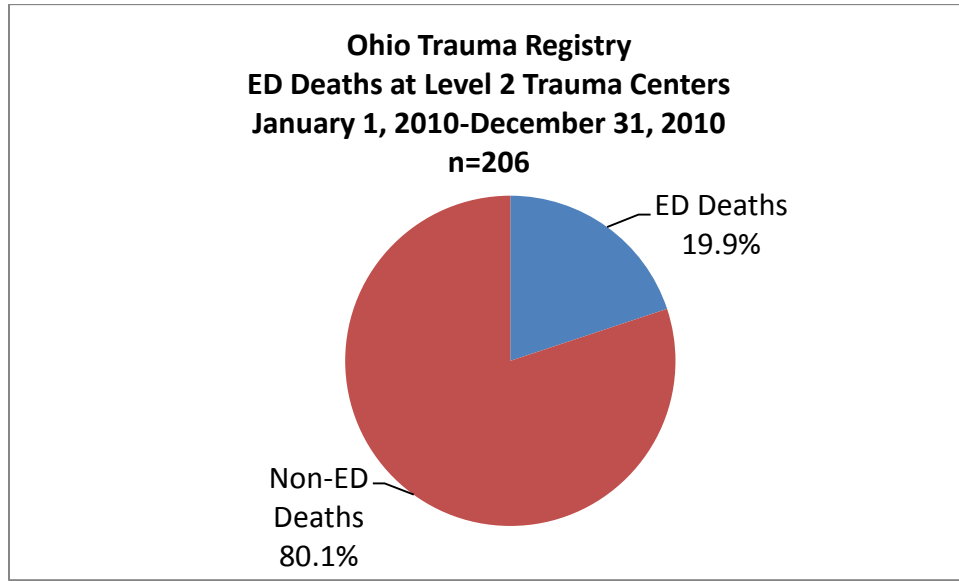


	ED Deaths	Non-ED Deaths	Total Deaths	% Deaths in ED
Level 1 TC	139	639	778	17.9%
Level 2 TC	41	165	206	19.9%
Level 3 TC	15	42	57	26.3%
Total	195	846	1,041	18.7%

ED Deaths at Level 1 Trauma Centers:

In 2010, 82.1% of inpatient trauma deaths that occurred in level 1 trauma centers occurred outside of the ED.

ED Deaths at Level 2 Trauma Centers

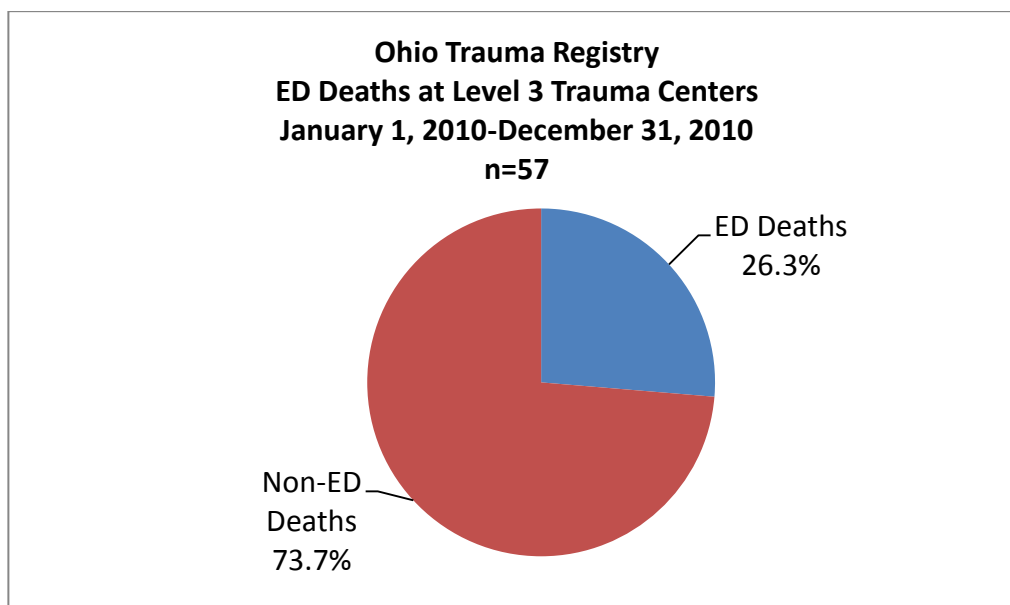


	ED Deaths	Non-ED Deaths	Total Deaths	% Deaths in ED
Level 1 TC	139	639	778	17.9%
Level 2 TC	41	165	206	19.9%
Level 3 TC	15	42	57	26.3%
Total	195	846	1,041	18.7%

ED Deaths at Level 2 Trauma Centers:

In 2010, 80.1% of inpatient trauma deaths that occurred in level 2 trauma centers in Ohio occurred outside of the ED.

ED Deaths at Level 3 Trauma Centers

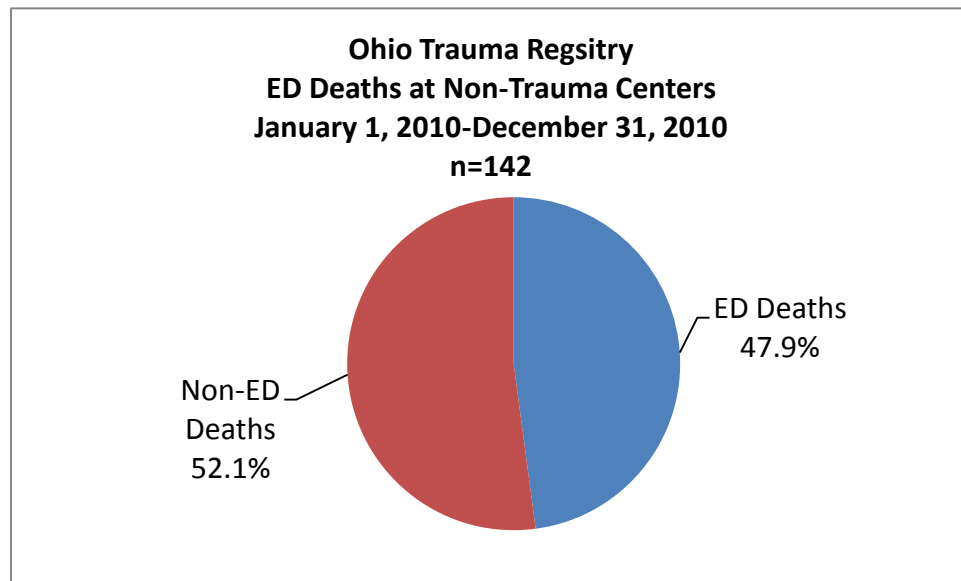


	ED Deaths	Non-ED Deaths	Total Deaths	% Deaths in ED
Level 1 TC	139	639	778	17.9%
Level 2 TC	41	165	206	19.9%
Level 3 TC	15	42	57	26.3%
Total	195	846	1,041	18.7%

ED Deaths at Level 3 Trauma Centers:

In 2010, 73.7% of inpatient trauma deaths that occurred in level 3 trauma centers occurred outside of the ED.

ED Deaths at Non-Trauma Centers



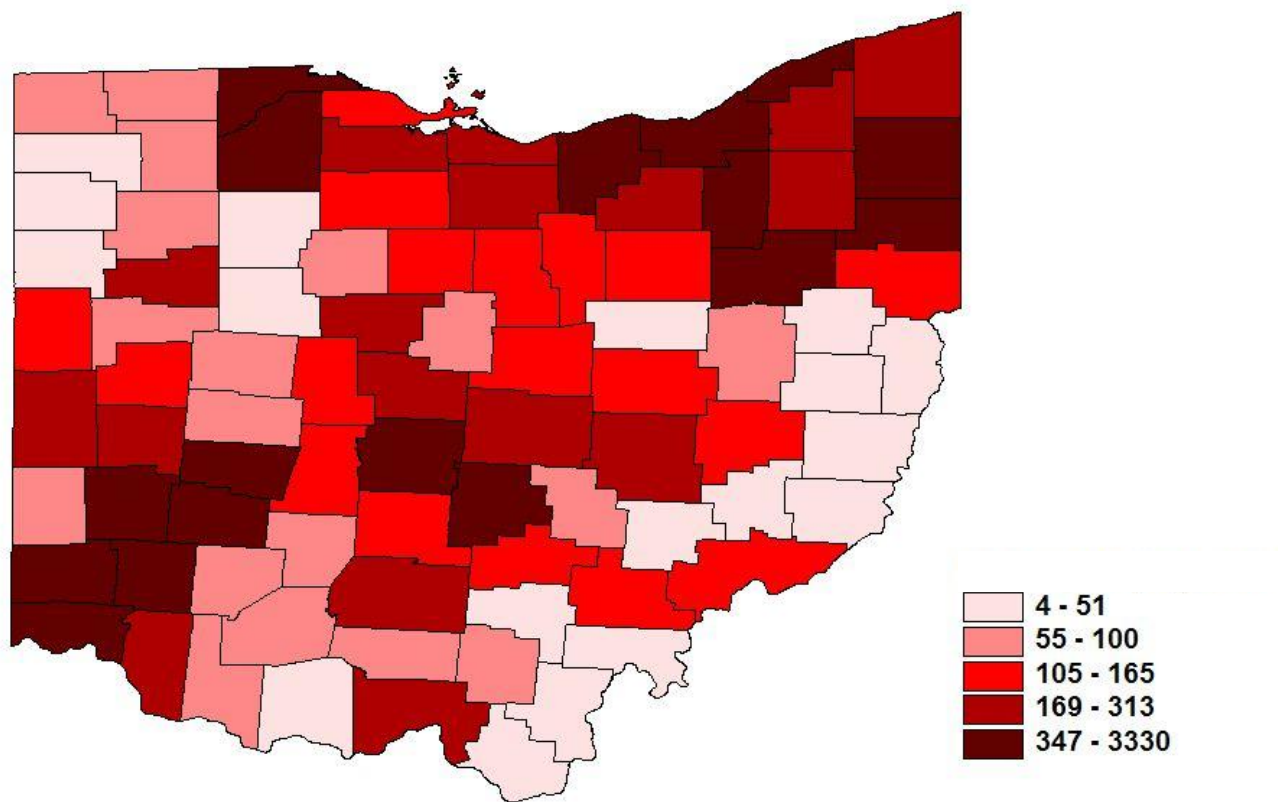
	ED Deaths	Non-ED Deaths	Total Deaths	% Deaths in ED
Level 1 TC	139	639	778	17.9%
Level 2 TC	41	165	206	19.9%
Level 3 TC	15	42	57	26.3%
NTC	68	74	142	47.9%
Total	263	920	1183	22.2%

ED Deaths at Non-Trauma Centers:

In 2010, 52.1% of inpatient trauma deaths that occurred in non-trauma centers occurred outside of the ED.

Geographic Characteristics

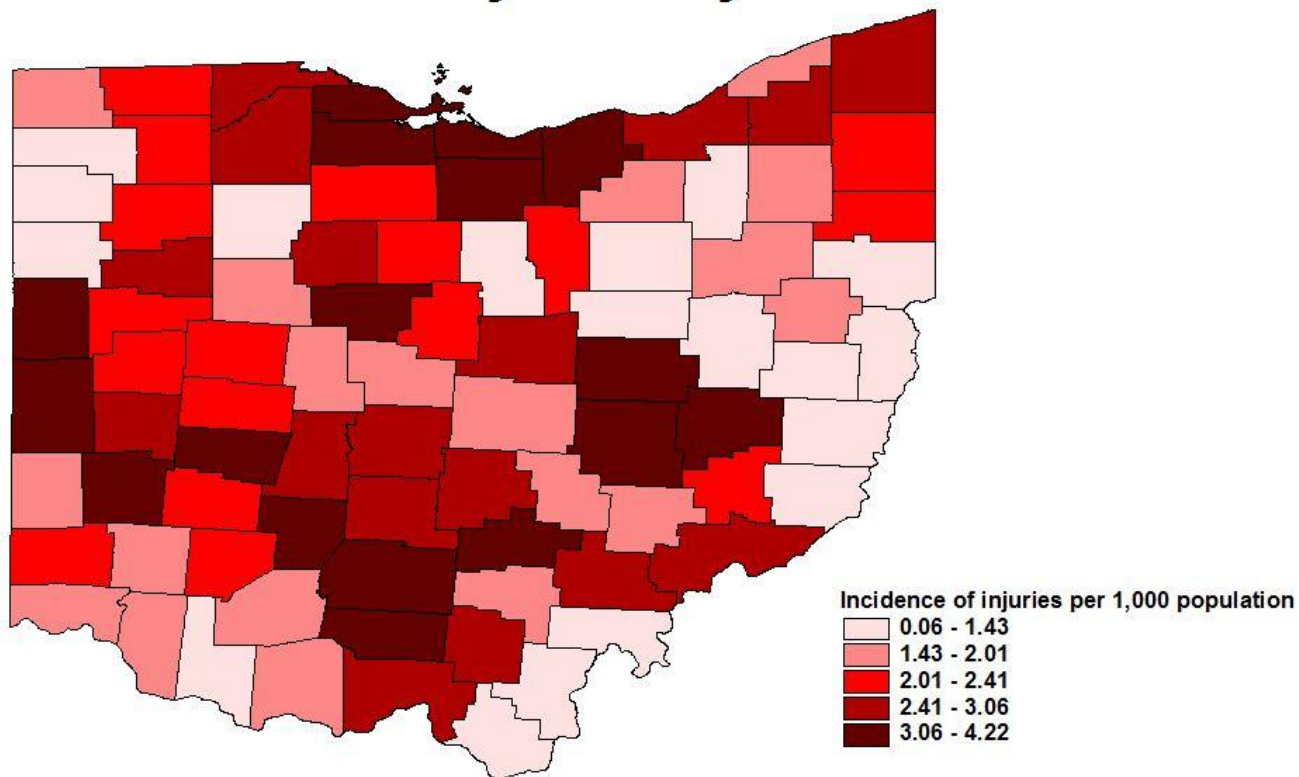
Number of Injuries by County



Number of Injuries by County:

This map reflects a basic count of injuries in each county. Darker shades of red reflect a higher number of injuries.

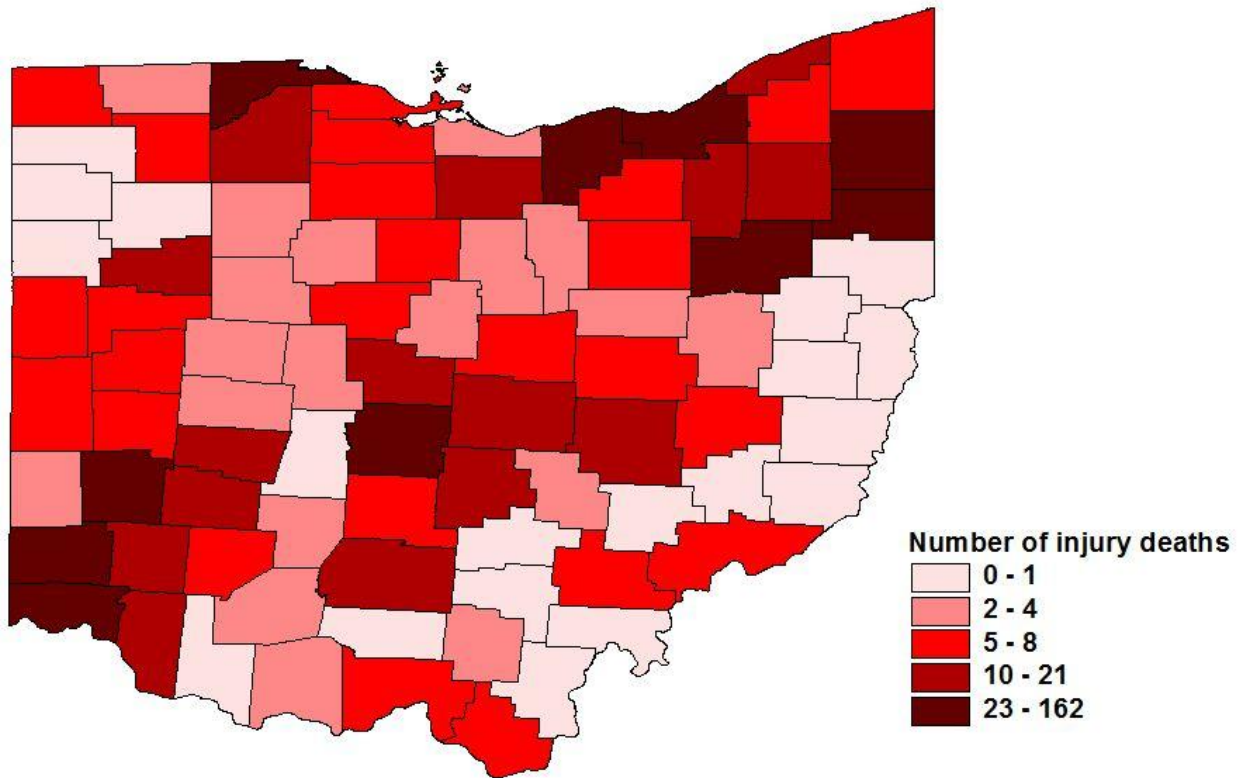
Incidence of Injuries/1,000 Population by County



Incidence of Injuries by County:

This map reflects the crude incidence of injury per 1000 population by county. Darker shades of red reflect higher incidence rates.

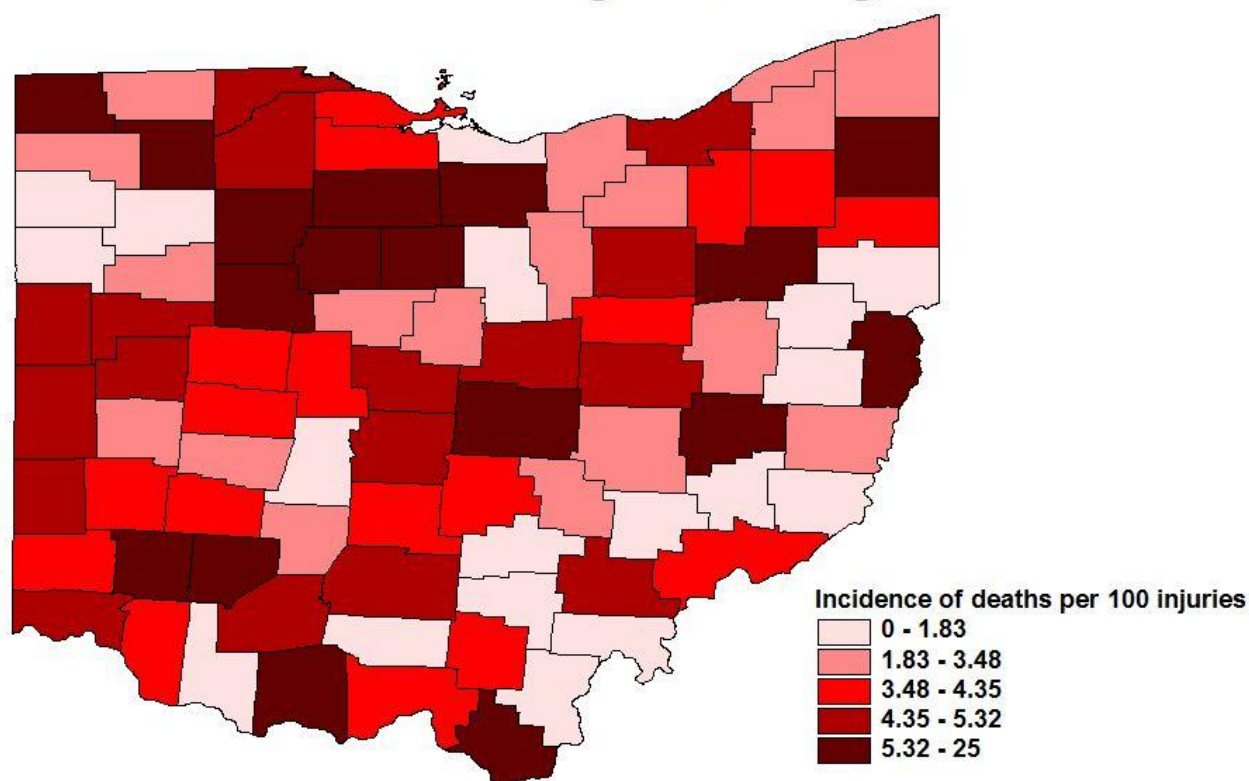
Number of Injury Deaths by County



Number of Injury Deaths:

This map reflects the number of deaths that resulted from injury in each county. Darker shades of red reflect a higher number of injury deaths.

Incidence of Deaths/100 Injuries by County



Incidence of Injury Deaths by County:

This map reflects the crude incidence of injury per 1000 population by county. Darker shades of red reflect higher incidence rates.

Appendix A: Patient Inclusion/Exclusion Criteria

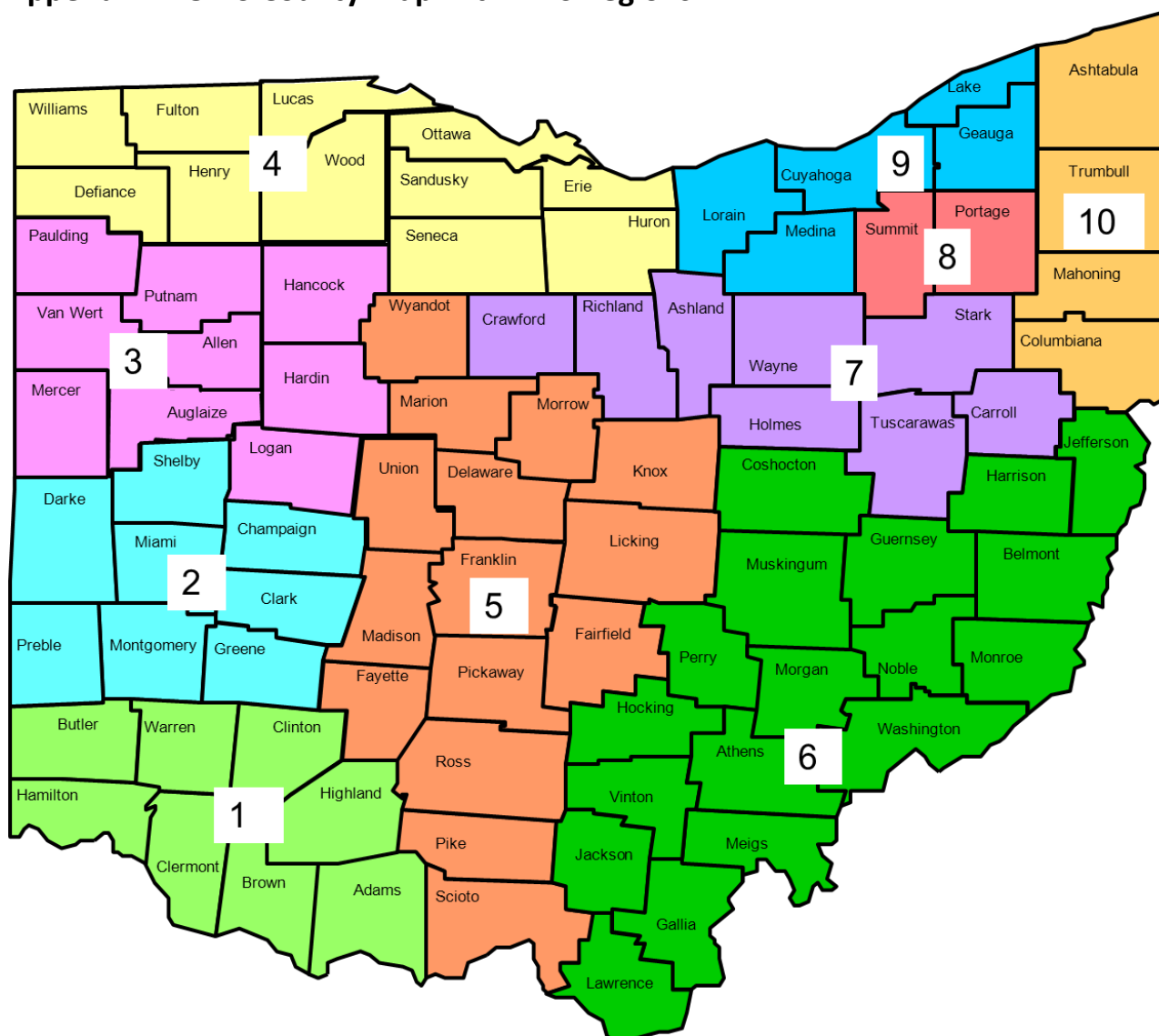
The State Board of EMS has established these criteria for inclusion of records in the OTR:

1. Patient's first or initial admission for at least 48 hours, and who meet one of the following inclusion criteria; **or**
2. Patients who transfer into or out of any hospital, regardless of their length of stay, and who meet one of the following inclusion criteria; **or**
3. Patients that arrive dead on arrival (DOA) and who meet one of the following inclusion criteria; **or**
4. Patients that die after receiving any evaluation or treatment while on hospital premises, **and** who meet one of the following inclusion criteria:

Inclusion Criteria

ICD-9-CM Diagnosis Codes on discharge from acute care hospital			
ICD-9-CM Diagnosis Codes		ICD-9-CM Diagnoses Descriptions	
800.00 – 819.1		Fractures	
821.00 – 904.9		Fractures, dislocations/sprains, intracranial injury, internal injury of thorax, abdomen and pelvis, open wounds, injury to blood vessels	
911.0, 911.1, 912.0, 912.1		Abrasions/friction burns to trunk, shoulder and upper arm	
916.0, 916.1, 919.0, 919.1		Abrasions / friction burns hip, thigh, leg, ankle, other or multiple sites	
920 – 929.9		Contusions and crush injury	
940.0 – 959.9		Burns, injury to nerves and spinal cord, traumatic complications and unspecified injury	
987.9		Smoke inhalation	
991.0 – 991.6		Frostbite, hypothermia and external effects of cold	
994.0, 994.1, 994.7, 994.8		Asphyxiation, strangulation, drowning, and electrocution	
995.50 – 995.59		Child maltreatment and abuse	
OR			
ICD-9-CM Diagnoses		AND WITH ANY OF THE FOLLOWING External Cause Codes (E-Codes)	E-CODE
348.1	Anoxic Brain Injury		E800 – E848.8
348.4	Uncal herniation		E878 – E905.0
348.5,	Cerebral Edema		E906.0 – E928.8
348.8	Pneumocephalus		E950.0 – E998.9
372.72	Subconjunctival hemorrhage		
518.5	Traumatic ARDS		
784.7	Epistaxis		
ICD-9-CM Diagnoses Codes EXCLUDED			
820.00 – 820.9		Isolated hip fracture	
905.0 – 909.9		Late effects of injury	
910.0 – 910.9, 911.2 – 911.7, 912.2 - 912.9. 913.0 - 913.9, 914.0 - 914.9, 915.0 - 915.9, 916.2 - 916.9, 917.0 - 917.9, 918.0 - 918.9, 919.2 - 919.9		Blisters, insect bites	
930 – 939		Foreign bodies	
External Cause Codes EXCLUDED			
E849.0 – E849.9	Place of occurrence		
E850.0 – E869.9	Poisonings		
E870.0 – E879.9	Misadventures during surgical and medical care		
E905.1 – E905.9	Venomous animals and plants (except snakes)		
E929.0 – E929.9	Late effects of Accidental Injury		
E930.0 – E949.9	Drugs, medicinal and biological substances causing adverse effects in therapeutic use		
Codes separated by a hyphen indicate a range of codes including both codes AND all codes in between. Example 800.0 – 801.5 Codes separated by a comma indicate a single code. Example 901.1, 901.2, 901.8			

Appendix B: Ohio County Map with EMS Regions



Appendix C: E-Code Groupings

MECHANISM / CAUSE	MANNER / INTENT				
	Unintentional	Self-inflicted	Assault	Undetermined	Other ¹
Cut/pierce	E920.0-9	E956	E966	E986	E974
Drowning/submersion	E830.0-9, E832.0-9, E910.0-9	E954	E964	E984	
Fall	E880.0-E886.9, E888	E957.0-9	E968.1	E987.0-9	
Fire/burn	E890.0-E899, E924.0-9	E958.1, 2, 7	E961, E968.0, 3	E988.1, 2, 7	
Fire/flame	E890.0-E899	E958.1	E968.0	E988.1	
Hot object/substance	E924.0-9	E958.2, 7	E961, E968.3	E988.2, 7	
Firearm	E922.0-3, 8, 9	E955.0-4	E965.0-4	E985.0-4	E970
Machinery	E919 (0-9)				
Motor vehicle traffic ^{2,3}	E810-E819 (0-9)	E958.5	E968.5	E988.5	
Occupant	E810-E819 (0, 1)				
Motorcyclist	E810-E819 (2, 3)				
Pedal cyclist	E810-E819 (6)				
Pedestrian	E810-E819 (7)				
Unspecified	E810-E819 (9)				
Pedal cyclist, other	E800-E807(3), E820-E825(6), E826.1, 9, E827-E829(1)				
Pedestrian, other	E800-E807(2), E820-E825(7), E826-E829(0)				
Transport, other	E800-E807(0, 1, 8, 9) E820-E825(0-5, 8, 9) E826.2-8 E827-E829(2-9) E831.0-9, E833.0-E845.9	E958.6		E988.6	
Natural/environmental	E900.0-E909, E928.0-2	E958.3		E988.3	
Bites/stings ³	E905.0-6, 9 E906.0-4, 5, 9				
Overexertion	E927				
Poisoning	E850.0-869.9	E950.0-E952.9	E962.0-9	E980.0-E982.9	E972
Struck by, against	E916-E917.9	E960.0; E968.2			E973, E975
Suffocation	E911-E913.9	E953.0-9	E963	E983.0-9	
Other specified, classifiable ⁴	E846-E848, E914-E915, E918, E921.0-9, E922.4, E923.0-9, E925.0-E926.9, E928.3, E929.0-5	E955.5, 6, 9, E958.0, 4	E960.1, E965.5-9, E967.0-9, E968.4, 6, 7	E985.5, 6, E988.0, 4	E971, E978, E990-E994, E996, E997.0-2
Other specified, NEC	E928.8, E929.8	E958.8, E959	E968.8, E969	E988.8, E989	E997, E995, E997.8, E998, E999
Unspecified	E887, E928.9, E929.9	E958.9	E968.9	E988.9	E976, E997.9
All injury	E800-E869, E880-E929	E950-E959	E960-E969	E980-E989	E970-E978, E990-E999

¹ Includes legal intervention (E970-E978) and operations of war (E990-E999).

² Three 4th-digit codes (.4 [occupant of street car], .5 [rider of animal], .8 [other specified person]) are not presented separately because of small numbers. However, because they are included in the overall motor vehicle traffic category, the sum of these categories can be derived by subtraction.

³ E968.5 (assault by transport vehicle), E906.5 (bite from unspecified animal), E922.4 (unintentional injury [gunshot wound] with BB/pellet), E955.6 (suicide attempt/intentionally self-inflicted injury [gunshot wound] with BB/pellet gun), E968.6 (assault [gunshot wound] with BB/pellet gun), E985.6 (undetermined intent injury [gunshot wound] with BB/pellet gun), E928.3 (unintentional human bite), and E968.7 (assault by human bite), are specific to the ICD-9-CM and, therefore, only apply to morbidity coding.

⁴ E849 (place of occurrence) has been excluded from the matrix. For mortality coding, an ICD-9-CM E849 code should never be first-listed E code and should only appear as an additional code to specify the place of occurrence of the injury incident.

E-Code groupings from the Centers for Disease Control and Prevention's National Center for Health Statistics

Appendix D: Barell Injury Diagnosis Matrix

The Barell Injury Diagnosis Matrix (complete name: Barell Injury Diagnosis Matrix, Classification by Body Region and Nature of the Injury) standardizes data selection and reports, using a two dimensional array (matrix) that includes all *International Classification of Diseases* (ICD)-9-CM codes describing trauma. It serves as a basic tool in epidemiological and clinical analyses of injury data.

The matrix displays nature of injury in columns and body region in rows placing each ICD-9-CM code in the range from 800-995 in a unique cell location in the matrix. Each cell includes the codes associated with a given injury. The matrix rows and columns can be easily collapsed to get broader groupings or expanded if more specific sites are required.

The full matrix is too complex to reprint here legibly. It can be found at the website of the Centers for Disease Control and Prevention's National Center for Health Statistics in the section on the International Collaborative Effort on Injury Statistics.

Appendix E: Members of the EMS Board, Trauma Committee, and Trauma Registry Advisory Subcommittee (TRAS)

Ohio State Board of Emergency Medical Services—2010

Pamela L. Bradshaw	James R. Parrish
Dr. Deanna L. Dahl Grove	Dr. Wendy J. Pomerantz
*James E. Davis	William E. Quinn, Jr.
Vickie Graymire	**Mark N. Resanovich
Deanna L. Harris	Craig Self
John A. Kubincanek	Bruce Shade
William Mallory, Jr.	Dr. Brian L. Springer
Mark L. Marchetta	Dr. Steve M. Steinberg
Daryl McNutt	William F. Vedra, Jr.
Dr. John A. Pakiela	

Trauma Committee of the EMS Board—2010

Nancie Bechtel	*Dr. John Crow	William Crum
David Degnan	Gary Englehart	Dr. Todd Glass
Vickie Graymire	**Kathy Haley	Brian Kuntz
Dr. Edward A. Michelson	Dr. Sidney Miller	Debra Myers
Dr. Gregory Nemunaitis	Jennifer Piccione	David Pohlman
Dr. Kevin J. Pugh	John D. Ross	Dr. Jonathan M. Saxe
Dr. Michael Shannon	Diane Simon	Dr. Howard Werman
	Dr. Richard Ziegler	

Trauma Registry Advisory Subcommittee—2010

**Nancie Bechtel	Vickie Graymire	Dr. Wendy Pomerantz
Dr. James Begley	Renae Kable	Mike Smeltzer
Sally Betz	*Dr. F. Barry Knotts	Dr. Richard Treat
Roxanna Giambri	Debra Myers	

*Chair

** Vice-Chair

Appendix F: Participating Facilities for 2010

Adams County Hospital	East Liverpool City Hospital	Memorial Hospital-Fremont	Southeastern Ohio Regional Medical Center
Adena Regional Medical Center	EMH Regional Medical Center	Memorial Hospital-Geneva	Southern Ohio Medical Center
Affinity Medical Center, Massillon Campus	Euclid Hospital	Memorial Hospital-Union County	Southview Hospital & Family Health Center
Akron Children's Hospital Medical Center	Fairfield Medical Center	Mercer County Joint Twp. Community Hospital	Southwest General Health Center
Akron City Hospital	Fairview Hospital	Mercy Franciscan Hospital-Mt. Airy	Springfield Regional Medical Center
Alliance Community Hospital	Firelands Regional Medical Center	Mercy Franciscan Hospital-Western Hills	St. Elizabeth Boardman Health Center
Amherst Hospital	Fisher-Titus Medical Center	Mercy Hospital-Anderson	St. Elizabeth's Health Center
Atrium Medical Center	Flower Hospital	Mercy Hospital-Clermont	St. John Medical Center
Aultman Hospital	Fort Hamilton-Hughes Memorial Hospital	Mercy Hospital-Fairfield	St. Joseph Health Center
Barberton Citizen's Hospital	Fostoria Community Hospital	Mercy Hospital-Willard	St. Luke's Hospital-Toledo
Barnesville Hospital Association	Fulton County Health Center	Mercy Medical Center-Canton	St. Rita's Medical Center
Bay Park Community Hospital	Galion Community Hospital	Mercy Memorial Hospital	St. Thomas Hospital
Belmont Community Hospital	Genesis Good Samaritan Hospital-Zanesville	Mercy St. Anne Hospital	St. Vincent Charity
Berger Hospital	Good Samaritan Hospital-Dayton	Mercy St. Charles Hospital	Sycamore Hospital
Bethesda North-Cincinnati	Grady Memorial Hospital	Mercy St. Vincent Medical Center	The Bellevue Hospital
Blanchard Valley Hospital	Grandview Hospital	MetroHealth Medical Center	The Christ Hospital
Bluffton Hospital	Grant Medical Center	Miami Valley Hospital	The Toledo Hospital
Brown County General Hospital	Greene Memorial Hospital	Morrow County Hospital	The University Hospital-Cincinnati
Brown Memorial Hospital	Hardin Memorial Hospital	Mount Carmel East Hospital	Tri-Health Good Samaritan Hospital- Cincinnati
Bucyrus Community Hospital	Highland District Hospital	Mount Carmel West Hospital	Trinity Medical Center-West
Cincinnati Children's Hospital Medical Center	Hillcrest Hospital	Mount Carmel St. Ann's Hospital	TriPoint Medical Center
Cleveland Clinic Foundation	Huron Hospital	Nationwide Children's Hospital	Trumbull Memorial Hospital
Clinton Memorial Hospital	Jewish Hospital Kenwood	New Albany Surgical Hospital	Twin City Hospital
Community Hospitals and Wellness Centers-Archbold	Joint Township District Memorial Hospital	O'Bleness Memorial Hospital	UH-University Hospital & Rainbow Babies/Children's Hospital
Community Hospitals and Wellness Centers-Bryan	Kettering Memorial Medical Center	Ohio State University Medical Center	UHHS-Bedford Medical Center
Community Hospitals and Wellness Centers-Montpelier	Knox Community Hospital	Ohio State University Medical Center-East	UHHS-Geauga Regional Hospital
Community Memorial Hospital	Lake West Hospital	Parma Community Hospital	University of Toledo Medical Center
Coshocton County Memorial Hospital	Lakewood Hospital	Paulding County Hospital	Upper Valley Medical Center
Cuyahoga Falls General Hospital	Licking Memorial Hospital	Pomerene Hospital	Wayne Hospital
Dayton Children's Medical Center	Madison County Hospital	Richmond Heights Hospital	West Chester Hospital
Defiance Regional Medical Center	Marietta Memorial Hospital	Riverside Methodist Hospital	Wilson Hospital
Diley Ridge Medical Center	Marion General Hospital	Robinson Memorial Hospital	Wood County Hospital
Doctor's Hospital West-Columbus	Marymount Hospital	Salem Community Hospital	Wyandot Memorial Hospital
Dublin Methodist Hospital	McCullough-Hyde Memorial Hospital	Samaritan Regional Health System	
Dunlap Community Hospital	Medina Hospital	Selby General Hospital	

Appendix G: Ohio Trauma Registry Data Element List

- Demographics
 - Hospital Code
 - Unique Patient Admission Number
 - Date Exported
 - Zip Code of Residence
 - Patient's Date of Birth
 - Gender
 - Race/Ethnicity
 - Work Relatedness of Injury
 - Safety Equipment
 - Site at Which Injury Occurred
 - E-Code (Description of Injury)
 - Date Injury Occurred
 - State in Which Injury Occurred
 - County in Which Injury Occurred
- Pre-Hospital
 - Glasgow Eye Component at Scene
 - Glasgow Verbal Component at Scene
 - Glasgow Motor Component at Scene
 - GCS Assessment Qualifier at Scene
 - Intubated-Scene
 - CPR-Scene
 - MAST-Scene
 - Fluids-Scene
 - Chest Decompression-Scene
 - Thoracentesis/Thoracostomy-Scene
 - Spinal Immobilization-Scene
- Emergency Department
 - ED Arrival Date
 - ED Arrival Time
 - Systolic Blood Pressure (First)
 - Respiratory Rate (Unassisted)
 - Injury Type
 - Glasgow Eye Component in ED
 - Glasgow Verbal Component in ED
 - Glasgow Motor Component in ED
 - GCS Assessment Qualifier in ED
 - Was Alcohol Present?
 - Alcohol Level Range
 - Were Drugs Present?
 - Drug Category
 - ED Disposition
 - ED Transfer to Hospital
 - ED Transfer Date
 - ED Transfer Time
 - First Temperature in ED
 - Intubated in ED
 - CPR-ED
 - MAST-ED
 - Fluids-ED
 - Chest Decompression-ED
 - Thoracentesis/Thoracostomy-ED
 - Spinal Immobilization-ED
 - Head CT Results-ED

- Abdominal Evaluation-ED
- Inpatient Course
 - Admitting Specialty
 - Total Days in ICU
 - Ventilator Support Days
 - ICD-9-CM Diagnosis Code/Description for Injuries
 - Complications
 - Pre-existing Comorbidity Factors
- OR Visits
 - OR Date
 - OR Time
 - ICD-9 Codes for OR Visit
- Disability Assessment / Discharge
 - Disability Assessment - Self-Feeding
 - Disability Assessment - Locomotion
 - Disability Assessment - Expression
 - Discharge Disposition
 - Transfer to Other Hospital
 - Date of Discharge or Death
 - Discharge Status
 - Billed Hospital Charges
 - Principal Payment Source
 - Length of Stay in Hospital
 - Organs/Tissue Requested
 - Organs/Tissue Granted
 - Organs/Tissue Taken
 - Was an Autopsy Performed?

Appendix H: Glossary

Barell Matrix: A system of classification of injury by body region and the nature of the injury.

CDC: Centers for Disease Control and Prevention

E-Code: External cause of injury code

ED: Emergency Department

EMS: Emergency Medical Services

Floor: A general medical-surgical room or bed in a hospital. Generally advanced patient monitoring is not performed on a floor bed.

GSW: Gunshot Wound

ICD-9-CM: International Classification of Disease, 9th Revision, Clinical Modification.

ICU: Intensive Care Unit

ISS: Injury Severity Score. A system for scoring the overall severity of injuries. Ranging from 1-75, an ISS of greater than 15 is generally considered a severe injury.

LOS: Length of Stay

MCC: Motorcycle Collision

MOI: Mechanism of Injury

MVC: Motor Vehicle Collision

Observation: A level of hospital care most frequently utilized for lower acuity, short stays, or during an intermediate period while a decision is being made to admit or release the patient.

OR: Operating Room.

OTR: Ohio Trauma Registry

Outcome: Used to describe the patient's outcome; alive or dead.

Step-Down: An intermediate level of care between the "floor" and the ICU.

Appendix I: Ohio Revised Code

§4765.06: Emergency medical services incidence reporting system—state trauma registry.

(B) The board shall establish a state trauma registry to be used for the collection of information regarding the care of adult and pediatric trauma victims in this state. The registry shall provide for the reporting of adult and pediatric trauma-related deaths, identification of adult and pediatric trauma patients, monitoring of adult and pediatric trauma patient care data, determination of the total amount of uncompensated adult and pediatric trauma care provided annually by each facility that provides care to trauma victims, and collection of any other information specified by the board. All persons designated by the board shall submit to the board any information it determines is necessary for maintaining the state trauma registry. At the request of the board any state agency possessing information regarding adult or pediatric trauma care shall provide the information to the board. The board shall maintain the state trauma registry in accordance with rules adopted under section 4765.11 of the Revised Code. Rules relating to the state trauma registry adopted under this section and section 4765.11 of the Revised Code shall not prohibit the operation of other trauma registries and may provide for the reporting of information to the state trauma registry by or through other trauma registries in a manner consistent with information otherwise reported to the state trauma registry. Other trauma registries may report aggregate information to the state trauma registry, provided the information can be matched to the person that reported it. Information maintained by another trauma registry and reported to the state trauma registry in lieu of being reported directly to the state trauma registry is a public record and shall be maintained, made available to the public, held in confidence, risk adjusted, and not subject to discovery or introduction into evidence in a civil action as provided in section 149.43 of the Revised Code and this section. Any person who provides, maintains, or risk adjusts such information shall comply with this section and rules adopted under it in performing that function and has the same immunities with respect to that function as a person who performs that function with respect to the state trauma registry.

(C) The board and any employee or contractor of the board or the department of public safety shall not make public information it receives under Chapter 4765. of the Revised Code that identifies or would tend to identify a specific recipient of emergency medical services or adult or pediatric trauma care.

(D) Not later than two years after the effective date of this amendment, the board shall adopt and implement rules under section 4765.11 of the Revised Code that provide written standards and procedures for risk adjustment of information received by the board under Chapter 4765. of the Revised Code. The rules shall be developed in consultation with appropriate medical, hospital, and emergency medical service organizations and may provide for risk adjustment by a contractor of the board. Before risk adjustment standards and procedures are implemented, no member of the board and no employee or contractor of the board or the department of public safety shall make public information received by the board under Chapter 4765. of the Revised Code that identifies or would tend to identify a specific provider of emergency medical services or adult or pediatric trauma care. After risk adjustment standards and procedures are implemented, the board shall make public such information only on a risk adjusted basis.

(E) The board shall adopt rules under section 4765.11 of the Revised Code that specify procedures for ensuring the confidentiality of information that is not to be made public under this section. The rules shall specify the circumstances in which deliberations of the persons performing risk adjustment functions under this section are not open to the public and records of those deliberations are maintained in confidence. Nothing in this section prohibits the board from making public statistical information that does not identify or tend to identify a specific recipient or provider of emergency medical services or adult or pediatric trauma care.

(F) No provider that furnishes information to the board with respect to any patient the provider examined or treated shall, because of this furnishing, be deemed liable in damages to any person or be held to answer for betrayal of a professional confidence in the absence of willful or wanton misconduct. No such information shall be subject to introduction in evidence in any civil action against the provider. No provider that furnishes information to the board shall be liable for the misuse or improper release of the information by the board or any other person. No person who performs risk adjustment functions under this section shall, because of performing such functions, be held liable in a civil action for betrayal of professional confidence or otherwise in the absence of willful or wanton misconduct.

Effective Date: 11-03-2000

Appendix J: Counties by Population Density Designation

High Density (>1000 people per square mile)	Medium-High Density (300-999 people per square mile)	Medium-Low Density (100-299 people per square mile)	Low Density (<100 people per square mile)
Cuyahoga	Lake	Allen	Preble
Franklin	Butler	Richland	Washington
Hamilton	Stark	Delaware	Clinton
Lucas	Mahoning	Fairfield	Defiance
Montgomery	Lorain	Miami	Union
Summit	Warren	Geauga	Williams
	Clermont	Licking	Holmes
	Trumbull	Columbiana	Champaign
	Clark	Wayne	Darke
	Medina	Wood	Mercer
	Greene	Jefferson	Madison
	Erie	Marion	Brown
	Portage	Ottawa	Perry
		Tuscarawas	Guernsey
		Sandusky	Morrow
		Ashtabula	Jackson
		Lawrence	Highland
		Hancock	Carroll
		Belmont	Van Wert
		Scioto	Putnam
		Muskingum	Henry
		Ashland	Fayette
		Athens	Hardin
		Huron	Hocking
		Shelby	Gallia
		Crawford	Coshocton
		Auglaize	Pike
		Ross	Wyandot
		Seneca	Meigs
		Pickaway	Paulding
		Knox	Adams
		Fulton	Harrison
		Logan	Morgan
			Noble
			Monroe
			Vinton

Population density data from the US Census Bureau, 2000 census
Density designations by the EMS Office of Research and Analysis



THE BURDEN OF INJURY IN OHIO: 2000 - 2010



VIOLENCE AND INJURY PREVENTION PROGRAM OHIO DEPARTMENT OF HEALTH

OCTOBER 2012

DATA PROVIDED BY THE OHIO HOSPITAL ASSOCIATION



OHIO DEPARTMENT OF HEALTH

DIVISION OF PREVENTION AND HEALTH PROMOTION

BUREAU OF HEALTHY OHIO

VIOLENCE AND INJURY PREVENTION PROGRAM

Matthew Falb, MHS
Injury Epidemiologist

Christy Beeghly, MPH
Violence and Injury Prevention Program Administrator

ACKNOWLEDGEMENTS

This publication was supported by the Cooperative Agreement Award Number 5U17CE002038- (Core Violence and Injury Prevention Program Grant) and the Preventive Health and Health Services Block Grant from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC.

Special thanks go to the Ohio Hospital Association for their data and assistance. The authors would also like to thank colleagues in the Violence and Injury Prevention Program for their review of the report.

SUGGESTED CITATION:

Falb M and Beeghly C. The Burden of Injury in Ohio: 2000-2010. Ohio Department of Health, Division of Prevention and Health Promotion, Bureau of Health Ohio, Violence and Injury Prevention Program. October 2012.

TABLE OF CONTENTS	PAGE
Ohio Violence and Injury Prevention Program Overview	5
Executive Summary	7
Section 1: Introduction and Overview	9
Section 2: The Overall Burden of Injury in Ohio	11
Overview	16
Injury Mechanisms	29
Injury across the Lifespan	31
Section 3: Unintentional Injury	35
Poisoning	36
<i>Highlight: Drug Poisoning</i>	49
Motor Vehicle Traffic Crashes	69
<i>Highlight: Teen Driving</i>	88
<i>Highlight: Youth Seat Belt Use</i>	90
<i>Highlight: Adult Seat Belt Use</i>	92
Pedestrian	94
Pedal Cycle	107
<i>Highlight: Youth Bicycle Helmet Use</i>	120
Falls	122
<i>Highlight: Falls Among Older Adults</i>	129
Suffocation	142
<i>Highlight: Infant Sleep Suffocation</i>	148
<i>Highlight: Safe Sleep Practices</i>	152
Drowning	162
Fire/burn	175
Section 4: Intentional Injury	190
Suicide and Self-harm	191
Homicide and Assault	208
Firearms – All intents	226

Section 5: Traumatic Brain Injuries	242
Section 6: Economic Burden of Injuries	257
Section 7: Appendices	260
Appendix 1: Data Sources	261
Appendix 2: Analytic Methods	263
Appendix 3: Limitations of Injury Surveillance Data	266
Appendix 4: External Cause of Injury Coding Matrix for ICD-10 Codes	267
Appendix 5: External Cause of Injury Coding Matrix for ICD-9 Codes	268
Appendix 6: Fatal Injury Mechanism Subcategories	269
Appendix 7: Hospitalization and ED Visit Injury Mechanism Subcategories	272
Appendix 8: Costs of Fatal Injury by Intent and Mechanism	275
Appendix 9: Costs of Injury Hospitalizations by Intent and Mechanism	276
Appendix 10: Cost of Injury ED Visits by Intent and Mechanism	277
Appendix 11: County Urbanity Classifications	278
Appendix 12: Federal Poverty Guidelines	278

THE OHIO VIOLENCE AND INJURY PREVENTION PROGRAM OVERVIEW

Injury is the leading cause of death for Ohioans ages 1 to 44 and the 5th-leading cause of death overall. The goal of the Ohio Violence and Injury Prevention Program (VIPP) is to continue development of a comprehensive injury prevention program by establishing and sustaining a solid infrastructure that includes statewide injury surveillance to inform and evaluate public policy, as well as comprehensive injury prevention programs.

The VIPP strives to:

- Coordinate surveillance systems that collect injury data.
- Assess the burden of injuries and violence, and communicate information for the purpose of action.
- Promote evidence-based injury prevention interventions for at-risk populations.
- Coordinate and collaborate with partners in building program infrastructure.
- Encourage the adoption of policies and programs that lead to the prevention of injuries.
- Provide technical support and training as needed.
- *Ultimately, make Ohio a safer place to live, work and play by reducing death and disability associated with intentional and unintentional injury.*

The VIPP is working to develop a comprehensive injury prevention program for the State of Ohio. Current VIPP initiatives include:

Ohio Injury Prevention Partnership (OIPP) – The OIPP is a group of professionals representing a broad range of agencies and organizations concerned with building Ohio’s capacity to address the prevention of injury, particularly related to the group’s identified priority areas of falls among older adults, prescription drug abuse and overdose, child injury and violence prevention (suicide and firearm related). The OIPP was convened in November 2007 and is coordinated by ODH with funds from the Centers for Disease Control and Prevention (CDC) National Center for Injury Prevention and Control (NCIPC). The OIPP helps to improve statewide collaboration around injury prevention and will assist ODH with establishing priorities and future directions regarding injury and violence prevention in Ohio.

Local Injury Prevention Grant Program – Through the CDC’s Preventive Health and Health Services Block Grant (PHHSBG), the VIPP provides funding annually to local programs targeting injury. The goal of this grant program is to reduce injury and injury-related deaths to Ohioans through the development of comprehensive, multi-faceted, population-based programs at the local level that address the risks associated with injuries. The nine currently-funded projects (2010-2013 cycle) focus on the following injury priorities: unintentional child/youth injury; falls among older adults; and unintentional prescription drug poisoning.

Child Passenger Safety (CPS) Program – With fines collected through enforcement of Ohio’s child restraint law (Ohio Revised Code Section 4511.81), ODH’s CPS Program provides child safety seats to eligible low-income families in all Ohio counties. The overall goal of this program is to increase

Ohio Violence and Injury Prevention Program, Ohio Department of Health

the availability of child safety seats and booster seats for low income families in Ohio and to increase proper use and correct installation of child safety seats. ODH distributes approximately 45-60 seats to each of the 88 counties per year based on the availability of funds. The CPS Program works in coordination with regional occupant protection coordinators funded by the Ohio Department of Public Safety who serve as liaisons between ODH and the county seat distribution contacts.

Surveillance Activities

- **Injury Surveillance** – The injury surveillance program assesses the burden of overall injury and specific types of injury in Ohio through the examination of multiple data sets including hospital discharge, death certificates, and other sources of injury-related data. Using these data, the VIPP monitors trends and emerging injury issues, produces annual reports and responds to requests for data.
- **Census of Fatal Occupational Injuries (CFOI)** – With funding from the Bureau of Labor Statistics and the Ohio general revenue fund, the CFOI Program provides the public, employers and safety personnel with comprehensive data surrounding fatal occupational-related injuries in Ohio. Data are collected from several sources including death certificates, workers' compensation reports, Occupational Safety and Health Administration (OSHA) reports, traffic crash records, agricultural injury reports and media clippings. The data are collated at the national level and used to establish occupational safety policies and programs.
- **Ohio Violent Death Reporting System (OH-VDRS)** – In September 2009, the CDC awarded a grant to the VIPP to participate in the National Violent Death Reporting System (NVDRS), enabling Ohio to address a critical need in the state: the collection and analysis of high quality data on violent death. With this funding, the VIPP collects and links Vital Statistics data; coroner data from the 88 county coroners; and local law enforcement data to better understand the circumstances surrounding and contributing to violent deaths in Ohio. These data will ultimately be used to develop recommendations regarding the prevention of violent death in Ohio. The NVDRS operates in 18 states, combining data on violent deaths including homicides, suicides, legal intervention deaths, unintentional firearm injury deaths, and deaths of undetermined intent.

Please visit the VIPP website for more information, resources and program updates.

Go to: <http://www.healthyohioprogram.org/vipp/injury.aspx>

EXECUTIVE SUMMARY

This report reviews injuries for Ohioans from 2000 to 2010. Data for this report were derived from Ohio Hospital Association hospital inpatient discharge and emergency department (ED) datasets and Ohio death certificate files.

Fatalities:

- 7,156 people died from an injury in Ohio in 2010. On average, 20 people die from an injury every day statewide.
- The death rate for injuries increased 33 percent between 2000 and 2010.
- The leading causes of injury death in 2010 were unintentional poisoning, suicide, motor vehicle traffic crashes, and falls. The risk profile for the leading causes of injury varies by segment of the population. The following groups are disproportionately at risk for the leading causes of injury death.
 1. Unintentional poisoning: Males, ages 25-54, and whites
 2. Suicide: Males, ages 25-54, and whites
 3. Motor vehicle traffic crashes: Males, ages 15-24 and ages 85 or older
 4. Falls: Ages 85 or older
- Death rates increased rapidly for poisoning, suicides, and fall related injuries while rates have decreased for motor vehicle traffic related injuries between 2000 and 2010.

Hospitalizations:

- 72,485 injury related hospitalizations occurred in Ohio in 2010. On average, 199 hospitalizations occur in Ohio every day.
- The injury hospitalization rate changed very little between 2002 and 2010.
- The leading causes of injury hospitalizations were falls, self-harm, motor vehicle traffic crashes, and unintentional poisoning. The risk profile for the leading causes of injury hospitalizations varies by segment of the population. The following groups were identified as at risk.
 1. Falls: Females and ages 85 or older
 2. Self-harm: Females and ages 15-44
 3. Motor vehicle traffic crashes: Males and ages 15-24
 4. Unintentional poisoning: Ages 45 or older
- Hospitalization rates increased for self-harm and unintentional poisoning related injuries while rates associated with motor vehicle traffic related injuries decreased between 2002 and 2010. Rates of fall related hospitalizations increased between 2002 and 2003 then remained the same between 2003 and 2010.

Emergency Department Visits (ED):

- 1.36 million ED visits in Ohio were associated with injuries in 2010. On average, 3,726 visits were made to emergency departments every day in Ohio.
- The injury ED visit rate changed very little between 2002 and 2010.
- The leading causes of injury ED visits were falls, motor vehicle traffic crashes, assaults, and unintentional poisoning. The risk profile for the leading causes of injury ED visits varies by segment of the population. The following groups were identified as at risk.
 1. Falls: Females and ages 85 or older
 2. Motor vehicle traffic crashes: Females and ages 15-34
 3. Assaults: Males and ages 15-34
 4. Unintentional poisoning: Ages 1-4
- ED visit rates increased for injuries associated with falls, motor vehicle traffic, assaults, and unintentional poisoning.

Social and Economic Costs:

- Injury related deaths, hospitalizations, and ED visits cost Ohio an estimated \$13 billion in 2010. The estimate includes costs associated with medical care and worker productivity.
- Costs associated with injuries increased 21 percent between 2002 and 2010.
- The leading cause of injury costs in 2010 were falls (\$2.6 billion), motor vehicle traffic (\$2.3 billion), unintentional poisoning (\$2.0 billion), suicide or self-harm (\$1.7 billion), and homicides or assaults (\$1.3 billion).
- Rapid increases in costs were found among unintentional poisoning (117 percent), falls (40 percent), and suffocation (15 percent) while a significant decrease in costs occurred among injuries associated with motor vehicle traffic crashes (20 percent).
- Injuries were associated with over 109,000 years of potential life lost each year which is the leading cause of potential life loss in Ohio.

Violence and Injury Prevention:

The Ohio Department of Health (ODH) is funded by the Centers for Disease Control and Prevention to build capacity related to the prevention and control of injuries and to develop or strengthen injury surveillance programs. ODH coordinates a statewide group of injury prevention stakeholders, the Ohio Injury Prevention Partnership, to build capacity to address the leading causes of injury in Ohio. The group has identified falls among older adults, drug poisonings, child injury and violence prevention (suicide and firearm related) as priority areas.

SECTION 1: INTRODUCTION AND OVERVIEW: INJURY DEFINED



The National Safety Council defines **INJURY** as:

Physical harm or damage to the body resulting from an energy exchange, usually acute mechanical (e.g., motor vehicle crash, falls), chemical (e.g., poisoning), thermal (e.g., fire/burn) or other environmental energy (e.g., hyperthermia, suffocation, drowning) that exceeds the body's tolerance.

Injuries can further be classified by the intent or purposefulness of occurrence in two categories: intentional and unintentional injuries. Intentional injuries are purposely inflicted and often associated with violence. These include child and elder maltreatment, domestic violence, sexual assault, aggravated assault, homicide, and suicide. Unintentional injuries include those that occur without intent of harm and are not purposely inflicted.

In this report, we will examine the burden of unintentional injury as well as injury resulting from intentional acts such as self harm and assaults. The term “unintentional injury” will be used to describe what may commonly be referred to as an accident. The term accident implies a random act; however, most injuries are predictable and preventable. Like diseases, injuries follow recognizable patterns that can be studied and used to inform prevention strategies such as policy and behavior change.

Injuries may be classified by the:

- Mechanism or source of the energy transfer (e.g., motor vehicle, firearms, falls).
- Outcome or result of the transfer of injury (e.g., traumatic brain injury, poisoning, burns).
- Intention of the acts causing the injury (e.g., suicide, abuse, homicide).
- Events/activities or locations that precede them (e.g., playground-related, occupational-related, agricultural-related).

Overlap among these categories exists; for example, motor vehicle-related injuries cause traumatic brain injury. Firearm-related injuries include suicide, homicide and unintentional acts. Playground-related injuries involve falls, strangulation, struck-by and other mechanisms of injury.

The first step in understanding injury is to collect and analyze data. Through the epidemiological study of injury, we can address questions such as “How many people die from violent injury in Ohio each year? Who is most likely to die in a fall? What age groups are most affected by poisoning? By answering these questions, injury data can also lead to important prevention strategies. This report was created to help answer these questions and to provide data to help inform prevention strategies and policies.

INJURY MECHANISMS

The cause, or mechanism, describes the way in which the person sustained the injury; how the person was injured; or the process by which the injury occurred. The cause of injury is the **underlying cause**, rather than the direct cause. The underlying cause is what starts the chain of events that leads to an injury. The direct cause is what produces the actual physical harm. The underlying and direct causes can be the same or different. For example, if a person cuts his or her finger with a knife, the cut is both the underlying and direct cause. However, if a child falls and hits his head on a coffee table, the fall is the underlying cause (the action that starts the injury event), and the contact with the table is the direct cause (the action that causes the actual physical harm). If we can prevent the underlying cause, we can stop the injury from occurring in the first place. In other words, without the underlying cause, there would be no direct cause.

Throughout this report, fatal injuries are defined as a death with any injury listed as the underlying cause of death on the death certificate and non-fatal injuries are defined as an injury listed in the primary diagnostic field of the hospital inpatient or emergency department record. Intent and mechanism of injuries were based on the International Classification of Diseases (ICD) which is a system designed to promote international comparability of statistics. It provides a way to classify medical terms reported by physicians, medical examiners, and coroners on death certificates and data from physician offices and hospital inpatient and outpatient records so they can be grouped together for statistical purposes. The following ICD mechanism groups were used in this report. A list of ICD-9 (ED and hospitalization) and ICD-10 (deaths) codes may be found in Appendix 4 and 5.

Cause of Injury Categories

1. **Cut/pierce/stab:** Injury resulting from an incision, slash, perforation, or puncture by a pointed or sharp instrument, weapon, or object. This category does not include injury from being struck by or against a blunt object (such as the side of a night stand) or bite wounds; these injuries fall in the category "struck by/against."
2. **Drowning/submersion:** Suffocation (asphyxia) resulting from submersion in water or another liquid.
3. **Fall:** Injury received when a person descends abruptly due to the force of gravity and strikes a surface at the same or lower level.
4. **Fire/burn/smoke inhalation:** Severe exposure to flames, heat, or chemicals that leads to tissue damage in the skin or places deeper in the body; injury from smoke inhalation to the upper airway, lower airway, or lungs.

Ohio Violence and Injury Prevention Program, Ohio Department of Health

5. **Firearm gunshot:** A penetrating force injury resulting from a bullet or other projectile shot from a powder-charged gun. This category includes gunshot wounds from powder-charged handguns, shotguns, and rifles. This category does not include injury caused by a compressed air-powered paint gun or a nail gun, which falls in the "other specified" category.
6. **Foreign body:** Injury resulting from entrance of a foreign body into or through the eye or other natural body opening that does not block an airway or cause suffocation (asphyxia). Examples include pebble or dirt in eye, BB in ear, or small children's toys in esophagus.
7. **Suffocation:** Inhalation, aspiration, or ingestion of food or other object that blocks the airway or causes suffocation (asphyxia); intentional or unintentional mechanical suffocation due to hanging, strangulation, lack of air in a closed place, plastic bag or falling earth. This category does not include injury resulting from a foreign body that does not block the airway (see foreign body).
8. **Machinery:** Injury that involves operating machinery, such as drill presses, fork lifts, large power-saws, jack hammers, and commercial meat slicers. This category does not include injury involving machines not in operation, falls from escalators or moving sidewalks, or injuries from powered lawn mowers or other powered hand tools or home appliances.
9. **Natural / environmental:** Injury resulting from exposure to adverse natural and environmental conditions (such as severe heat, severe cold, lightning, sunstroke, large storms, and natural disasters) as well as lack of food or water.
10. **Bite / sting:** Injury from a poisonous or non-poisonous bite or sting through the skin, other than a dog bite. This category includes human bite, cat bite, snake or lizard bite, insect bite, stings from coral or jellyfish, or bites and stings by other plants and animals.
11. **Other specified causes:** Injury associated with any other specified cause that does not fit another category. Some examples include causes such as electric current, electrocution, explosive blast, fireworks, and overexposure to radiation, welding flash burn, or animal scratch.
12. **Overexertion:** Working the body or a body part too hard, causing damage to muscle, tendon, ligament, cartilage, joint, or peripheral nerve (e.g., common cause of strains, sprains, and twisted ankles). This category includes overexertion from lifting, pushing, or pulling or from excessive force.
13. **Poisoning:** Ingestion, inhalation, absorption through the skin, or injection of so much of a drug, toxin (biologic or non-biologic), or other chemical that a harmful effect results, such as drug overdoses. This category does not include harmful effects from normal therapeutic drugs (i.e., unexpected adverse effects to a drug administered correctly to treat a condition) or bacterial illnesses.

- 14. Struck by / against or crushed:** Injury resulting from being struck by (hit) or crushed by a human, animal, or inanimate object or force other than a vehicle or machinery; injury caused by striking (hitting) against a human, animal, or inanimate object or force other than a vehicle or machinery.
- 15. Transportation-related causes:** Injury involving modes of transportation, such as cars, motorcycles, bicycles, and trains. This category is divided into five subcategories according to the person injured: motor vehicle occupant, motorcyclist, pedal cyclist, pedestrian, and other transport. This category also involves another factor--whether the injury occurred in traffic (on a public road or highway).
- 16. Unknown/unspecified cause:** Injury for which the report does not provide enough information to describe the cause of injury.

“Injury is probably the most under recognized major public health problem facing the nation today, and the study of injury represents unparalleled opportunities for reducing morbidity and mortality and for realizing significant savings in both financial and human terms—all in return for a relatively modest investment.”

From: Injury Prevention: Meeting the Challenge, The National Committee for Injury

SECTION 2: THE OVERALL BURDEN OF INJURY IN OHIO

INJURY AS A CAUSE OF DEATH IN COMPARISON TO OTHER PUBLIC HEALTH ISSUES

Injuries are a serious public health problem throughout the lifespan in Ohio. Injuries were consistently in the top five leading causes of death for most age groups in 2009 (Table 2.1). Unintentional injuries are the 5th-leading cause of death overall and the leading cause of death for ages 1-44. Homicides were one of the 5 leading causes of death for ages 1-9 and 15-44 while suicides were one of the 5 leading causes of death for ages 10-54.

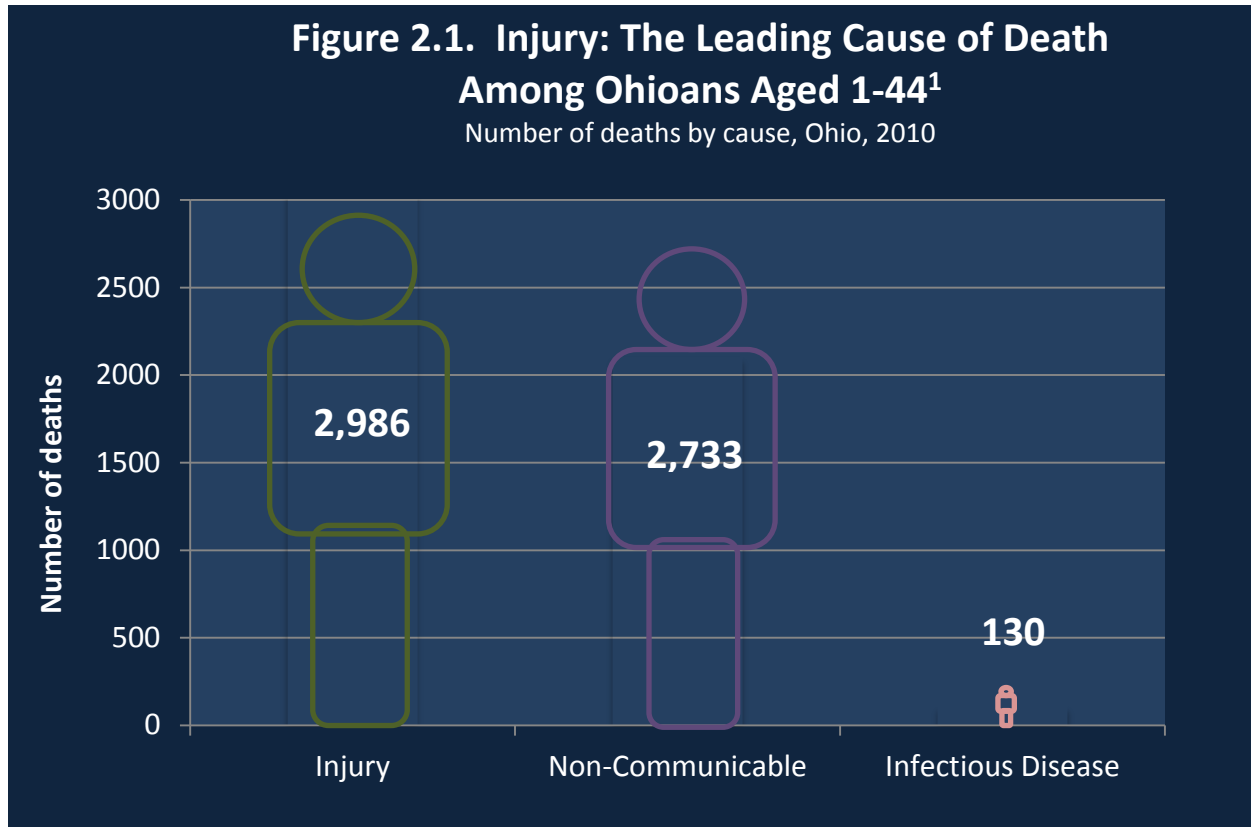
Table 2.1 Five Leading Causes of Death Number of deaths by age groups, Ohio 2009											
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Short Gestation 216	Unintent. Injury 37	Unintent. Injury 15	Unintent. Injury 35	Unintent. Injury 330	Unintent. Injury 448	Malignant Neoplasm 533	Malignant Neoplasm 2,347	Malignant Neoplasm 4,691	Heart Disease 20,676	Heart Disease 25,453
2	Congenital Anomalies 209	Congenital Anomalies 15	Malignant Neoplasm 14	Malignant Neoplasm 15	Suicide 143	Suicide 168	Unintent. Injury 509	Heart Disease 1,469	Heart Disease 2,722	Malignant Neoplasm 17,333	Malignant Neoplasm 25,149
3	SIDS 80	Homicide 14	Homicide ---	Suicide 14	Homicide 129	Malignant Neoplasm 147	Heart Disease 416	Unintent. Injury 681	Chronic Lower Respiratory Disease 747	Chronic Lower Respiratory Disease 5,609	Chronic Low. Respiratory Disease 6,642
4	Maternal Pregnancy Comp. 69	Malignant Neoplasm ---	Heart Disease ---	Influenza & Pneumonia ---	Malignant Neoplasm 55	Homicide 142	Suicide 227	Liver Disease 328	Diabetes Mellitus 553	Cerebro- vascular 4,798	Cerebro- vascular 5,576
5	Unintent. Injury 54	Heart Disease ---	Congenital Anomalies ---	Benign Neoplasm ---	Heart Disease 26	Heart Disease 116	Diabetes Mellitus 93	Suicide 274	Cerebro- vascular 436	Alzheimer's Disease 3,833	Unintent. Injury 4,012

Source: CDC WISQARS

--- Number suppressed due to counts less than 10

Ohio Violence and Injury Prevention Program, Ohio Department of Health

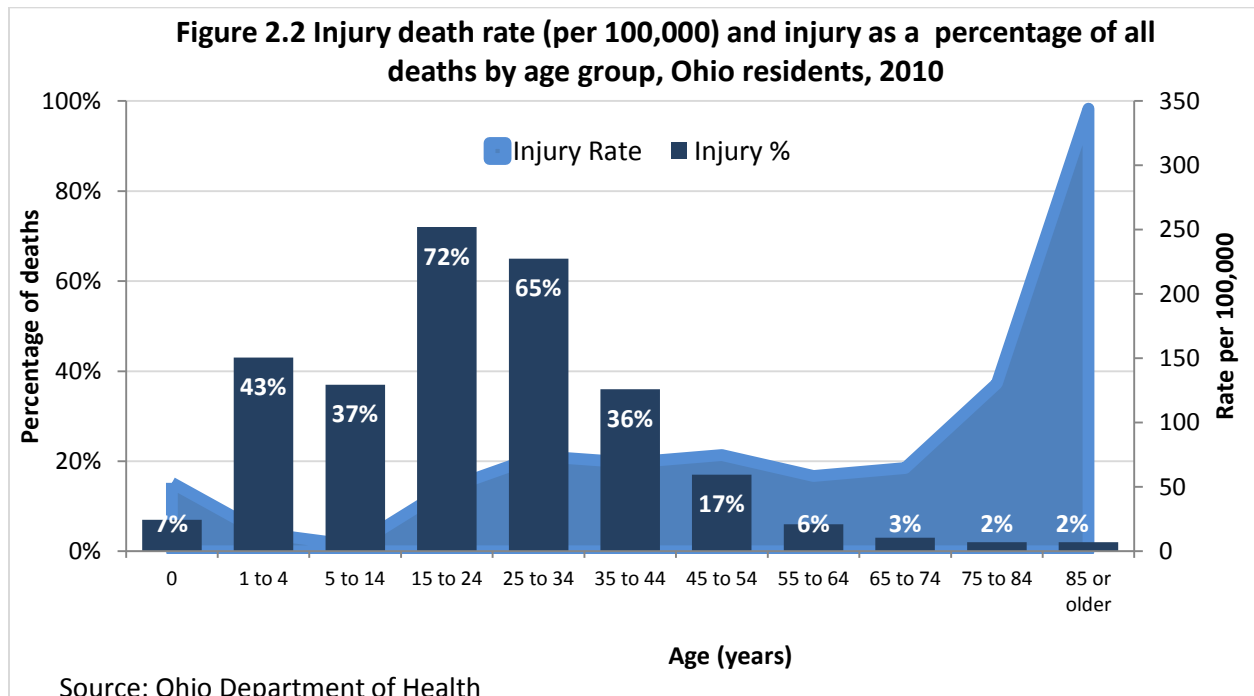
Among those aged 1 to 44, injuries caused more deaths than all infectious and non-communicable diseases (e.g., heart disease, cancer, stroke, diabetes, Alzheimer's, liver disease, etc.) combined (see Figure 2.1).



¹Source: ODH Office of Vital Statistics

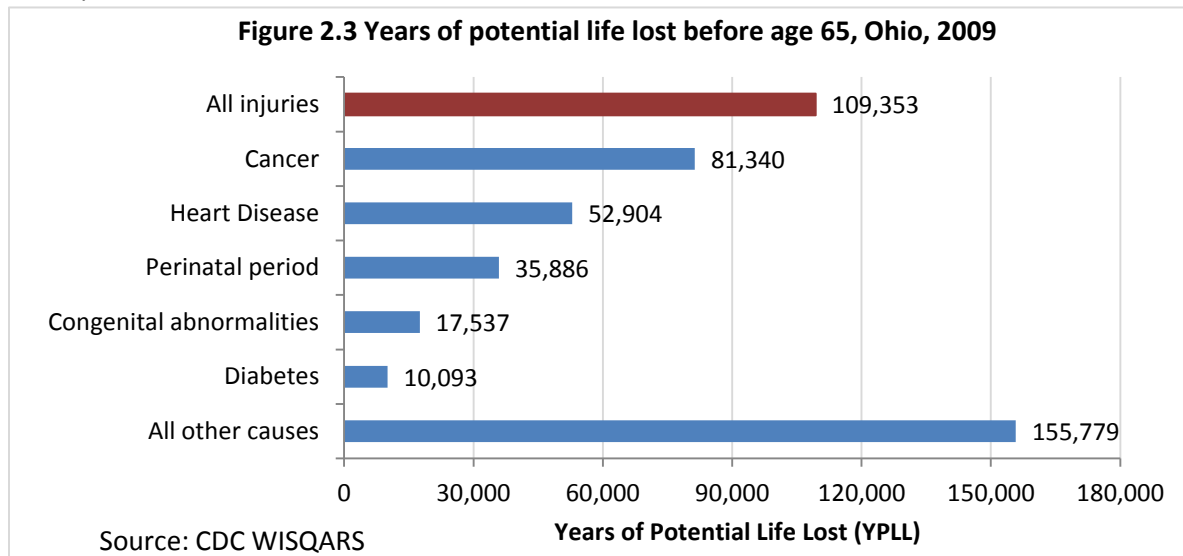
Another way to explore the burden of injury in relation to other causes of death throughout the lifespan is shown in Figure 2.2 below. This figure demonstrates the proportion of all 2010 deaths in a particular age group that were accounted for by injury. Injuries accounted for a substantial percentage of all deaths among ages 1-44. They were associated with the greatest proportion of deaths among those ages 15-34 years. For the ages 15-24, if all injury deaths were prevented, 72 percent of all deaths in this age group would be eliminated. Injuries were associated with a smaller percentage of deaths among infants less than 1 year and adults ages 45 or older. For young children ages 1 to 4 years, 43 percent of deaths were caused by injuries, and for children ages 5 to 14, more than one-third of all deaths in 2010 were injury-related. From age 25 on, the proportion of deaths due to injury steadily decreased down to 2 percent for older Ohioans as the number of deaths from chronic diseases and other causes increases.

In contrast, fatal injury rates decreased from birth through age 14 then increased from ages 15 to 34 and was similar among ages 35-74. Fatal injury rates increased dramatically among adults ages 75 or older. So while the proportion of all deaths due to injury decreases with age after 24 years, the impact of injury across the lifespan continues to be significant as death rates rise.



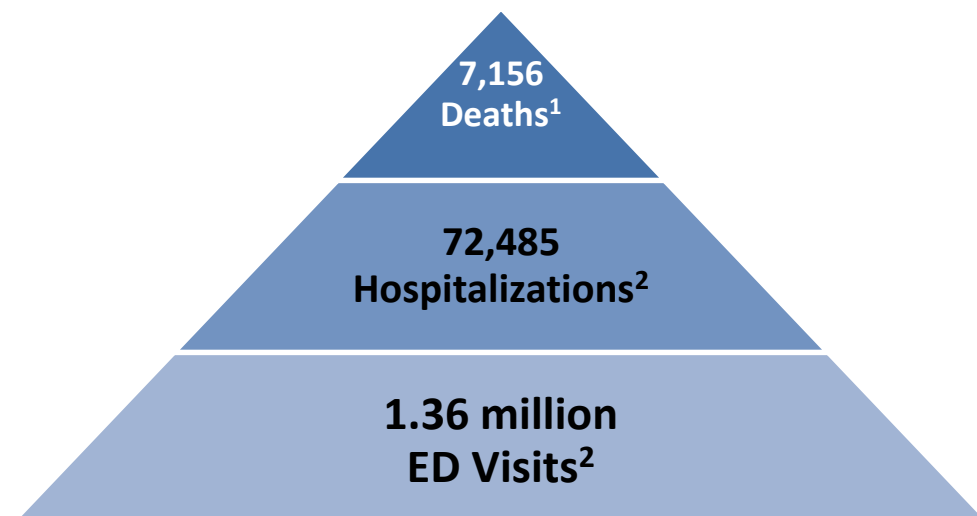
YEARS OF POTENTIAL LIFE LOST (YPLL)

Another measure of the burden of injury is Years of Potential Life Lost (YPLL), or life lost by a premature death. YPLL involves estimating the average time a person would have lived had he or she not died prematurely. This measure is used to help quantify social and economic loss owing to premature death, especially for specific causes of death affecting younger age groups. According to the CDC WISQARS web-based query system, injuries were the leading contributor to YPLL for Ohio in 2009 (See Figure 2.3). Approximately 109,000 YPLL were attributed to all injuries. Unintentional injuries contributed 65,239 YPLL followed by suicides (24,287 years) and homicides (16,675).



SECTION 2A: OVERVIEW OF INJURY IN OHIO

Ohio Injury Pyramid, 2010



¹Source: Ohio Department of Health, Vital Statistics ²Source: Ohio Hospital Association

BURDEN OF INJURY:

Injuries are a significant public health problem in Ohio. On average in Ohio in 2010, there was more than one injury-related hospitalization every 7 minutes and an emergency department visit every 23 seconds, amounting to more than 72,000 hospitalizations and 1.36 million ED visits (Table 2.2). In addition, there was an average of nearly 20 injury-related deaths per day to Ohioans in 2010.

All injuries include unintentional causes such as motor vehicle traffic, drowning, poisoning as well as homicides and suicides.

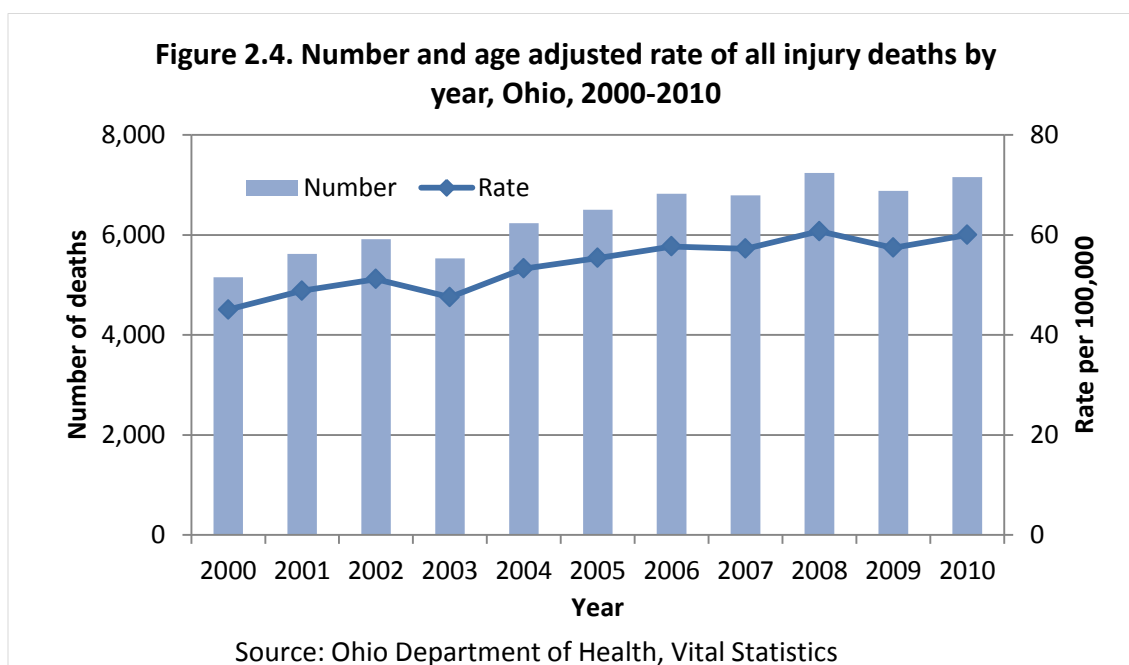
Table 2.2 Ohio Average Injury Frequency, 2010

Injury-related	Total 2010 Number	Per Day	Per Hour	Per Minute	Seconds....
ED Visits	1,360,000	3,726	155	2.6	An ED visit every 23 seconds
Hospitalizations	72,485	199	8	A hospitalization every 7 minutes	
Deaths	7,156	20	A death every 1 hour 23 minutes		

These injuries impact the state on a variety of levels. Injuries can lead to declines in physical health, well-being, and quality of life ranging from several days to many years. The large volume and treatment charges of injuries have taken a heavy toll on Ohio's health care systems. In 2010, fatal and non-fatal injuries cost Ohio \$13.4 billion in medical care and work loss. If these costs were equally divided among all Ohioans, injuries would cost every man, woman and child more than \$1,200 per year.

Fortunately injuries can be prevented through a combination of changes in individual behavior, the physical and social environment, as well as the implementation of policies aiming to reduce risk for injury.

The following sections of this report present information on specific types of injuries, the number of Ohioans affected, trends over time, and the economic impact on health care systems.



DEATHS:

In 2010, 7,156 Ohioans or roughly 20 per day died from an injury or violence-related cause. The death rate for injuries was 60.0 per 100,000 (see Figure 2.4). Males were more likely than females to die from an injury (82.0 versus 35.4 per 100,000). Injury fatality rates varied by age group with the highest rates found among adults ages 75 or older (see Figure 2.5). The highest fatal injury rates were found among African Americans (62.6 per 100,000) and whites (60.4 per 100,000) while lower rates were found among Hispanics (39.3 per 100,000). Table 2.3 highlights these injury risk profiles.

Table 2.3: All Injury Death Risk Profile, Ohio, 2010		
	2010 At Risk Groups	Annual trend since 2000
Overall		+33%
Sex	Males	Males (largest increase)
Age	75 or older	85 or older (largest increase)
Race and ethnicity	Blacks	Whites (largest increase)

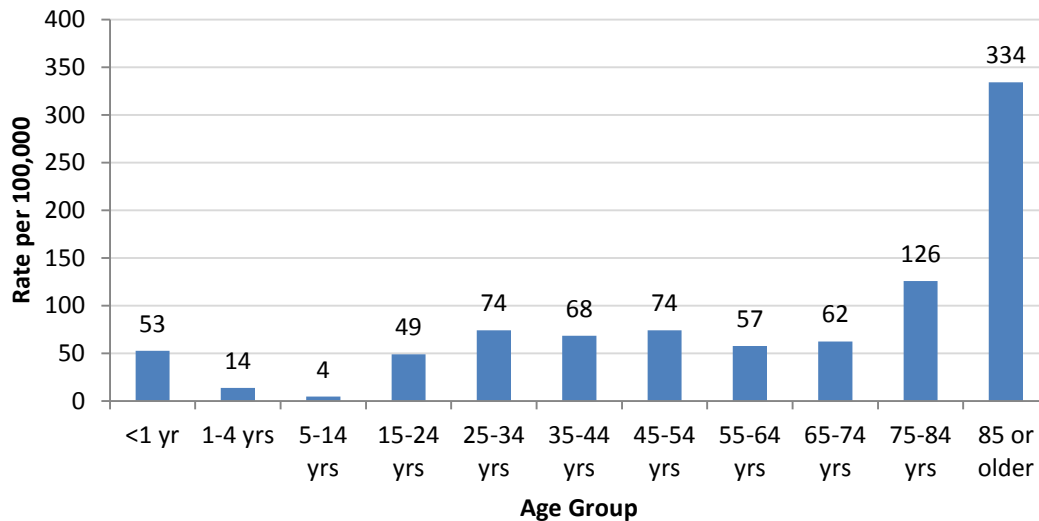
TRENDS:

Since 2000, fatal injury rates have increased 33 percent from 45 per 100,000 in 2000 to 60 per 100,000 in 2010 (see Figure 2.4). The death rate increased by an average of 1.5 deaths per 100,000 per year. The average annual increase was greater among males (+1.7 per 100,000) than females (0.95 per 100,000). Death rates increased among most age groups, with the largest increases by age found among adults aged 85 or older (+4.5 per 100,000 per year) followed by ages 45-54 (3.2 per 100,000 per year) (see Figure 2.6).

Ohio Violence and Injury Prevention Program, Ohio Department of Health

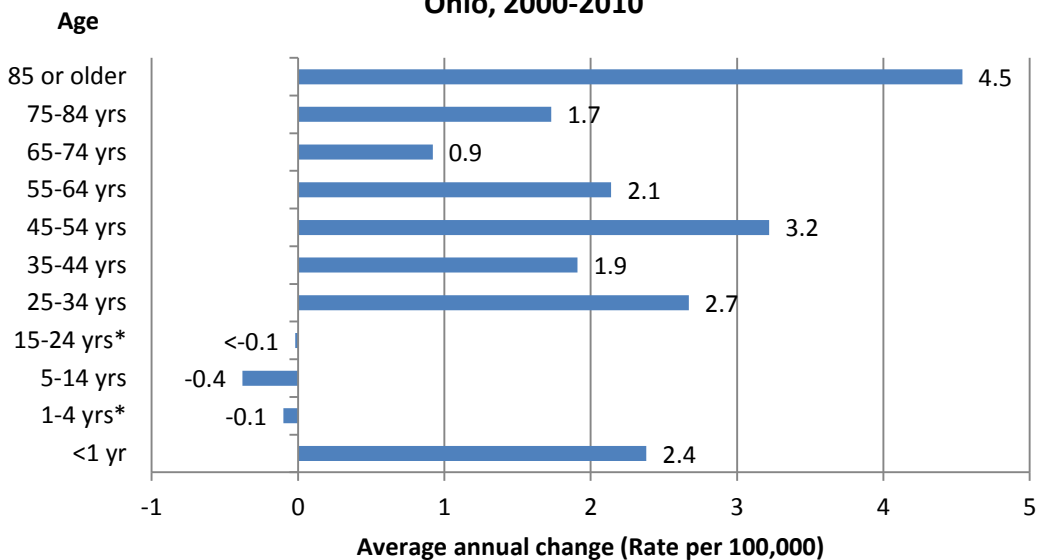
These increases are largely attributable to rising drug overdose rates and falls among older adults. A decrease in rates was found among children ages 5-14 (-0.4 per 100,000 per year). Fatal rates increased by an average of 1.6 per 100,000 per year for whites while rates remained the same for other race and ethnic groups. See tables 1a and 1b located at the end of this section for more detailed information on the number and rate of injury fatalities in Ohio.

Figure 2.5. Rate per 100,000 for all injury deaths by age, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

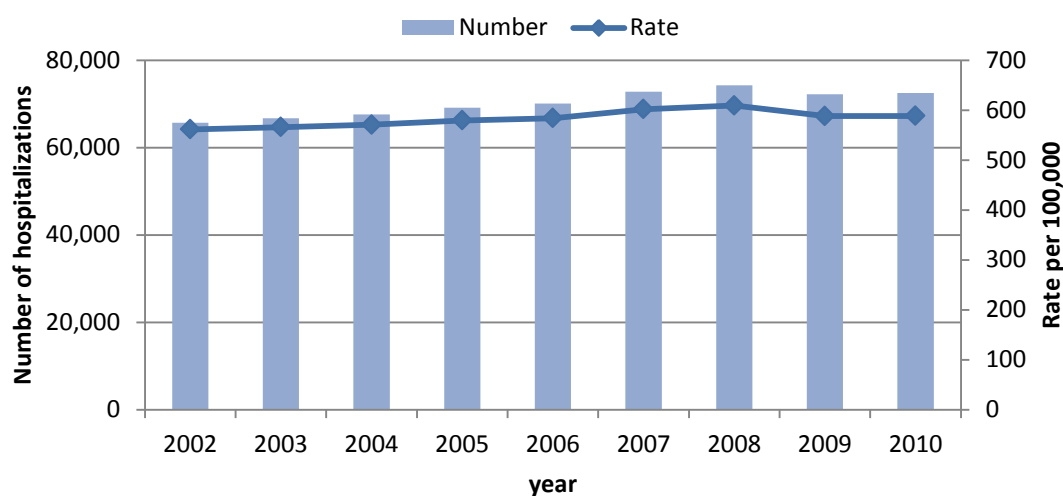
Figure 2.6. Average annual change in all injury death rates by age, Ohio, 2000-2010



Source: Ohio Department of Health, Vital Statistics

*Interpret with caution, does not follow linear trend

Figure 2.7. Number and age adjusted rate for all injury hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

Over 72,000 hospitalizations resulted from injuries in Ohio in 2010. The injury hospitalization rate was 588 per 100,000 (Figure 2.7). Overall males (614 per 100,000) were more likely to be hospitalized for an injury than females (545 per 100,000). For both males and females, the rate of hospitalizations decreased from birth to 14 years of age and then steadily increased with age among individuals 15 or older with the highest rates found among older adults 75 or older. From birth to age 64, hospitalization rates were higher among males than females. This pattern was reversed among adults aged 65 or older with higher rates found among females (see Figure 2.8). This trend is attributable to growing rates of fall-related injury among older females. Table 2.4 highlights these injury risk profiles.

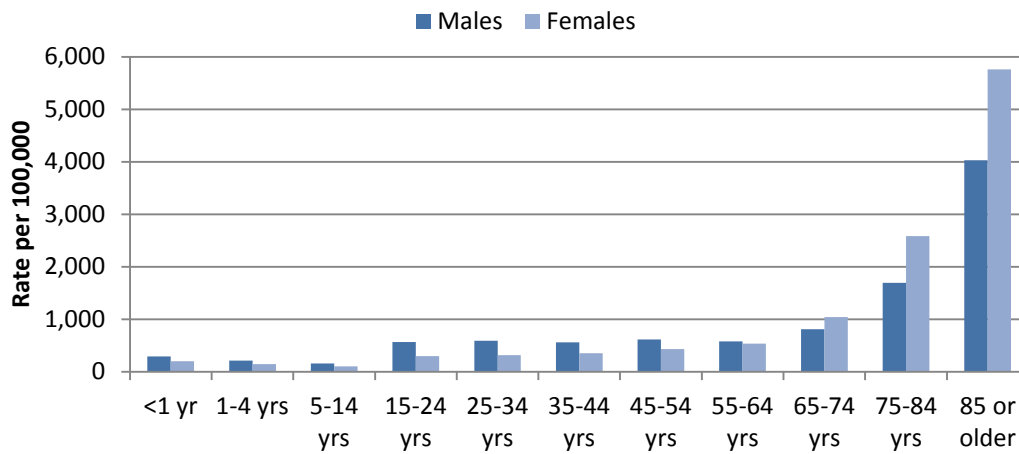
Table 2.4 All Injury Hospitalization Risk Profile

	2010 At Risk Groups	Annual trend since 2002
Overall		+5%
Sex	Males	Males (largest increase)
Age	75 or older	85 or older (largest increase)

TRENDS:

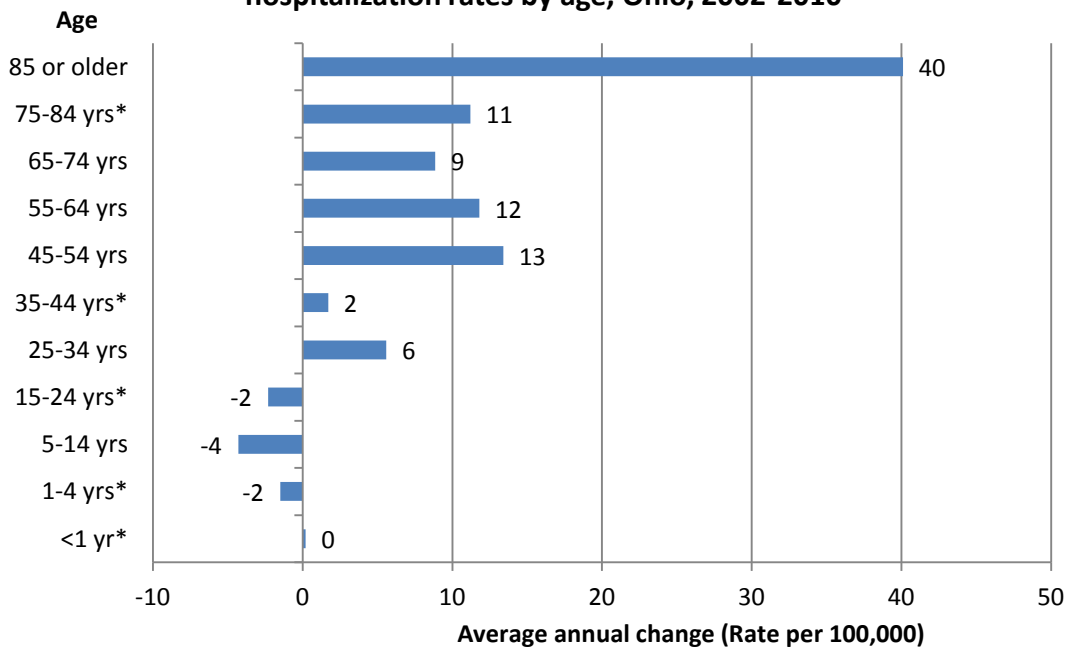
Since 2002, injury hospitalization rates have increased 5 percent from 561 per 100,000 in 2002 to 588 per 100,000 in 2010. The average increase was 4.6 hospitalizations per 100,000 per year. The average annual increase was larger among males (+5.6 per 100,000) compared to females (4.1 per 100,000). Injury hospitalization rates increased among most age groups with the largest increase found among adults ages 85 or older (40 per 100,000 per year). A decrease in hospitalization rates occurred among children ages 5-14 (-4 per 100,000) while rates among children 4 years or less, ages 15-24 and 35-44 did not follow a linear trend (see Figure 2.9). See Tables 2a and 2b for more detailed information located at the end of this section on the number and rate of all injury hospitalizations.

Figure 2.8. Rates for all injury hospitalizations by age and sex, Ohio, 2010



Source: Ohio Hospital Association

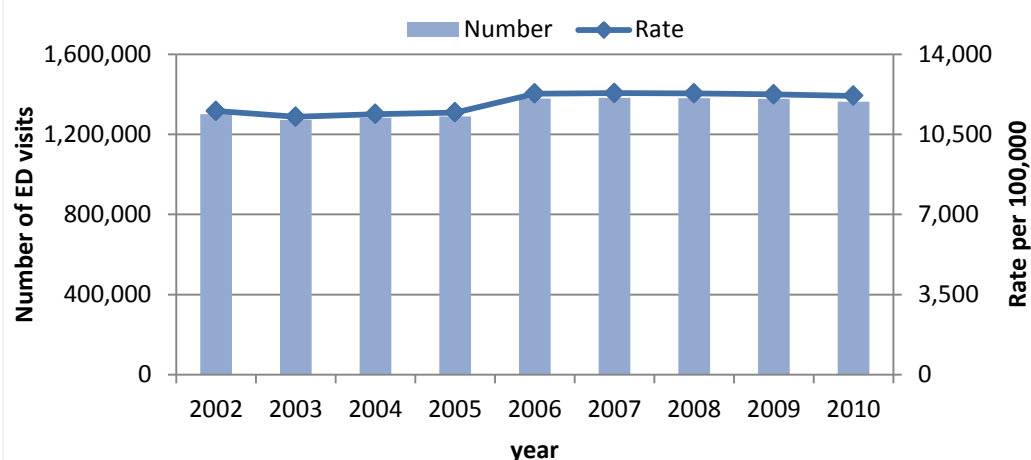
Figure 2.9. Average annual change in all injury hospitalization rates by age, Ohio, 2002-2010



Source: Ohio Hospital Association

*Interpret with caution, does not follow linear trend

Figure 2.10. Number and age adjusted rate for all injury-related ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

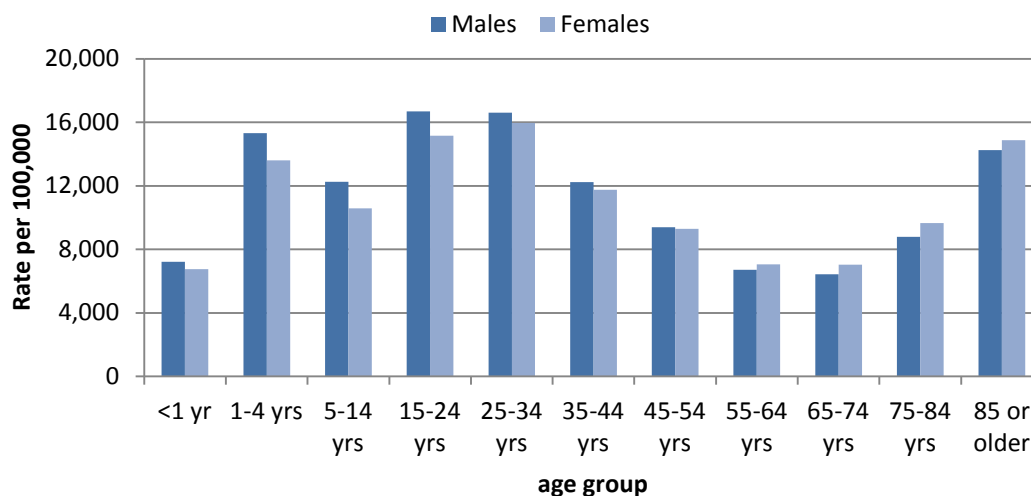
Nearly 1.36 million emergency department visits resulted from injuries in 2010. The injury ED visit rate was 12,181 per 100,000 (see Figure 2.10). The rate of ED visits was slightly higher among males compared to females (12,739 versus 11,567 per 100,000). ED visit rates increased with age from birth through age 34, steadily decreased from ages 35 to 64, and subsequently increased among adults 65 or older. From birth to age 54, ED visit rates were higher among males than females. This pattern was reversed among adults aged 55 or older with higher rates found among females (see Figure 2.11) due to higher rates of fall-related injury among older females. Table 2.4 highlights these injury risk profiles.

Table 2.4 All Injury ED Visit Risk Profile		
	2010 At Risk Groups	Annual trend since 2002
Overall		+8%
Sex	Males	Females (largest increase)
Age	15-34	85 or older (largest increase)

TRENDS:

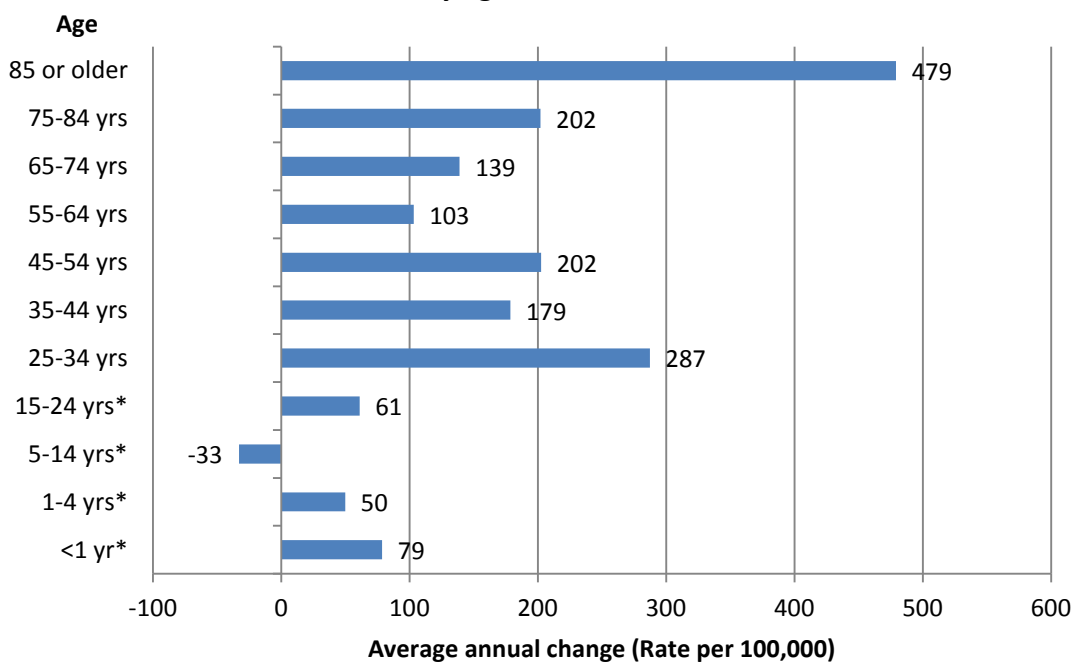
Injury ED visit rates resulting from all injuries increased 8 percent from 11,518 per 100,000 in 2002 to 12,495 in 2010. The average annual increase was 137 per 100,000 per year. The average annual increase was 185 per 100,000 among females while the trend for males did not follow a linear pattern. ED visit rates increased among almost all age groups with the largest increase found among adults aged 85 or older (479 per 100,000) (see Figure 2.12). See Tables 3a and 3b located at the end of this section for more detailed information on the number and rate of all injury ED visits.

Figure 2.11. Rates for all injury ED visits by age and sex, Ohio, 2010



Source: Ohio Hospital Association

Figure 2.12. Average annual changes in all injury ED visit rates by age, Ohio, 2002-2010



Source: Ohio Hospital Association

*Does not follow a linear trend

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 1a. Number of deaths resulting from all injuries, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	5,150	5,618	5,916	5,532	6,233	6,503	6,824	6,790	7,237	6,880	7,156
Sex											
Males	3,474	3,785	3,952	3,711	4,238	4,331	4,541	4,567	4,803	4,558	4,750
Females	1,676	1,833	1,964	1,821	1,995	2,172	2,283	2,223	2,434	2,322	2,406
Age											
< 1 yr	46	68	65	68	68	83	80	83	98	90	73
1-4 yrs	93	79	56	91	70	67	58	74	73	72	80
5-14 yrs	169	111	124	114	120	123	130	71	95	85	68
15-24 yrs	707	769	822	813	907	867	834	860	786	703	774
25-34 yrs	660	725	782	751	787	869	937	929	977	959	1,043
35-44 yrs	916	991	1,023	837	965	1,018	1,031	1,059	1,100	1,018	1,012
45-54 yrs	693	862	892	797	1,077	1,084	1,254	1,230	1,312	1,311	1,290
55-64 yrs	383	423	480	435	548	606	683	690	780	773	835
65-74 yrs	387	415	427	381	424	423	417	426	483	471	531
75-84 yrs	584	659	644	627	679	688	678	662	743	670	680
85 or older	512	516	601	618	588	675	722	706	790	728	770
Race and ethnicity											
White‡	4,349	4,714	4,975	4,627	5,196	5,404	5,702	5,687	6,096	5,786	6,088
Black‡	701	782	783	769	859	928	996	944	974	944	890
Hispanic	60	79	90	90	109	106	80	108	124	108	114
Other‡	28	35	33	22	35	34	32	41	36	38	57

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 1b. Death rates per 100,000 resulting from all injuries, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	45.0	48.8	51.1	47.5	53.3	55.4	57.7	57.2	60.7	57.4	60.0	1.5
Sex†												
Males	66.3	71.5	74.3	69.2	78.2	79.5	82.6	82.9	86.9	81.8	82.0	1.7
Females	26.3	28.6	30.6	27.9	30.7	33.3	34.6	33.6	36.7	35.1	35.4	1.0
Age												
< 1 yr	30.7	44.3	44.2	46.1	45.6	56.7	54.0	54.7	64.2	60.9	52.5	2.4
1-4 yrs	15.4	13.2	9.3	15.2	11.8	11.3	9.9	12.6	12.3	12.2	13.8	-0.1 (NL)
5-14 yrs	10.3	6.8	7.7	7.1	7.6	7.9	8.5	4.7	6.3	5.7	4.5	-0.4
15-24 yrs	45.5	49.0	51.9	51.0	56.8	54.4	52.7	54.6	50.0	44.9	48.8	-0.02 NL
25-34 yrs	43.6	48.6	53.0	51.2	53.9	59.6	64.3	63.6	66.8	64.9	74.0	2.7
35-44 yrs	50.8	55.7	58.6	49.0	57.6	61.8	63.5	66.5	70.7	67.0	68.4	1.9
45-54 yrs	44.0	52.8	54.2	47.7	63.5	63.1	72.2	70.4	74.9	74.7	74.0	3.2
55-64 yrs	37.8	41.3	44.3	38.7	46.9	49.9	54.3	53.1	58.5	55.8	57.5	2.1
65-74 yrs	49.1	53.2	55.4	49.6	55.2	55.2	54.2	54.5	59.8	56.4	62.5	0.9
75-84 yrs	107.7	120.1	116.4	112.8	122.2	124.1	123.4	121.9	138.9	123.6	125.6	1.7
85 or older	288.1	284.9	318.2	315.4	293.3	326.1	336.1	317.3	345.5	320.1	334.2	4.5
Race and ethnicity†												
White‡	43.9	47.3	49.8	46.2	51.6	53.6	56.2	56.1	59.8	56.8	60.4	1.6
Black‡	55.9	60.9	60.5	58.8	65.5	69.1	73.6	69.4	71.6	68.8	62.6	1.16 (NL)
Hispanic	32.7	44.6	45.1	47.4	43.5	45.5	32.6	40.2	45.2	38.2	39.3	-0.16 (NL)
Other‡	21.6	22.7	20.7	13.8	21.3	19.9	16.7	21.0	19.0	18.3	27.2	0.14 (NL)

†Rates age-adjusted to 2000 U.S. standard population
Source: Ohio Department of Health, Office of Vital Statistics

‡Non-Hispanic

NL: Interpret with caution because trend does not follow linear pattern

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 2a. Number of hospitalization resulting from all injuries, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	65,657	66,738	67,628	69,119	70,096	72,775	74,231	72,233	72,485
Sex									
Males	30,540	31,005	31,574	32,279	32,757	34,199	34,478	33,687	34,060
Females	35,117	35,733	36,054	36,840	37,339	38,576	39,753	38,546	38,425
Age									
< 1 yr	381	374	367	390	376	369	395	407	340
1-4 yrs	1,238	1,186	1,224	1,096	1,123	1,115	1,179	1,224	1,037
5-14 yrs	2,753	2,702	2,609	2,434	2,349	2,355	2,295	2,159	1,990
15-24 yrs	7,176	7,253	7,188	7,420	7,446	7,308	6,931	6,971	6,837
25-34 yrs	5,942	5,970	6,070	6,145	6,319	6,590	6,500	6,266	6,378
35-44 yrs	7,701	7,489	7,579	7,555	7,297	7,401	7,111	6,839	6,735
45-54 yrs	6,888	7,315	7,671	8,167	8,270	8,983	9,235	8,882	9,083
55-64 yrs	5,090	5,580	5,811	6,271	6,552	7,067	7,627	7,698	8,104
65-74 yrs	6,664	6,826	6,787	6,955	6,919	7,393	7,819	7,538	7,948
75-84 yrs	12,178	12,425	12,448	12,439	12,640	12,755	13,142	12,230	12,009
85 or older	9,646	9,618	9,874	10,247	10,805	11,439	11,997	12,019	12,024

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 2b. Hospitalization rates resulting from all injuries, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	561	566	571	580	584	602	609	588	588	4.6
Sex†										
Males	579	582	590	599	604	627	629	613	614	5.6
Females	521	527	530	538	540	554	568	545	545	4.1
Age										
< 1 yr	259	254	246	266	254	243	259	276	245	0.2 (NL)
1-4 yrs	206	198	206	184	191	190	199	207	178	-1.5 (NL)
5-14 yrs	170	169	165	157	153	155	153	144	131	-4.3
15-24 yrs	454	455	450	466	471	464	441	445	431	-2.3 (NL)
25-34 yrs	403	407	415	422	434	451	444	424	452	5.6
35-44 yrs	441	439	452	459	450	464	457	450	455	1.7 (NL)
45-54 yrs	418	437	452	476	476	514	527	506	521	13.4
55-64 yrs	470	496	497	517	521	544	572	555	558	11.8
65-74 yrs	864	888	884	908	899	945	969	902	935	8.9
75-84 yrs	2,201	2,235	2,240	2,244	2,300	2,350	2,456	2,256	2,218	11.2 (NL)
85 or older	5,107	4,908	4,926	4,951	5,030	5,141	5,247	5,285	5,218	40.1

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 3a. Number of ED visits resulting from all injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	1,300,058	1,271,812	1,283,535	1,289,019	1,379,288	1,382,187	1,379,696	1,377,385	1,362,301
Sex									
Males	694,087	675,119	681,182	681,895	728,084	725,604	717,694	707,396	698,758
Females	605,971	596,693	602,353	607,124	651,204	656,583	662,002	669,989	663,513
Age									
< 1 yr	10,428	10,089	10,122	9,832	10,982	10,714	10,945	11,629	10,025
1-4 yrs	91,108	88,351	87,475	84,207	91,046	86,098	86,870	90,837	89,206
5-14 yrs	208,318	199,556	197,444	189,549	202,428	190,240	186,884	187,702	186,672
15-24 yrs	269,397	260,896	263,584	265,353	280,877	276,797	271,514	269,321	264,793
25-34 yrs	216,218	208,472	212,274	216,734	230,195	236,084	235,763	234,654	234,167
35-44 yrs	196,680	187,237	186,762	186,606	195,211	195,817	190,740	185,028	181,242
45-54 yrs	133,765	136,456	140,012	145,935	157,683	164,036	166,988	164,248	163,625
55-64 yrs	66,400	70,482	74,207	76,904	84,799	90,083	93,807	95,456	97,488
65-74 yrs	43,720	44,637	45,072	45,964	49,774	52,840	55,033	55,968	54,605
75-84 yrs	42,983	43,671	44,085	44,526	48,877	49,989	49,792	49,960	47,630
85 or older	21,041	21,965	22,498	23,409	27,416	29,489	31,360	32,582	32,848

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 3b. ED visit rate per 100,000 resulting from all injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	11,518	11,265	11,383	11,450	12,278	12,297	12,283	12,245	12,181	137.3
Sex†										
Males	12,482	12,146	12,275	12,311	13,179	13,142	13,013	12,821	12,739	89.3 (NL)
Females	10,497	10,326	10,438	10,536	11,314	11,392	11,495	11,612	11,567	185.1
Age										
< 1 yr	7,086	6,845	6,782	6,711	7,412	7,067	7,173	7,872	7,210	78.6 (NL)
1-4 yrs	15,140	14,773	14,688	14,169	15,508	14,645	14,695	15,349	15,332	48.9 (NL)
5-14 yrs	12,896	12,484	12,504	12,199	13,188	12,557	12,487	12,561	12,260	-33.1 (NL)
15-24 yrs	17,025	16,357	16,519	16,658	17,755	17,582	17,275	17,210	16,687	60.7 (NL)
25-34 yrs	14,655	14,217	14,528	14,871	15,806	16,156	16,110	15,874	16,608	287.2
35-44 yrs	11,267	10,971	11,145	11,325	12,032	12,288	12,261	12,174	12,247	178.5
45-54 yrs	8,127	8,160	8,255	8,497	9,078	9,386	9,536	9,363	9,392	202.4
55-64 yrs	6,129	6,263	6,349	6,337	6,747	6,936	7,039	6,887	6,713	103.1
65-74 yrs	5,667	5,806	5,873	6,001	6,470	6,755	6,818	6,696	6,422	138.9
75-84 yrs	7,770	7,855	7,932	8,033	8,894	9,208	9,307	9,216	8,798	202.0
85 or older	11,139	11,209	11,224	11,310	12,762	13,252	13,715	14,327	14,255	479.1

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

INJURY MECHANISM

Table 2.6 provides the leading mechanisms for fatal injuries and injuries treated as hospital inpatient care and in the emergency department in 2010. Poisoning, falls, transportation, firearms, and suffocation were the leading causes of injury death for Ohioans of all ages.

Of non-fatal injuries with an external cause of injury code (E-Code), falls, poisoning, transportation, struck by or against, and firearms were leading causes of injury hospitalization while falls, struck by or against, transportation, overexertion, and cut/pierce were the leading causes of injury treated in emergency departments.

Please note that these data include all intents (i.e., unintentional, homicide, suicide, undetermined). Intent will be specified in later sections of the report.

External Cause of Injury Coding (E-Code) Limitations

A substantial percentage of hospital inpatient (38%) and emergency department (26%) records did not list an external cause mechanism. This missing information is an important limitation to our ability to accurately describe the burden of injuries in Ohio by mechanism and to design efforts to prevent injuries from occurring in the future.

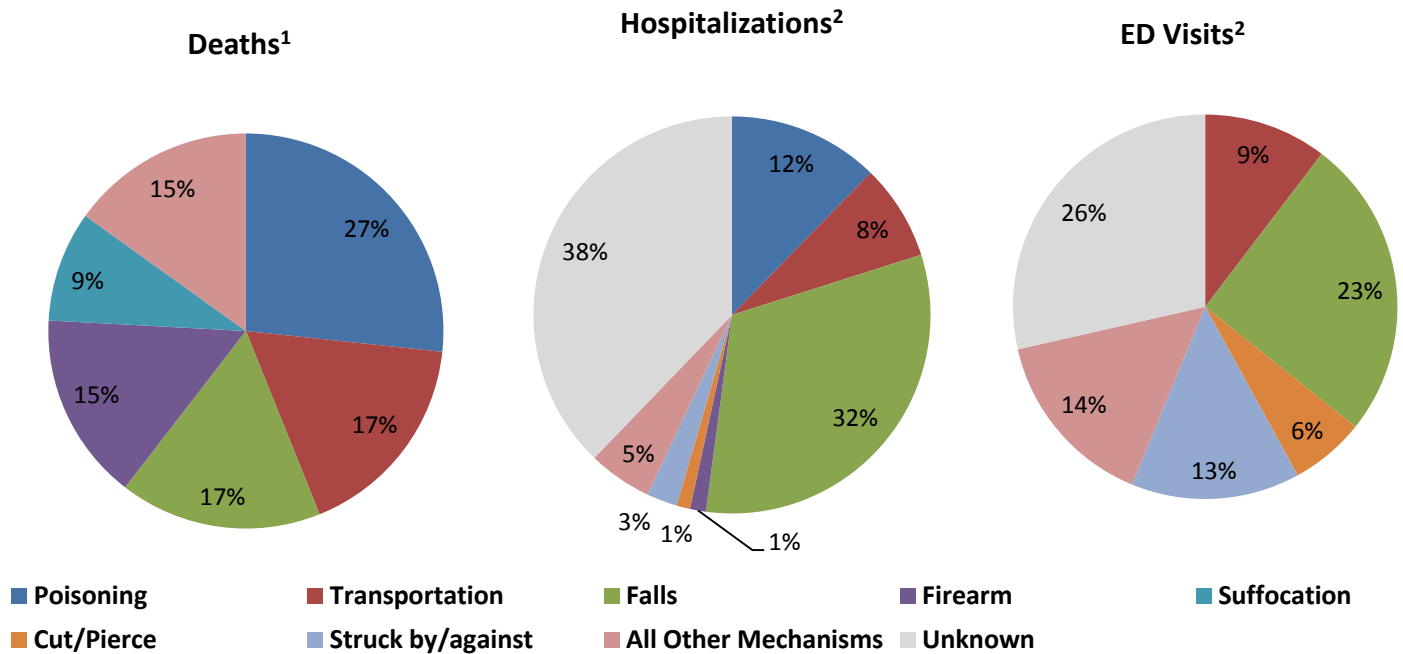
Table 2.6: Leading Causes of Injury Death¹, Hospitalization² and ED Visits² by Mechanism, Ohio, 2010

RANK	DEATHS ¹ 2010	HOSPITALIZATIONS ² 2010	ED VISITS ² 2010
1	Poisoning (27.4%)	Falls (32.0%)	Falls (23.2%)
2	Transportation (17.7%)	Poisoning (12.3%)	Struck by/against (12.9%)
3	Falls (16.5%)	Transportation (7.8%)	Transportation (9.4%)
4	Firearm (15.8%)	Struck by/against (2.5%)	Overexertion (9.1%)
5	Suffocation (9.3%)	Firearm (1.3%)	Cut/Pierce (5.7%)
6	Not specified (4.5%)	Cut/Pierce (1.1%)	Other specified (3.2%)
	All other mechanisms (11.0%)	All other mechanisms (5.2%)	All other mechanisms (10.6%)
MISSING E-CODE		37.8%	25.9%

Sources: 1 ODH Office of Vital Statistics, 2 Ohio Hospital Association

Figure 2.13 presents this same information in chart format. The chart format clearly illustrates the problem of missing E-codes in hospital and ED data where the mechanism of injury is simply missing in more than one-third of the hospitalized injuries and more than one-fourth of the ED visits.

Figure 2.13. Leading Causes of Injury-related Death, Hospitalization, and ED Visits by Mechanism, Ohio, 2010



Sources: 1 ODH Office of Vital Statistics, 2 Ohio Hospital Association

INJURY ACROSS THE LIFESPAN

Age is a significant factor affecting the occurrence, severity and type of injury. As demonstrated in the table below, risk for different type of injury varies across the lifespan.

YOUNG OHIOANS:

Injury is the leading cause of death and disability for children. Their dynamic cognitive and development abilities play a significant role in their vulnerability to injury.

While fatal injury risk varies greatly as children age (see Table 2.7), non-fatal risk is much less variable. Falls are the leading cause of non-fatal (ED and hospitalizations) injury for children birth to age 9. Falls remain the leading cause of injury-related hospitalization through age 15 when self-harm and motor vehicle traffic crashes surpass them. Falls remain the 2nd-leading cause of injury-related ED visits from ages 10 to 24.

Infants

During the first year of life, risk of death due to injury is higher than any other age group until age 24 (Figure 2.2). Suffocation and homicide are the leading causes of injury death to infants while falls and assault lead to the most injury-related hospitalizations. Falls and unintentional struck by/against cause the greatest number of injury-related ED visits among Ohio infants.

Children

For young children ages 1 to 4, homicide, drowning, motor vehicle traffic and fire/burn are the leading causes of injury death in Ohio. As described above, falls are the leading cause of injury-related hospitalization and ED visits for young children. Poisoning and fire/burn are the 2nd- and 3rd-leading causes of injury-related hospitalizations, respectively for this age group. Struck by/against is the 2nd cause of injury-related ED visits.

For children ages 5 to 9, motor vehicle traffic and homicide are the two leading causes of injury death. Falls are the leading cause of non-fatal injury for both ED visits and hospitalizations. Motor vehicle traffic crashes are the 2nd-leading causes of injury-related hospitalizations and struck by/against is the second leading cause of injury related ED visits.

Teens and Young Adults

For ages 10-24, motor vehicle traffic crashes remain the leading cause of injury-related death followed by suicide and then homicide. Self-harm, motor vehicle traffic crashes and falls are the three-leading causes of injury-related hospitalization in order. Struck-by against followed by falls are the leading causes of injury-related ED visits for ages 10 -24.

ADULTS

Adults have significant risks for injury. Over the past decade, rates have been increasing largely due to the prescription drug abuse epidemic leading to fatal drug overdoses. For ages 25 – 54, unintentional poisoning (drug overdose), suicide and motor vehicle traffic cause the most injury fatalities. Most injury-related hospitalizations are caused by self-harm, falls and motor vehicle traffic among this age group. Falls, overexertion and struck-by/against are the three-leading causes of injury-related ED visits.

For ages 55-64, suicide emerges as the leading cause of injury death. Falls and motor vehicle traffic are the two-leading causes for non-fatal injury-related hospitalizations and ED visits.

OLDER ADULTS

Older adults have the highest rates of injury death. As with children, anatomical, physiological and cognitive changes help to explain the heightened risk. Sight, balance and coordination wane with age leading to an increased risk for falls. In addition, increasing use of medications and possible drug interactions may also be a risk factor for falls. Falls are the leading cause of injury-related death, hospitalization and ED visits for older Ohioans aged 65 and older. In 2010, older adults accounted for 14 percent of Ohio's population while accounting for 82 percent of the fatal falls.

Reaction times increase leading to risk for motor vehicle crashes, the 2nd-leading cause of injury-related death, hospitalization and ED visits. Poor sight or decreased mental capacity and memory may lead to unintentional drug overdoses or poisonings. In addition, physical changes may lead to greater severity of injury and less resiliency.

Older adults may also be socially isolated and depressed leading to risk for substance abuse or self-harm/suicide.

Table 2.7 provides a detailed listing of leading causes of fatal and non-fatal injury by intent, mechanism and age group.

Leading Causes of Injury by Age Group Summary, Ohio, 2006-10

Age Group	Fatal ¹	Non-fatal ²
Infants (< 1 year)	Suffocation*	Falls*
Toddlers (1-4 years)	Homicide	Falls*
Children (5 to 9 years)	Motor vehicle traffic*	Falls*
Tweens to Young Adults (10-24 years)	Motor vehicle traffic*	Struck-by/against* (e.g., in sports)
Adults (25 – 64 years)	Poisoning*	Falls*
Older Adults (65+)	Falls*	Falls*

Sources: 1 ODH Office of Vital Statistics

2 Ohio Hospital Association

*Unintentional

Burden of Injury in Ohio, 2000-2010

Table 2.7 Leading causes of injury deaths¹ by intent²; inpatient hospitalizations³ and ED visits³ by age-group, Ohio, 2008-2010

Age Group	Deaths by Mechanism (Unintentional, Intentional and Undetermined Intent)	Deaths by Intent (Unintentional unless Homicide/Suicide)	Inpatient Hospitalizations	Emergency Department Visits
It 1	<ol style="list-style-type: none"> 1. Suffocation (176) 2. Other specified (22) 3. Not specified (18) 4. MV Traff (17) 	<ol style="list-style-type: none"> 1. Suffocation (164) 2. Homicide (43) 3. Undetermined (18) 4. MV Traffic (15) 	<ol style="list-style-type: none"> 1. Falls (206) 2. Assault (191) 3. Fire/burn (71) 4. Other specified and poisoning (43 each) 	<ol style="list-style-type: none"> 1. Falls (11,352) 2. Struck by/against (2,652) 3. MV Traffic (1,721) 4. Other specified (1,273)
1-4	<ol style="list-style-type: none"> 1. Drowning (42) 2. Fire/burn (36) 3. MV Traffic (33) 4. Other specified (18) 	<ol style="list-style-type: none"> 1. Homicide (56) 2. Drowning (39) 3. MV Traffic (33) 4. Fire/burn (27) 	<ol style="list-style-type: none"> 1. Falls (625) 2. Poisoning (539) 3. Fire/burn (287) 4. Other specified (156) 	<ol style="list-style-type: none"> 1. Falls (77,975) 2. Struck by/agnst (31,241) 3. Other Specified (16,351) 4. Ntl Environment (15,711)
5-9	<ol style="list-style-type: none"> 1. MV Traffic (28) 2. Fire/Burn (16) 3. Drowning (13) 4. Firearm (12) 	<ol style="list-style-type: none"> 1. MV Traffic (28) 2. Homicide (17) 3. Fire/burn (16) 4. Drowning (13) 	<ol style="list-style-type: none"> 1. Falls (674) 2. MV Traffic (275) 3. Pedal Cycle (175) 4. Struck by/against (131) 	<ol style="list-style-type: none"> 1. Falls (59,595) 2. Struck by/agnst (38,290) 3. Ntl Environment (14,085) 4. Cut/pierce (13,184)
10-14	<ol style="list-style-type: none"> 1. MV Traffic (46) 2. Suffocation (39) 3. Drowning (18) 4. Firearm (15) 	<ol style="list-style-type: none"> 1. MV Traffic (46) 2. Suicide (35) 3. Drowning (18) 4. Homicide (15) 	<ol style="list-style-type: none"> 1. Falls (561) 2. MV Traffic (321) 3. Struck by/against (283) 1. Self-harm (273) 	<ol style="list-style-type: none"> 1. Struck by/angst (68,364) 2. Falls (64,416) 3. Overexertion (26,062) 4. Cut/pierce (15,705)
15-19	<ol style="list-style-type: none"> 1. MV Traffic (326) 2. Firearms (235) 3. Suffocation (113) 4. Poisoning (89) 	<ol style="list-style-type: none"> 1. MV Traffic (326) 2. Suicide (217) 3. Homicide (155) 4. Poisoning (73) 	<ol style="list-style-type: none"> 1. Self-harm (1,921) 2. MV Traffic (1,469) 3. Assault (816) 4. Falls (591) 	<ol style="list-style-type: none"> 1. Struck by/angst (65,976) 2. Falls (52,439) 3. MV Traffic (39,633) 4. Overexertion (37,018)
20-24	<ol style="list-style-type: none"> 1. Firearms (414) 2. MV Traffic (365) 3. Poisoning (342) 4. Suffocation (136) 	<ol style="list-style-type: none"> 1. MV Traffic (365) 2. Suicide (316) 3. Poisoning (301) 4. Homicide (296) 	<ol style="list-style-type: none"> 1. Self-harm (1,891) 2. MV Traffic (1,648) 3. Assault (1,393) 4. Falls (684) 	<ol style="list-style-type: none"> 1. Falls (55,998) 2. MV Traffic (43,332) 3. Struck by/agst (40,876) 4. Overexertion (40,462)
25-34	<ol style="list-style-type: none"> 1. Poisoning (1,145) 2. Firearm (668) 3. MV Traffic (524) 4. Suffocation (284) 	<ol style="list-style-type: none"> 1. Poisoning (1,017) 2. Suicide (667) 3. MV Traffic (486) 4. Homicide (271) 	<ol style="list-style-type: none"> 2. Self-harm (3,537) 3. MV Traffic (2,326) 4. Assault (1,875) 5. Falls (1,665) 	<ol style="list-style-type: none"> 1. Falls (111,034) 2. Overexertion (86,778) 3. Struck by/angst (65,054) 4. MV Traffic (63,363)
35-44	<ol style="list-style-type: none"> 1. Poisoning (1,409) 2. Firearms (538) 3. MV Traffic (486) 4. Suffocation (264) 	<ol style="list-style-type: none"> 1. Poisoning (1,173) 2. Suicide (800) 3. MV Traffic (702) 4. Homicide (419) 	<ol style="list-style-type: none"> 1. Self-harm (3,772) 2. Falls (2,641) 3. MV Traffic (2,208) 4. Assault (1,280) 	<ol style="list-style-type: none"> 1. Falls (101,490) 2. Overexertion (68,302) 3. MV Traffic (47,134) 4. Struck by/against (46,653)
45-54	<ol style="list-style-type: none"> 1. Poisoning (1,757) 2. MV Traffic (579) 3. Firearms (574) 4. Suffocation (290) 	<ol style="list-style-type: none"> 1. Poisoning (1,451) 2. Suicide (955) 3. MV Traffic (579) 4. Homicide (229) 	<ol style="list-style-type: none"> 1. Falls (5,496) 2. Self-Harm (3,469) 3. MV Traffic (2,358) 4. Poisoning (1,758) 	<ol style="list-style-type: none"> 1. Falls (111,481) 2. Overexertion (68,794) 3. MV Traffic (40,918) 4. Struck by/against (36,319)
55-64	<ol style="list-style-type: none"> 1. Poisoning (706) 2. MV Traffic (431) 3. Firearms (404) 4. Fall (283) 	<ol style="list-style-type: none"> 1. Suicide (610) 2. Poisoning (525) 3. MV Traffic (431) 4. Falls (271) 	<ol style="list-style-type: none"> 1. Falls (7,570) 2. MV Traffic (1,578) 3. Self-harm (1,248) 4. Poisoning (1,202) 	<ol style="list-style-type: none"> 1. Falls (89,277) 2. MV Traffic (23,224) 3. Overexertion (23,124) 4. Struck by/against (18,595)
65-74	<ol style="list-style-type: none"> 1. Falls (395) 2. MV Traffic (260) 3. Firearms (243) 4. Suffocation (143) 	<ol style="list-style-type: none"> 1. Falls (394) 2. Suicide (311) 3. MV Traffic (260) 4. Suffocation (106) 	<ol style="list-style-type: none"> 1. Falls (10,106) 2. MV Traffic (900) 3. Poisoning (712) 4. Self-harm (316) 	<ol style="list-style-type: none"> 1. Falls (61,720) 2. MV Traffic (10,280) 3. Overexertion (9,581) 4. Struck by/agnst (8,984)
75-84	<ol style="list-style-type: none"> 1. Falls (995) 2. MV Traffic (234) 3. Not specified (221) 4. Suffocation (194) 	<ol style="list-style-type: none"> 1. Falls (995) 2. MV Traffic (234) 3. Not specified (212) 4. Suicide (193) 	<ol style="list-style-type: none"> 1. Falls (19,472) 2. MV Traffic (824) 3. Poisoning 548) 4. Not specified (328) 	<ol style="list-style-type: none"> 1. Falls (72,253) 2. Struck by/against (6,452) 3. MV Traffic (5,652) 4. Overexertion (5,512)
85+	<ol style="list-style-type: none"> 1. Falls (1,315) 2. Not specified (407) 3. Suffocation (227) 4. MV Traffic (106) 	<ol style="list-style-type: none"> 1. Falls (1,313) 2. Not specified (398) 3. Suffocation (220) 4. MV Traffic (106) 	<ol style="list-style-type: none"> 1. Falls (20,982) 2. MV Traffic (355) 3. Not specified (287) 4. Poisoning (242) 	<ol style="list-style-type: none"> 1. Falls (57,823) 2. Struck by/against (3,637) 3. Overexertion (2,058) 4. Cut/pierce (1,774)

Burden of Injury in Ohio, 2000-2010

Totals *	1. Poisoning (5,727)	1. Poisoning (4,716)	1. Falls (71,273)	1. Falls (920,454)
	2. MV Traffic (3,433)	2. Suicide (4,192)	2. Self-harm (16,645)	2. Struck by/against (433,095)
	3. Firearms (3,374)	3. MV Traffic (3,433)	3. MV Traffic (14,413)	3. Overexertion (365,877)
	4. Falls (3,348)	4. Falls (3,277)	4. Poisoning (8,516)	4. MV Traffic (300,593)

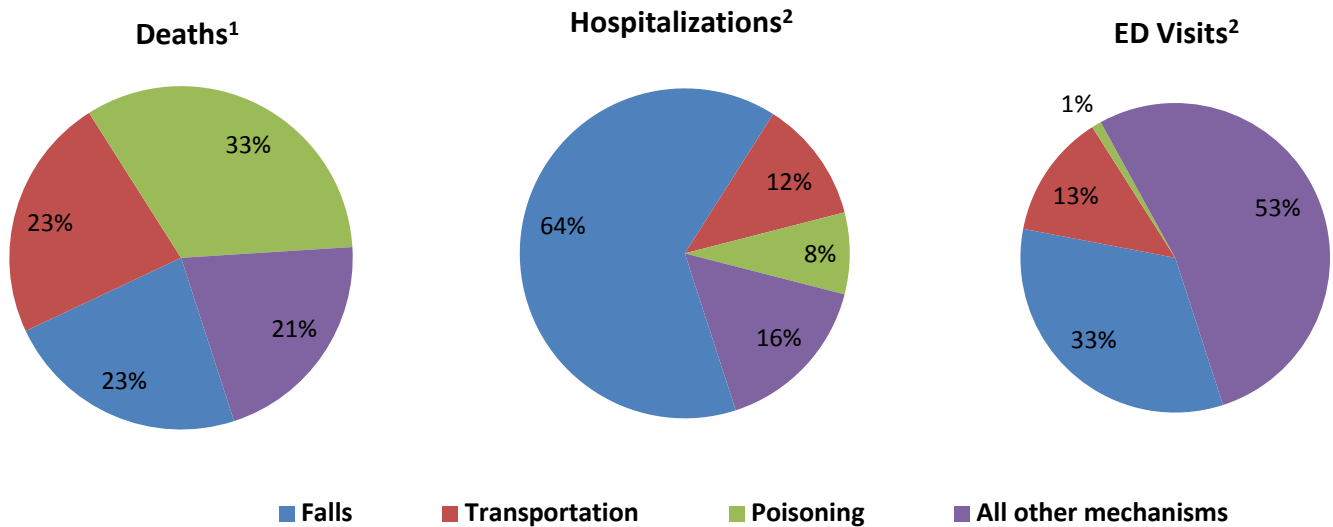
¹ **Source:** Ohio Dept. of Health, Office of Vital Statistics

² **Intent:** The state of mind of persons involved in an injury episode which forms the basis for categorizing an injury as unintentional (traditionally termed accidental), as homicide/assault, as suicide/self-inflicted or as unable to be determined

³ **Source:** Ohio Hospital Association

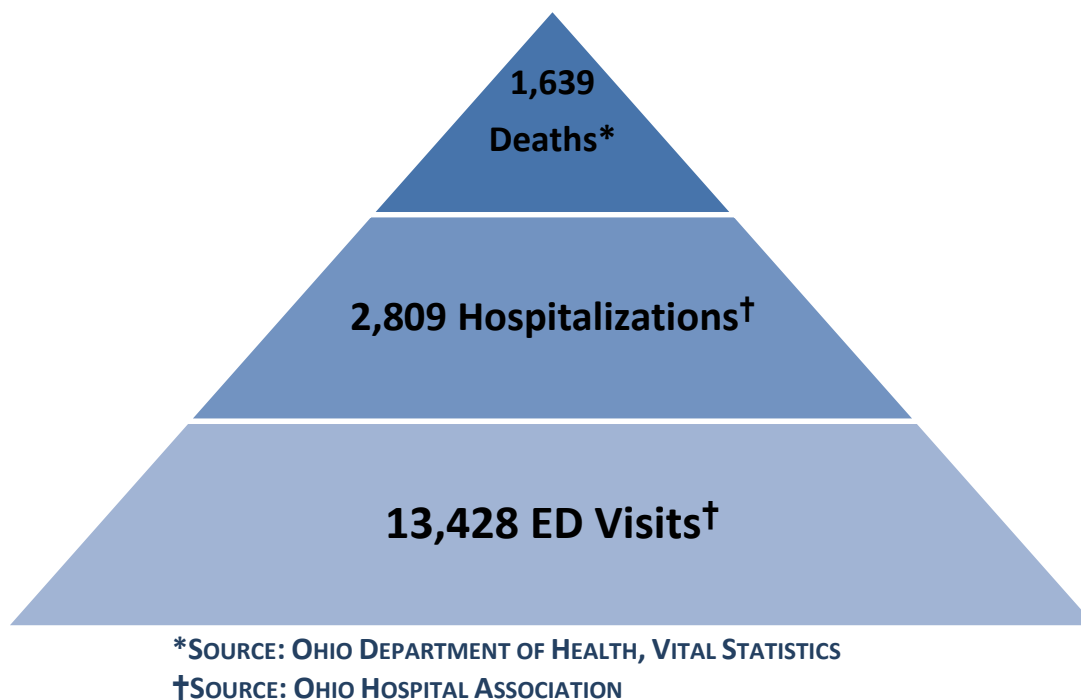
SECTION 3: UNINTENTIONAL INJURIES

Figure 3.1: Distribution of Injury-related death, hospitalization and ED visits by mechanism, Ohio, 2010



In 2010, unintentional injuries accounted for two-thirds of all fatal injuries (including suicide, homicide and undetermined cases). Among discharges with an external cause of injury code, most injuries treated in hospitals were unintentional (80 percent of inpatient injuries and 94 percent of emergency department visits). The leading mechanism for unintentional injuries differed by severity (Figure 3.1). The leading cause of fatal unintentional injuries was poisoning (33%) followed by falls (23%) and transportation (23%). The leading mechanisms were the same for inpatient-related injuries however the distribution and rank of the mechanisms changed. Falls accounted for nearly two-thirds of injury related hospitalizations and was followed by transportation (12%) and poisoning (8%). These mechanisms represented a much smaller percentage of emergency department discharges (47 percent combined). Notably, being struck by or against (16%), overexertion (12%), and cutting or piercing (9 percent) were leading mechanisms of emergency department discharges that did not represent a sizeable proportion of fatal injuries or inpatient discharges.

SECTION 3.1: UNINTENTIONAL POISONINGS



CHAPTER HIGHLIGHTS:

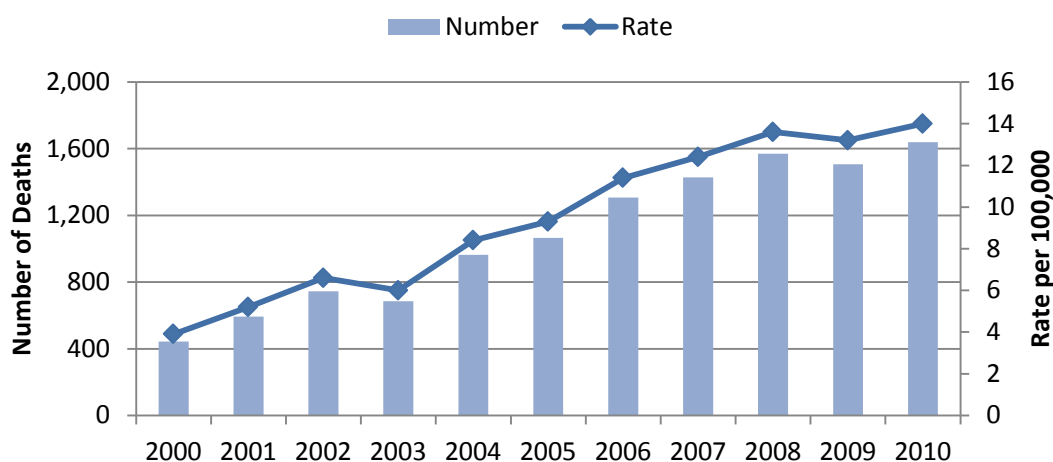
Patterns:

- Unintentional poisonings are one of the leading causes of fatal and non-fatal injuries.
- Higher rates of death and ED visits were found among males compared to females.
- Poisoning severity distinctly varied by age with the highest rates of death found among ages 45-54, hospitalizations among older adults ages 45 or older, and ED visits among children ages 1-4.
- Prescription medication and controlled substances are implicated in most unintentional poisoning deaths and hospitalizations. Approximately one-half of poisoning-related ED visits were associated with food and other non-drug substances; whereas drugs and medications have caused over 90 percent of unintentional poisoning deaths and hospitalizations.

Trends:

- Deaths, hospitalizations and ED visit rates have increased rapidly.
- Largest increases in death and hospitalization rates were found among ages 45-54. Largest increase in ED visit rates were found among children ages 1-4.

Figure 3.2. Number and age adjusted rate of unintentional poisoning deaths by year, Ohio, 2000-2010



Source: Ohio Department of Health, Office of Vital Statistics

DEATHS:

In 2010, 1,639 Ohioans died from an unintentional poisoning. The 2010 unintentional poisonings fatality rate was 14.2 per 100,000 (see Figure 3.2). The rate of unintentional poisoning fatalities was higher among males (18.6 per 100,000) compared to females (10.0 per 100,000). Rates increased with age up to 45-54 year olds, and decreased among ages 55 and older (Figure 3.3). Whites had a higher rate than Blacks or Hispanics. See Table 3.1 for an unintentional poisoning death risk profile. Drugs and medicinal substances contributed to nearly all (94 percent) of the poisoning deaths in 2010 (Figure 3.4).

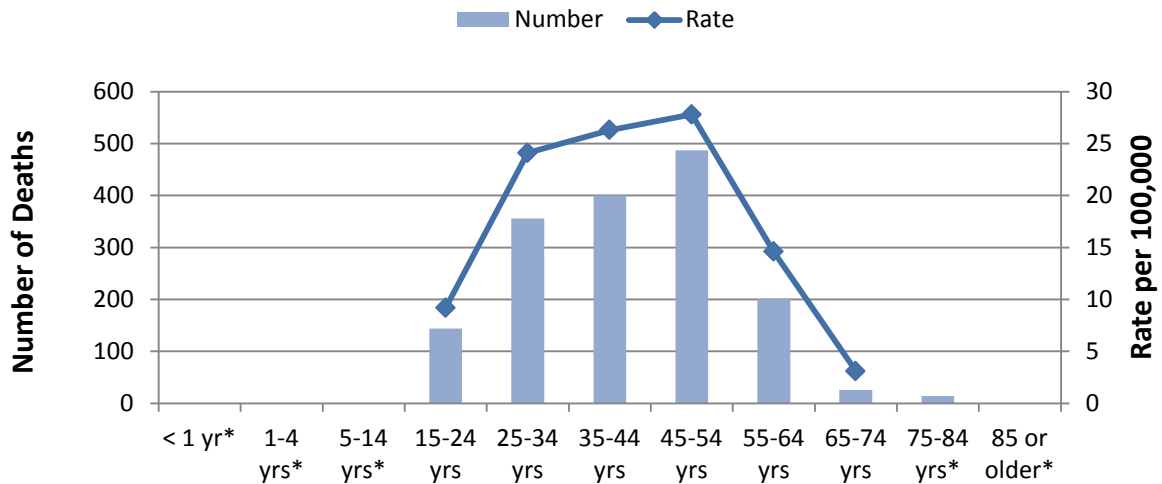
Table 3.1. Unintentional Poisoning Death Risk Profile

	2010 At Risk Groups	Annual trend since 2000
Overall		+264%
Sex	Males	Males (largest increase)
Age	45-54	45-54 and 25-34 (largest increases)
Race and ethnicity	Whites	Whites (largest increase)

TRENDS:

Fatal unintentional poisoning rates have quadrupled from 3.9 per 100,000 in 2000 to 14.2 per 100,000 in 2010 (Figure 3.2). Unintentional poisoning is now the leading cause of injury-related death in Ohio, surpassing motor vehicle traffic in 2006 and continuing the trend through 2010. Rates increased rapidly among both males and females. Fatality rates increased across most age groups with the largest increases observed among adults aged 45-54 and 25-34. Contrasting trends in drug poisoning deaths were found by race. In 2000, rates were higher among blacks than whites. Rates among whites increased by 1.2 deaths per 100,000 throughout the study period while rates among blacks increased in 2000-2006 then decreased in 2006-2010. Ultimately death rates among whites surpassed blacks in 2008 and remained higher in 2009-2010. Drugs and medications contributed to nearly all unintentional poisoning deaths throughout the study period. See Tables 4a-b located at the end of this section for more detailed information on the number and rate of unintentional poisoning fatalities.

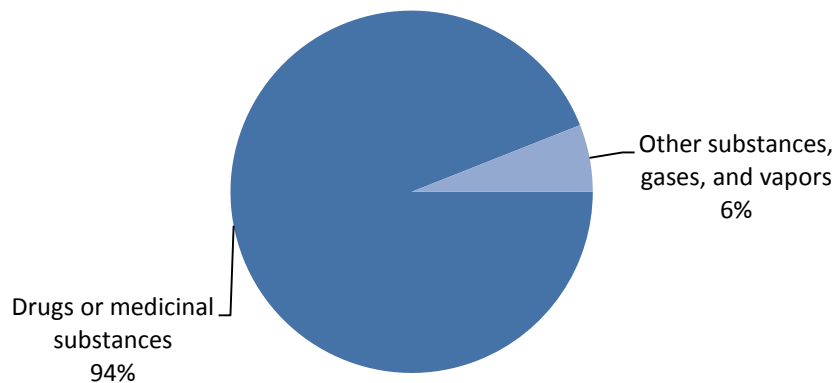
Figure 3.3. Number and rates for unintentional poisoning deaths by age group, Ohio, 2010



Source: Ohio Department of Health, Office of Vital Statistics

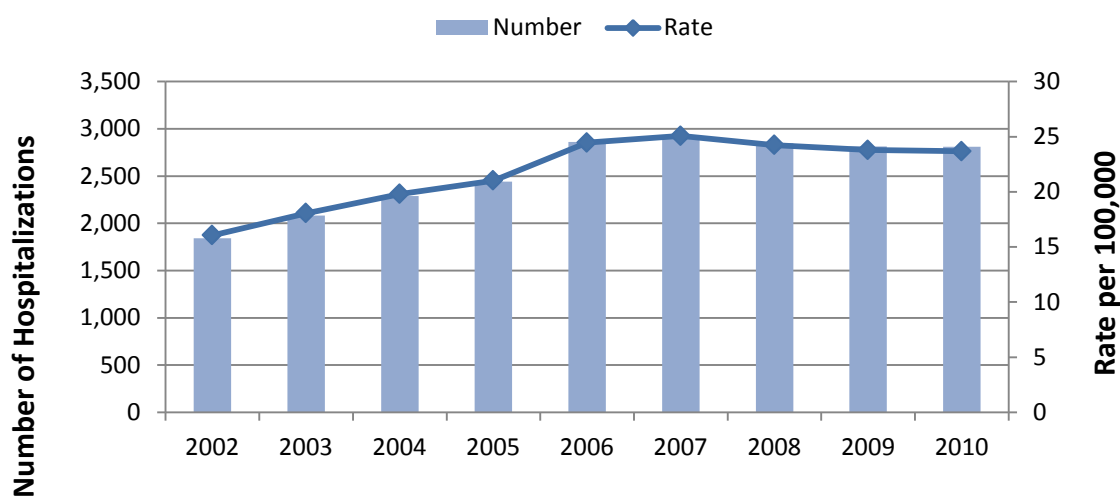
*Rates suppressed due to < 20 deaths

Figure 3.4. Distribution of unintentional poisoning deaths by agent, Ohio, 2010



Source: Ohio Department of Health, Office of Vital Statistics

Figure 3.5. Number and age adjusted rate for unintentional poisoning hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

Over 2,800 hospitalizations resulted from unintentional poisonings in Ohio in 2010. The poisoning hospitalization rate was 24 per 100,000 (Figure 3.5). The hospitalization rate was similar for males and females and rates of hospitalizations varied by age. Starting at age 15, rates increased through age 54 then decreased among 55-74 year olds and increased among ages 75 or older (Figure 3.6). Rates of hospitalizations for males and females were similar among all age groups except for adults 85 or older with higher rates found among males (data not shown). Ninety-two percent of hospitalizations resulted from unintentional poisoning by a drug or medicinal substance (Figure 3.7).

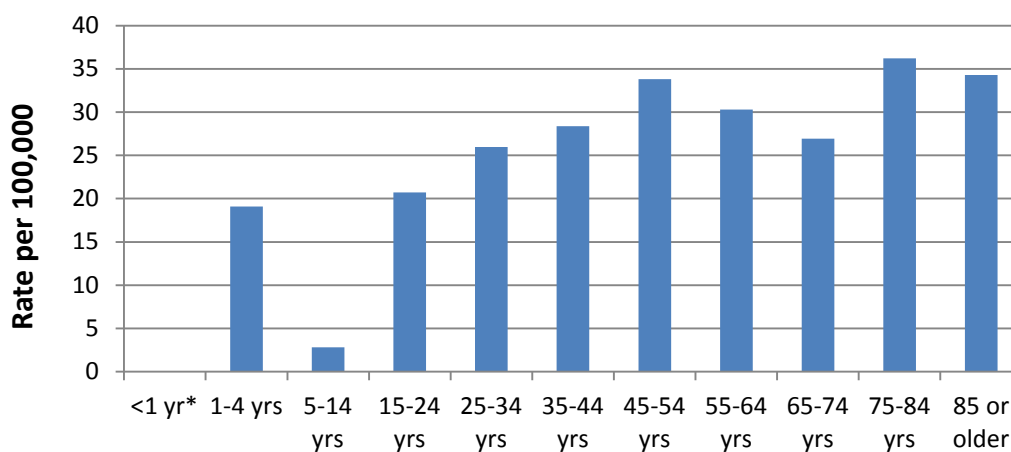
Table 3.2 Unintentional Poisoning Hospitalization Risk Profile

	2010 At Risk Groups	Annual Trend since 2002
Overall		+46%
Sex	Similar for males and females	Similar for males and females
Age	75-84	45-64 (largest increase)

TRENDS:

Unintentional poisoning hospitalizations rates increased 46 percent from 16 per 100,000 in 2002 to 24 per 100,000 in 2010. Rates increased by an average of 1 per 100,000 per year. The increase in hospitalizations was similar among males and females. Hospitalization rates increased among most age groups with the largest increases found among ages 45-64 (2 per 100,000). Most poisonings were caused by drugs or medications throughout the study period (data not shown). See Tables 5a-c located at the end of this section for more detailed information on the number and rate of unintentional poisoning hospitalizations.

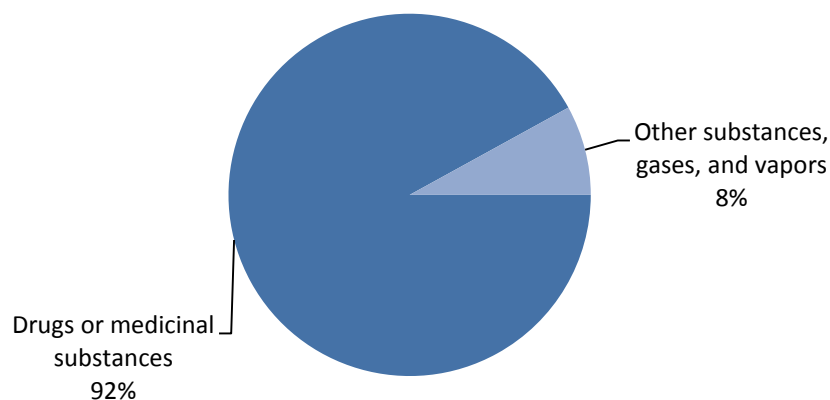
Figure 3.6. Rates for unintentional poisoning hospitalizations by age, Ohio, 2010



Source: Ohio Hospital Association

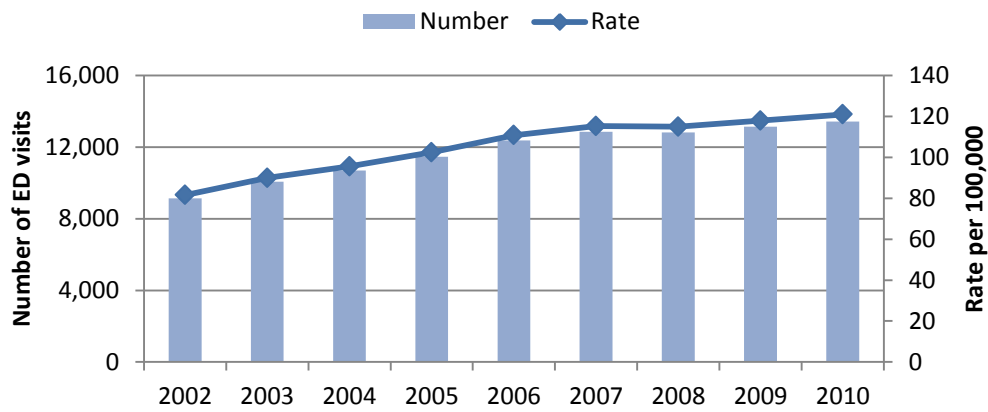
* Rate suppressed due to < 20 poisonings

Figure 3.7. Distribution of unintentional poisoning hospitalizations by agent, Ohio, 2010



Source: Ohio Hospital Association

Figure 3.8. Number and age adjusted rate for unintentional poisoning ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

Over 13,000 ED visits resulted from unintentional poisonings in 2010. The ED visit rate was 121 per 100,000 (Figure 3.8). The rate of unintentional poisoning ED visits was slightly higher among males compared to females (129 versus 113 per 100,000). ED visit rates were the highest among children ages 1-4 years (Figure 3.9). See Table 3.3 for an unintentional poisoning ED visit risk profile. Approximately one-half of unintentional poisoning ED visits resulted from drug, medication or biological substances and the other half resulted from foodstuff and other non-drug substances (Figure 3.10).

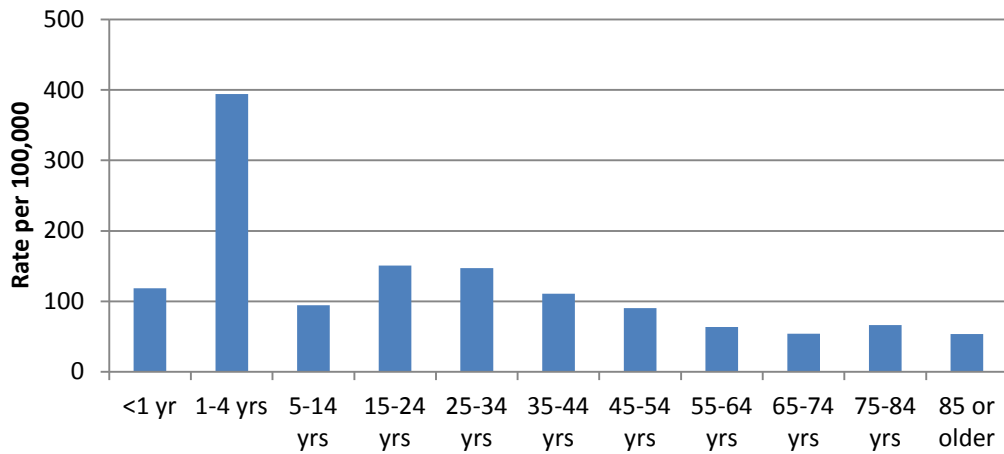
Table 3.3 Unintentional Poisoning ED Visit Risk Profile

	2010 At Risk Groups	Annual trend since 2002
Overall		+48%
Sex	Males	Males (largest increase)
Age	1-4	1-4 (largest increase)

TRENDS:

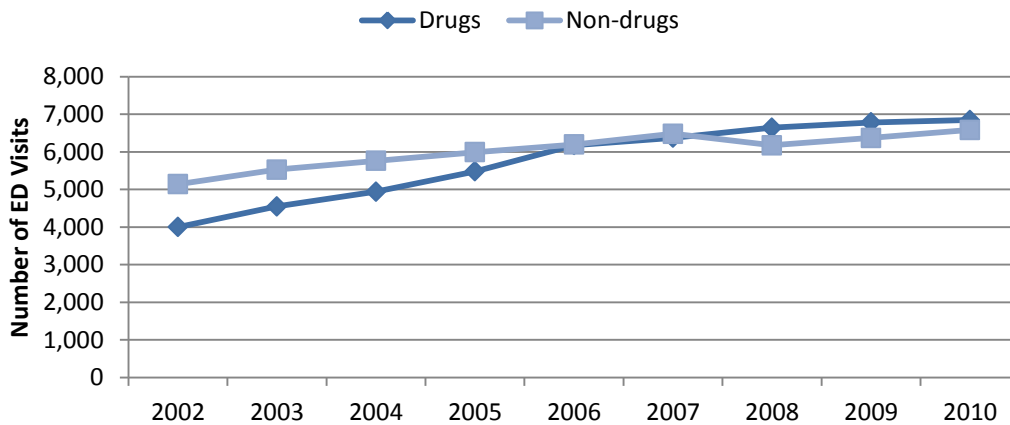
The rate of unintentional poisoning ED visits increased 48 percent from 82 per 100,000 in 2002 to 121 per 100,000 in 2010. The average annual increase was 5 ED visits per 100,000 per year. The annual increase was slightly higher among males (6 per 100,000) compared to females (4 per 100,000). ED visit rates increased across all age groups with the largest annual increases found among most age groups with the largest increase found among children ages 1-4 (14 per 100,000). The number of ED visits increased for both drug and non-drug substances. The number of ED visits resulting from drug, medicinal, and biologic substances increased by an average of 373 while foodstuff and other non-drug substances increased by an average of 160 per year. The number of ED visits resulting from drug related poisoning surpassed non-drug substances in 2008 and remained higher through 2010. See Tables 6a-c for more detailed information on the number and rate of unintentional poisoning ED visits.

Figure 3.9. Rates for unintentional poisoning ED visits by age and sex, Ohio, 2010



Source: Ohio Hospital Association

Figure 3.10. Number of unintentional poisoning ED visits by agent and year, Ohio, 2002-2010



Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 4a. Number of deaths resulting from unintentional poisoning by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	443	593	745	686	963	1,065	1,308	1,428	1,570	1,507	1,639
Sex											
Males	313	390	487	462	648	687	865	928	1,010	963	1,056
Females	130	203	258	224	315	378	443	500	560	544	583
Age											
< 1 yr	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1-4 yrs	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
5-14 yrs	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
15-24 yrs	17	56	60	90	108	109	112	129	121	109	144
25-34 yrs	76	96	130	133	156	207	244	263	320	341	356
35-44 yrs	175	213	260	191	289	294	372	383	388	385	400
45-54 yrs	121	165	202	191	290	326	428	470	494	470	487
55-64 yrs	25	25	51	35	68	83	111	138	177	146	202
65-74 yrs	8	13	17	12	21	20	14	27	30	28	26
75-84 yrs	12	14	18	12	20	16	11	10	25	18	14
85 or older	6	9	< 5	19	8	< 5	9	5	10	5	< 5
Race/Ethnicity											
White‡	359	463	610	576	795	912	1,110	1,238	1,371	1,332	1,458
Black‡	77	107	112	95	151	130	184	176	173	150	151
Hispanic	< 5	17	14	8	13	20	7	11	19	20	26
Other‡	< 5	6	< 5	< 5	< 5	< 5	< 5	< 5	5	5	< 5

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 4b. Death rates per 100,000 resulting from unintentional poisoning by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	3.9	5.2	6.6	6.0	8.4	9.3	11.4	12.4	13.6	13.2	14.2	1.1
Sex†												
Males	5.7	7.1	8.8	8.3	11.5	12.2	15.3	16.4	17.8	17.0	18.6	1.4
Females	2.2	3.4	4.4	3.8	5.4	6.4	7.5	8.4	9.5	9.4	10.0	0.8
Age												
< 1 yr	*	*	*	*	*	*	*	*	*	*	*	*
1-4 yrs	*	*	*	*	*	*	*	*	*	*	*	*
5-14 yrs	*	*	*	*	*	*	*	*	*	*	*	*
15-24 yrs	*	3.6	3.8	5.7	6.8	6.9	7.1	8.2	7.7	7.0	9.2	*
25-34 yrs	5.0	6.4	8.8	9.0	10.6	14.1	16.7	17.9	21.7	23.1	24.1	2.0
35-44 yrs	9.7	12.0	14.9	11.2	17.2	17.8	22.9	24.0	24.9	25.3	26.3	1.8
45-54 yrs	7.7	10.1	12.3	11.4	17.1	18.9	24.6	26.8	28.1	26.8	27.8	2.3
55-64 yrs	2.5	2.4	4.7	3.1	5.8	6.8	8.8	10.6	13.2	10.5	14.6	1.2
65-74 yrs	*	*	*	*	2.7	2.6	*	3.4	3.7	3.4	3.1	*
75-84 yrs	*	*	*	*	3.6	*	*	*	4.6	*	*	*
85 or older	*	*	*	*	*	*	*	*	*	*	*	*
Race/Ethnicity†												
White‡	3.7	4.8	6.3	6.0	8.3	9.5	11.6	12.9	14.3	14.1	15.4	1.2
Black‡	6.4	8.6	9.0	7.6	12.0	9.9	14.0	13.2	13.0	11.1	11.0	0.5
Hispanic	*	*	*	*	*	8.0	*	*	*	7.1	9.5	-
Other‡	*	*	*	*	*	*	*	*	*	*	*	-

*Rates suppressed due to less than 20 deaths.

‡Non-Hispanic

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 5a. Number of hospitalizations resulting from unintentional poisonings, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	1,858	2,096	2,303	2,461	2,879	2,957	2,867	2,840	2,809
Sex									
Males	945	1,025	1,108	1,234	1,509	1,428	1,392	1,396	1,384
Females	913	1,071	1,195	1,227	1,370	1,529	1,475	1,444	1,425
Age									
< 1 yr	12	14	9	13	17	20	18	18	7
1-4 yrs	181	191	175	160	188	218	228	200	111
5-14 yrs	76	63	72	54	55	65	88	54	43
15-24 yrs	240	295	307	304	354	328	303	330	329
25-34 yrs	190	237	249	309	333	372	329	379	366
35-44 yrs	334	352	397	407	474	447	433	398	420
45-54 yrs	305	359	425	474	595	595	590	579	589
55-64 yrs	166	200	223	267	374	351	382	380	440
65-74 yrs	165	153	205	239	227	255	237	246	229
75-84 yrs	132	166	171	149	175	212	176	176	196
85 or older	57	66	70	85	87	94	83	80	79

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 5b. Hospitalization rates per 100,000 resulting from unintentional poisonings, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	16.2	18.2	19.9	21.2	24.6	25.3	24.4	24.0	23.7	1.0
Sex†										
Males	17.2	18.6	20.1	22.2	26.9	25.4	24.5	24.6	24.3	1.0
Females	15.2	17.7	19.7	20.1	22.3	24.9	24.2	23.5	23.0	1.0
Age										
< 1 yr	*	*	*	*	*	13.2	*	*	*	*
1-4 yrs	30.1	31.9	29.4	26.9	32.0	37.1	38.6	33.8	19.1	-0.2 (NL)
5-14 yrs	4.7	3.9	4.6	3.5	3.6	4.3	5.9	3.6	2.8	-0.1 (NL)
15-24 yrs	15.2	18.5	19.2	19.1	22.4	20.8	19.3	21.1	20.7	0.5 (NL)
25-34 yrs	12.9	16.2	17.0	21.2	22.9	25.5	22.5	25.6	26.0	1.6
35-44 yrs	19.1	20.6	23.7	24.7	29.2	28.1	27.8	26.2	28.4	1.1
45-54 yrs	18.5	21.5	25.1	27.6	34.3	34.0	33.7	33.0	33.8	2.0
55-64 yrs	15.3	17.8	19.1	22.0	29.8	27.0	28.7	27.4	30.3	1.9
65-74 yrs	21.4	19.9	26.7	31.2	29.5	32.6	29.4	29.4	26.9	1.0 (NL)
75-84 yrs	23.9	29.9	30.8	26.9	31.8	39.1	32.9	32.5	36.2	1.2
85 or older	30.2	33.7	34.9	41.1	40.5	42.2	36.3	35.2	34.3	0.4 (NL)

*Rates suppressed due to less than 20 hospitalizations.

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 5c. Number of hospitalizations resulting from unintentional poisonings by agent and year, Ohio, 2002-2010

YEAR	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Drug, medicinal, or biologic substances	1,625	1,881	2,060	2,212	2,639	2,693	2,615	2,632	2,579	127
Non-drug substances	233	215	243	249	240	264	252	208	230	0

*Rates suppressed due to less than 20 hospitalizations.

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 6a. Number of ED visits resulting from unintentional poisonings by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	9,141	10,075	10,703	11,469	12,370	12,856	12,815	13,152	13,428
Sex									
Males	4,650	5,064	5,342	5,843	6,358	6,513	6,574	6,765	7,049
Females	4,491	5,011	5,361	5,626	6,012	6,343	6,241	6,387	6,379
Age									
< 1 yr	196	189	162	168	205	239	218	230	165
1-4 yrs	1,950	2,050	2,080	2,173	2,422	2,591	2,635	2,618	2,294
5-14 yrs	1,025	1,164	1,249	1,309	1,438	1,523	1,471	1,504	1,439
15-24 yrs	1,570	1,720	1,803	1,970	2,107	2,106	2,125	2,194	2,389
25-34 yrs	1,298	1,464	1,495	1,697	1,724	1,789	1,807	1,970	2,071
35-44 yrs	1,267	1,361	1,479	1,497	1,507	1,505	1,505	1,506	1,637
45-54 yrs	866	958	1,106	1,234	1,333	1,370	1,359	1,402	1,572
55-64 yrs	386	533	593	676	723	769	828	833	920
65-74 yrs	304	319	386	350	427	465	419	443	459
75-84 yrs	224	242	269	299	361	366	316	327	359
85 or older	55	75	81	96	123	133	132	125	123

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 6b. ED visit rates per 100,000 resulting from unintentional poisonings by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	82	90	96	102	111	115	115	118	121	4.9
Sex†										
Males	84	91	96	105	115	118	119	122	129	5.5
Females	79	88	95	99	106	112	111	113	113	4.3
Age										
< 1 yr	133	128	109	115	138	158	143	156	119	2.3 (NL)
1-4 yrs	324	343	349	366	413	441	446	442	394	14.1
5-14 yrs	63	73	79	84	94	101	98	101	95	4.4
15-24 yrs	99	108	113	124	133	134	135	140	151	5.5
25-34 yrs	88	100	102	116	118	122	123	133	147	6.4
35-44 yrs	73	80	88	91	93	94	97	99	111	3.9
45-54 yrs	53	57	65	72	77	78	78	80	90	4.2
55-64 yrs	36	47	51	56	58	59	62	60	63	2.9
65-74 yrs	39	41	50	46	56	59	52	53	54	1.8
75-84 yrs	40	44	48	54	66	67	59	60	66	3.1
85 or older	29	38	40	46	57	60	58	55	53	3.3

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

Table 6c. Number of ED visit rates resulting from unintentional poisonings by agent and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Substances involved											
Drugs, biologic, or medicinal substances	4,001	4,550	4,941	5,480	6,177	6,374	6,643	6,781	6,846	51%	373
Non-drug substances	5,140	5,526	5,762	5,989	6,195	6,482	6,172	6,371	6,582	49%	160

Source: Ohio Hospital Association

SECTION 3.1A: UNINTENTIONAL DRUG POISONINGS (OVERDOSES)

BACKGROUND INFORMATION

- Drugs/medications are involved with 95% of unintentional poisoning deaths.
- Drugs/medications are involved with 92% of unintentional poisoning hospitalizations.
- Drug overdose death rates increased 319 percent in the past decade in Ohio.
- Drug poisonings are now the leading cause of injury death in Ohio.

Please note that the terms drug poisoning and overdose will be used interchangeably in this report.

From 2000 to 2010, unintentional drug overdose (poisoning) deaths have increased more than 319% and are now the leading cause of injury death in Ohio surpassing motor vehicle traffic, suicide, homicide, firearms and falls. On average, an Ohioan suffers an unintended drug overdose every six hours leading to four deaths per day in this state alone. This epidemic is largely driven by abuse and misuse of prescription pain medication (opioids). In 2010, 45 percent of Ohio unintentional overdose deaths involved prescription opioids. These medications led to more deaths than any other legal or illicit substance including heroin and cocaine combined. Factors contributing to this epidemic include:

- Changes in clinical pain management guidelines encouraging the use of opioids as a result of pain treatment advocacy groups and pharmaceutical companies leading to state law changes.
- Release of new, long-acting opioids into the market (e.g., OxyContin, Duragesic)
- Aggressive marketing of opioids by pharmaceutical companies to primary care physicians
- Use of methadone as a pain medication
- Widespread prescribing, abuse and diversion of these medications

These factors led to rapid increases in the prescribing of prescription opioids for chronic pain. From 1997 to 2010, the total distribution of opioid grams (in morphine milligram equivalent grams) per 100,000 Ohioans increased 670 percent (Source: DEA ARCOS reports). The increasing use of prescription opioids has led to increased risk for opioid dependency and addiction and subsequent diversion of medications as those affected find ways to obtain the drugs.

Admissions for prescription opioid substance abuse treatment have closely followed increased prescribing trends and overdose death rates. In the past decade, admissions have increased more than 750 percent in Ohio (Source: Treatment Episode Data System, SAMHSA). Ohio's fatal overdose epidemic is the result of the increased exposure to these highly addictive and powerful medications with essentially the same active ingredient as heroin.

This epidemic is not limited to Ohio. In 2008, there were 14,800 prescription painkiller deaths across the United States. For every 1 death, there are 10 treatment admissions for abuse, 130 people who abuse or are dependent and 825 nonmedical users leading to significant direct and indirect costs.

PROGRAMMATIC EFFORTS TO ADDRESS DRUG POISONING



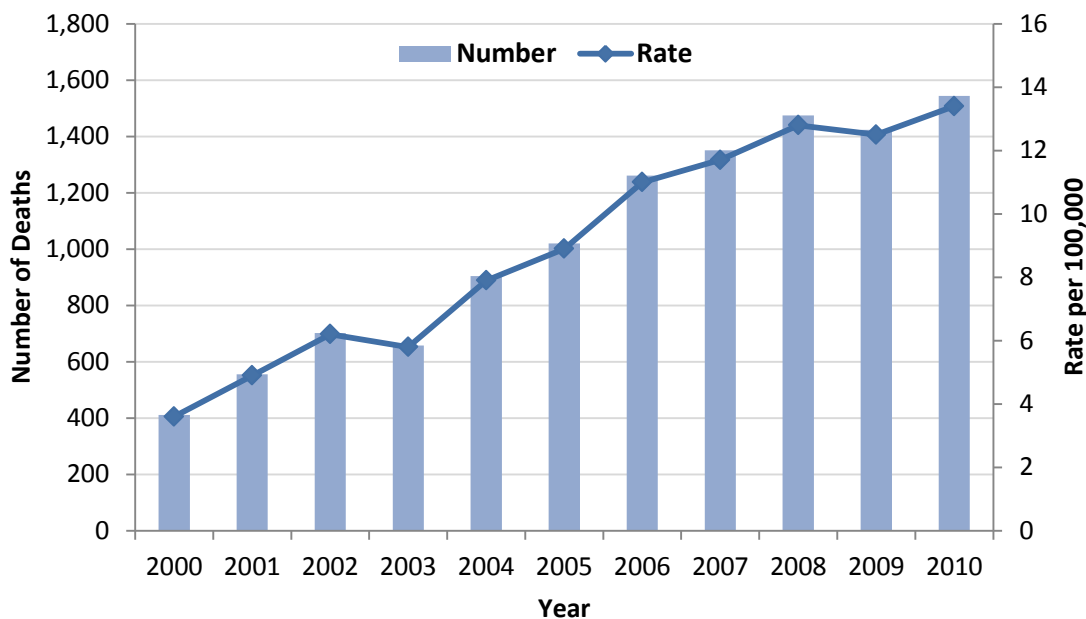
- **Surveillance of drug overdose trends and patterns** and providing data on the Ohio Drug Overdose webpage: <http://www.healthyohioprogram.org/vipp/drug/dpoison.aspx>
- **Coordination of the Prescription Drug Abuse Action Group (PDAAG)** The PDAAG is an ongoing state-level work group comprised of over 100 member organizations dedicated to reducing prescription drug abuse, misuse and overdose in Ohio. The PDAAG serves as a conduit for information sharing, networking and the development of state-level recommendations to address the issue. The PDAAG is an action group of the Ohio Injury Prevention Partnership (OIPP) described in the report introduction.
- **Conducting a social marketing campaign: *Prescription for Prevention: Stop the Epidemic* (P4P) (www.p4pohio.org)**. P4P is a multi-level social marketing campaign to combat the epidemic of prescription drug overdose that includes coalition establishment and support in high risk counties, public education and outreach, TV and radio public service announcements, peer-to-peer programs in schools and education at work sites.
- **Funding two pilot projects in Scioto and Montgomery Counties from 2010-2013** with funding from the CDC's Preventive Health and Health Services Block Grant. These projects engage in activities such as coalition development, education of healthcare prescribers and service providers, formation of a poison death review committee, policy development and implementation of public education and awareness campaigns.
- **Providing start-up support and resources for Scioto County's naloxone distribution program: Project DAWN** (Deaths Avoided with Naloxone) <http://bit.ly/projectdawn>; the first of its kind in the State.
- **Encouraging excess drug disposal solutions and methods** such as take back events and permanent drug disposal drop boxes through the development of take-back guidelines and support for permanent drop boxes.
- **Collaboration with other state organizations to plan conferences, summits and educational opportunities.**
- Providing support for the Governor's Opiate Cabinet Action Team, Prescriber Education Workgroup including **development of Emergency and Acute Care Opioid and Other Controlled Substances Prescribing Guidelines** and other responsible prescribing guidelines.

Figure 3.11: Number and age adjusted rate of unintentional drug poisoning deaths by year, Ohio, 2000-2010



Source: Ohio Department of Health, Office of Vital Statistics

DEATHS:

In 2010, 1,544 Ohioans died from unintentional drug poisoning with a fatality rate of 13.4 per 100,000 (Figure 3.11). The rate of unintentional drug poisoning fatalities was higher among males (17.5 per 100,000) compared to females (9.5 per 100,000). Rates of unintentional poisoning fatalities began increasing at age 15 and peaked among adults age 54 then decreased among adults 55 or older. Whites had a rate of 14.6 per 100,000 followed by blacks (10.3 per 100,000) and Hispanics (8.0 per 100,000). See Table 3.4 for an unintentional drug poisoning death risk profile.

Table 3.4 Unintentional Drug Poisoning Death Risk Profile

	2010 At Risk Groups	Annual trend since 2000
Overall		+319%
Sex	Males	Similar for males and females
Age	45-54	45-54 (largest increase)
Race and ethnicity	Whites	Whites (largest increase)

TRENDS:

Since 2000, fatal unintentional drug poisoning rates have increased 319 percent from 3.6 per 100,000 in 2000 to 13.4 per 100,000 in 2010. A rapid increase in rates was found among males and females. Fatality rates increased among ages 25-64 with the largest increase found among ages 25-34 and 45-54 (2.0 per 100,000 per year). Although whites exhibit the largest rate increase over time, 329 percent, Black, Non-Hispanics have had higher rates in seven of the last eleven years. It is not until 2008, that whites exceed rates among blacks.

The top six drug categories that were coded on the death certificate as contributing to the unintentional drug poisoning death are presented on the right. The categories are presented as the five-year average number of deaths for comparison purposes for 2000 to 2010 in Table 3.5.

1. The category with the highest number of average occurrences is “other or unspecified drug included”*, which groups all instances where an unspecified drug (e.g., multiple drug use, poly-substance use) was listed on the death certificate as contributing to an individual’s death. This drug category indicates multiple drugs were involved in the death. This category increased by 67 percent from the 2000 - 2005 average of 504 occurrences to the 2006- 2010 average of 842. From 2006 to 2010, approximately 60 percent of the unintentional overdoses included *other/unspecified* drugs.

2. The second drug category, all opioids, includes prescription opioids as well as heroin. Fatal unintentional overdoses involving all opioids increased by 82 percent from the 2000 - 2005 average of 337 occurrences to the 2006- 2010 average of 613. From 2006 to 2010, 43 percent of the unintentional overdoses included *all opioids*.

3. The third drug category, prescription opioids includes commonly-prescribed narcotic pain medications such as hydrocodone, oxycodone, fentanyl, morphine, codeine, methadone, etc. This category increased by 81 percent from the 2000 - 2005 average of 254 occurrences to the 2006- 2010 average of 460. From 2006 to 2010, one-third of the unintentional overdoses involved a prescription opioid. This percentage has been increasing and is 45 percent for 2010.

4. The fourth drug category includes only instances where only “other/unspecified drug(s)” were listed as the cause of death for the individual. The first drug category “Other/Unspecified Included” differs from this category in that specific drugs may have been included in addition to other/unspecified. The unspecified only drug category increased 83 percent from the 2000 - 2005 average of 186 occurrences to the 2006- 2010 average of 341. In nearly one in four (24 percent) of the overdoses, no specific drug is indicated on the death certificate.

5. Fatal unintentional overdoses involving cocaine increased by 35 percent from the 2000 - 2005 average of 159 occurrences to the 2006- 2010 average of 215. Cocaine was mentioned in 15 percent of the unintentional overdoses from 2006 to 2010.

Table 3.5 Unintentional Drug Poisoning Deaths by Drug Type ^{1,2}			
Drug Category	2000-2005 Annual Ave.	2006-2010 Annual Ave.	Percent of all 2006-10 Overdoses
Other/Unspecified Drug Included ³	504	842	60%
All Opioids	337	613	43%
Prescription Opioids	254	460	33%
Other/Unspecified Drug Only ⁴	186	341	24%
Cocaine	159	215	15%
Heroin	100	224	16%
All Overdoses*	708	1,411	

¹Source: ODH Office of Vital Statistics

²Multiple drugs may be involved in any death.

³includes all instances where ‘other/unspecified’ is included as contributing to death; may also be included with specific drugs.

⁴includes only those instances where no other drug than ‘other/unspecified’ is included as contributing to death.

Ohio Violence and Injury Prevention Program, Ohio Department of Health

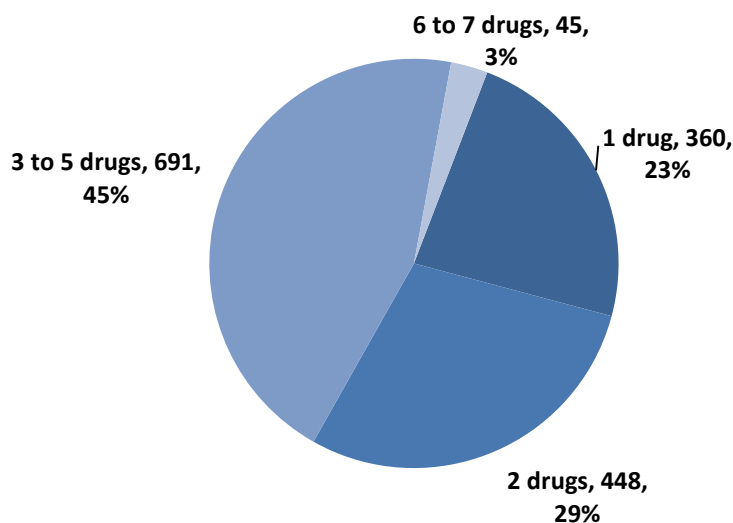
6. Fatal unintentional overdoses involving heroin increased from an average of 100 annual occurrences in 2000-2005 to an average of 224 annual occurrences in 2006-2010. In 2006-2010, 15 percent of the unintentional overdoses involved heroin.

Notice that the rank order of the drug category occurrences did not change from the 2000-2005 average to the 2006- 2010 average. As stated above, all of the drug category occurrences increased, however, cocaine only increased by 35 percent while other/unspecified drug only, other/unspecified drug included, prescription opioids and all opioids were all above 80 percent. Also stated above is that the drug categories, except for other/unspecified drug only, are not mutually exclusive, so that multiple drugs can be listed on the death certificate as contributing to the death.

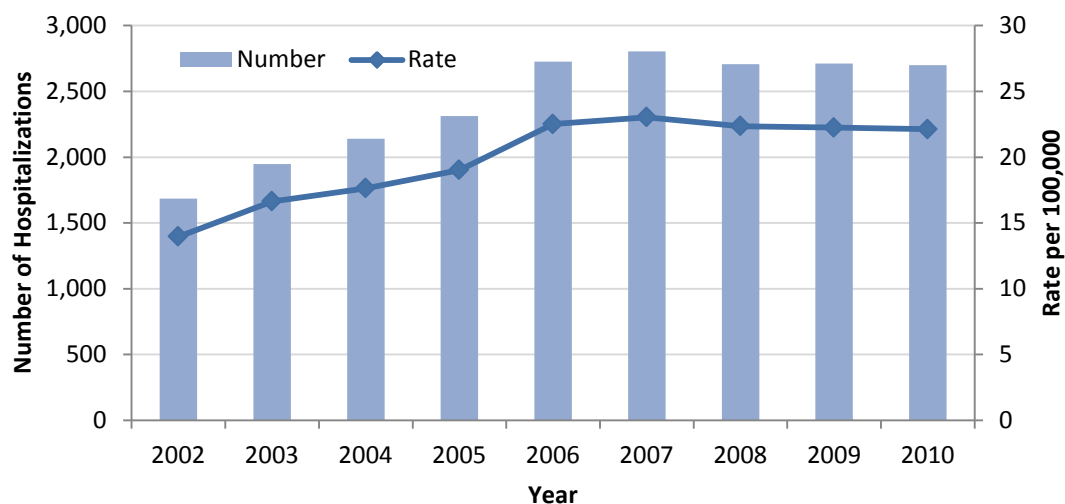
MULTIPLE DRUG USE

After examining the types of drugs involved in unintentional drug poisonings, the emphasis now turns to the number of substances involved in the death. In addition to rapidly rising opioid use, multiple drug use is another key contributing factor in this epidemic. Presenting the number of drugs/medications listed on the death certificate, Figure 3.12 displays the percentage of single and multiple unintentional drug poisoning deaths for Ohio in 2010. Grouped into categories, 360 or nearly one fourth (23 percent) of the decedents had only one drug listed **while the remaining three fourths (77%) involved more than one substance**. Twenty nine percent (448) of decedents had 2 drugs/medications. The largest category with 45 percent (691) had 3 to 5 drugs/medications while the smallest group, with 3 percent of the individuals, had 6 to 7 drugs/medications. None of the death certificates indicated over 7 drugs were involved in the deaths.

Figure 3.12: Number of drugs involved in unintentional drug poisoning deaths, Ohio, 2010



Source: Ohio Department of Health, Office of Vital Statistics

Figure 3.13. Number and age adjusted rate for unintentional drug poisoning hospitalizations by year, Ohio, 2002-2010

Source: Ohio Hospital Association

HOSPITALIZATIONS:

Over 2,700 hospitalizations resulted from unintentional drug poisonings in Ohio in 2010 (Figure 3.13). Nearly all (92 percent) of the hospitalizations for unintentional poisoning were related to drug/medications. For both males and females, the number of drug poisoning-related hospitalizations decreased with age from 0-14 years, steadily increased between ages 15 and 54, and remained elevated among ages 55 or older (Figure 3.14). See Table 3.6 for an unintentional drug poisoning hospitalization risk profile.

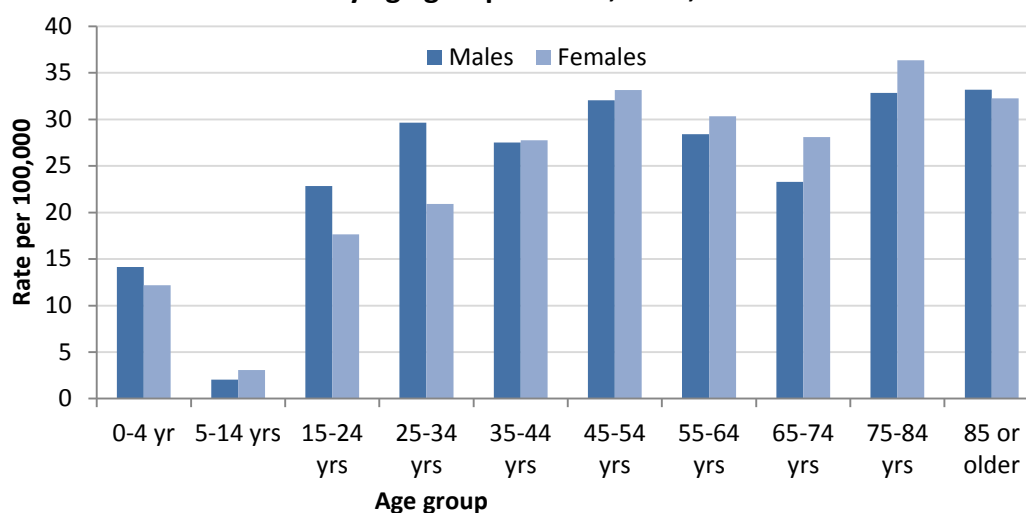
Table 3.6 Unintentional Drug Poisoning Hospitalization Risk Profile

	2010 At Risk Groups	Annual trend since 2002
Overall		+57%
Sex	Similar for males and females	Similar for males and females
Age	45 or older	45-54 (largest increase)

TRENDS:

Unintentional drug poisoning hospitalization rates for unintentional drug poisonings have increased from 14 per 100,000 in 2002 to 22 per 100,000 in 2010. Rates increased on average by 1 hospitalization per 100,000 per year. The increase was similar for males and females. The hospitalization rate increased across almost all age groups, with the largest increase found among adults ages 45-54 (2 per 100,000 per year). Trends among ages 0-14 and 85 or older did not follow a linear trend. See Tables 8a and 8b located at the end of this section for more detailed information on the number and rate of hospitalizations resulting from unintentional drug poisoning.

Figure 3.14. Unintentional drug poisoning hospitalization rate by age group and sex, Ohio, 2010



Source: Ohio Hospital Association

DRUGS AND MEDICATION:

Between 2007 and 2010, the most common drugs involved in unintentional poisoning were opioids (889 per year), prescription opioids (841 per year), alcohol (523 per year), benzodiazepines (498 per year), cocaine (307 per year), tranquilizers (287 per year), methadone (189 per year) and heroin (133 per year). An increase in the annual number of poisonings was found for almost all drug categories. The largest increases were found for methadone (73 percent), all opioids (51 percent), and prescription opioids (51 percent). In contrast, the annual number of poisonings involving cocaine remained the same in 2002-2006 and 2007-2010.

Consistent with death data, all opioids and prescription opioids were involved in the greatest percentage (33 percent or one-third) of hospitalizations for unintentional drug overdose. Among specific opioids, methadone was involved in a higher percentage of the unintentional overdoses than heroin. Prescription opioids and

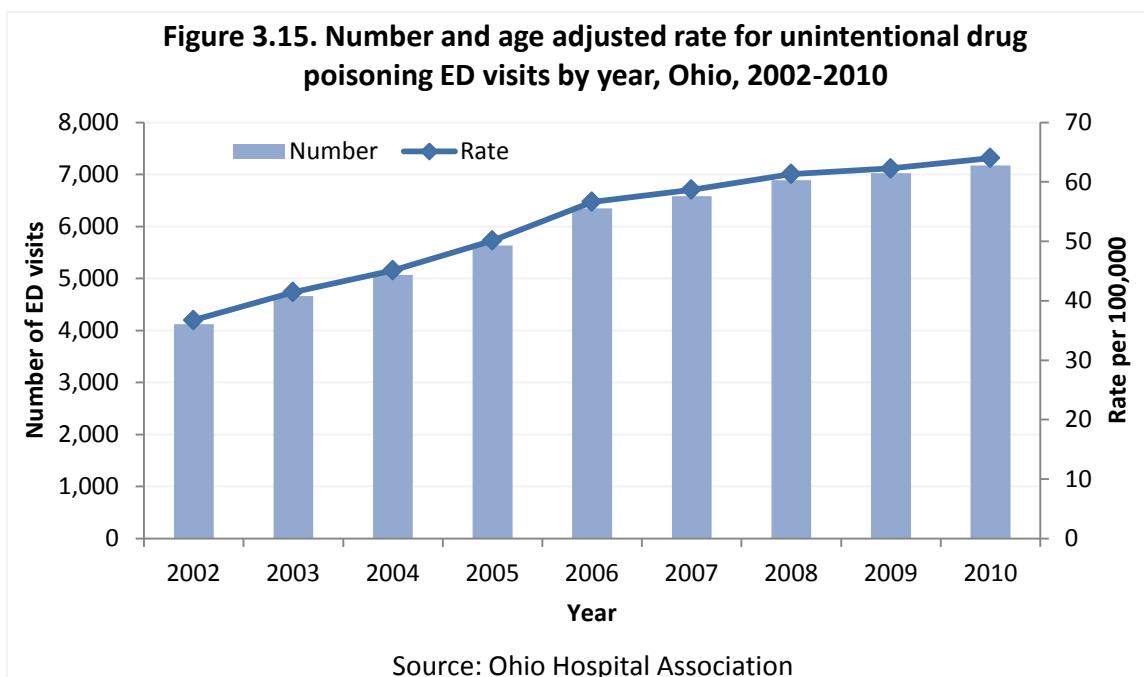
Table 3.7 Drug Involvement in Unintentional Drug Poisoning Hospitalizations: Risk Profile

Drug Category	2002-2006 Annual Ave.	2007-2010 Annual Ave.	Percent of all 2007-2010 Drug Poisonings
All opioids	587	889	33%
Prescription opioid	557	841	31%
Alcohol	408	523	19%
Benzodiazepines	341	498	18%
Cocaine	307	307	11%
Tranquilizers	201	287	11%
Methadone	87	189	7%
Heroin	86	133	5%
All Drug Poisoning Hospitalizations	2,162	2,731	

Ohio Violence and Injury Prevention Program, Ohio Department of Health

benzodiazepines were involved in 31 and 18 percent, respectively, of the hospitalized unintentional overdoses.

See table 8c at the end of this section for more detailed information on the number of drugs and medications involved with unintentional poisonings.



EMERGENCY DEPARTMENT VISITS:

Approximately 7,200 ED visits resulted from unintentional drug poisonings in 2010 resulting in a rate of 64 visits per 100,000 Ohioans (Figure 3.15). The rate of unintentional drug poisoning-related ED visits was similar among males and females for ages 0-74. Among ages 75 or older, rates were higher for males compared to females. The highest rate of ED visits was found among children ages 1-4 years (264 per 100,000) while the lowest number of ED visits was found among children ages 5-14 (24 per 100,000) (Figure 3.16). See Table 3.8 for an unintentional drug poisoning ED visit risk profile.

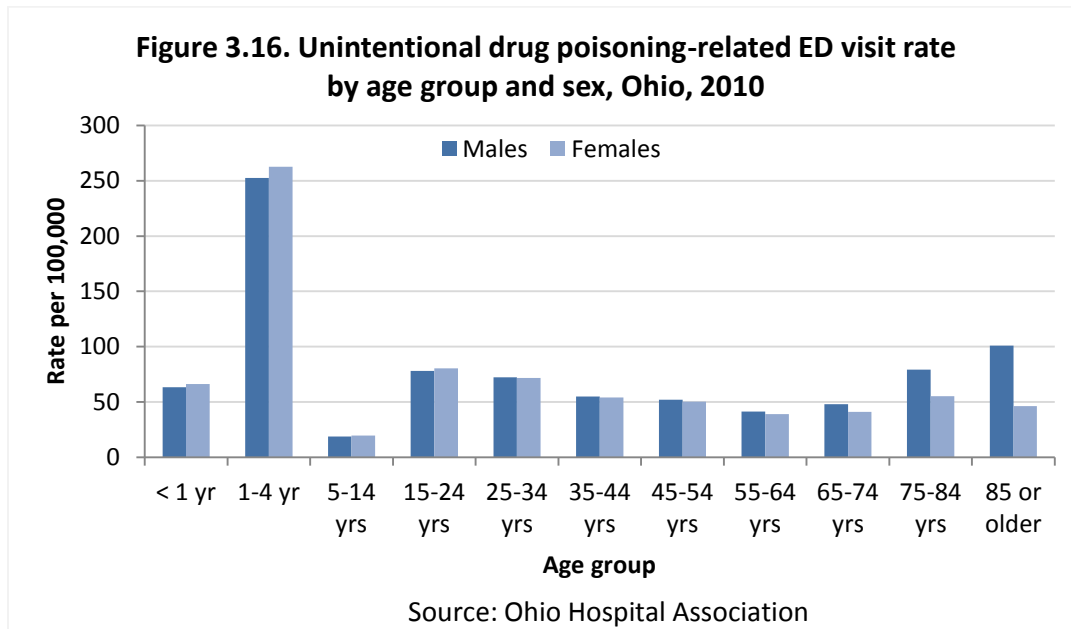
Table 3.8 Unintentional Drug Poisoning ED Visit Risk Profile		
	2010 At Risk Groups	Annual trend since 2002
Overall		+73%
Sex	Similar for males and females	Similar for males and females
Age	1-4 years	1-4 years (largest increase)

TRENDS:

Since 2002, the rate of unintentional drug poisoning-related ED visits nearly doubled from 37 per 100,000 in 2002 to 64 per 100,000 in 2010. The average annual increase was 4 per 100,000 per year. The increase was similar among males and females. Drug poisoning-related ED visit rates increased among all age groups with the largest increases found among children ages 1-4 (14 per 100,000 per year). See Tables 9a and 9b located

Ohio Violence and Injury Prevention Program, Ohio Department of Health

at the end of this section for more detailed information on the number and rate of unintentional drug poisoning ED visits.



DRUGS AND MEDICATION:

From 2007 to 2010, the most common drugs involved with ED visits resulting from unintentional drug poisonings included opioids (1,185 per year), prescription opioids (909 per year), benzodiazepines (635 per year), tranquilizers (557 per year), methadone (475 per year) and heroin (442 per year). The number of ED visits increased rapidly among most drug categories. Compared to annual averages in 2002-2006, the most rapid increase was found among visits associated with the use of Methadone (265 percent) and Heroin (149 percent).

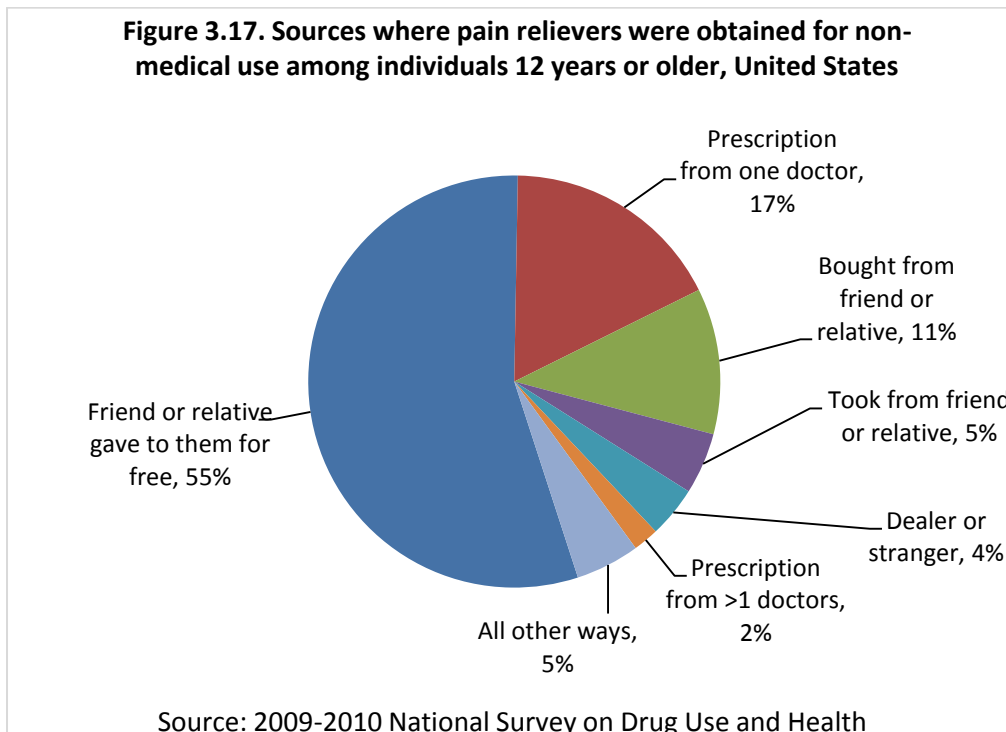
See Table 9c located at the end of this section for more detailed information on trends in the type of drugs associated with unintentional drug poisoning ED visits.

Table 3.9 Unintentional Drug Poisoning ED Visit Risk Profile			
Drug Category	2002-2006 Annual Ave.	2007-2010 Annual Ave.	Percent of all ED Visits for Drug Poisoning, 2007-2010
All opioids	662	1,185	17%
Prescription opioids	509	909	13%
Benzodiazepines	442	635	9%
Tranquilizers	330	557	8%
Methadone	130	475	7%
Heroin	178	442	6%
Alcohol	325	377	5%
Total ED Visits for Drug Poisoning	5,170	6,919	

PAIN MEDICATION USE:

According to the 2010, Ohio Behavioral Risk Factor Surveillance Survey (BRFSS), one third of adults in Ohio reported using pain medications in the last 12 months. The use of pain medication varied across segments of the population. Females were more likely to report use than males. Adults who were widowed, separated, or divorced were more likely to use than married couples. Substantial differences in pain medication use were found by socioeconomic groups. College graduates were less likely to use pain medications than other educational attainment categories. Adults living below or near the federal poverty level were more likely to report usage than individuals 200 percent or more above poverty.

While opioid pain medications are controlled substances that should be accessible only through prescriptions by legitimate prescribers, studies have shown these medications are commonly diverted and used by people for whom they are not prescribed. Nationwide, most nonmedical users of pain relievers reported accessing the drugs through someone else. The most common source was a friend or relative (71 percent) with most getting the pain relievers for free (55 percent), some buying them (11 percent) and a small proportion taking them without asking (5 percent). Only 1 in 5 reported obtaining pain relievers through one (17 percent) or more doctors (2 percent) (see Figure 3.17).



Ohio Violence and Injury Prevention Program, Ohio Department of Health

In Ohio, the most common prescription pain medications reported were drugs with the active ingredients of hydrocodone (e.g., Vicodin, Lortabs), oxycodone (e.g., OxyContin, Percocet) and medications with other active ingredients. In addition, 21 percent of adults with a prescription and 14 percent of adults without a prescription did not know the active ingredient.

Findings from the survey suggest that the majority of adults with a prescription had leftover medication.

Among those with leftover medication, most either kept it (69 percent) or disposed of it (28 percent). Secure

storage and proper disposal of unused medication is an important public health issue because it can reduce access to unintended users and reduce the environmental threat to natural resources.

While prescription opioid medication is commonly used to manage pain, the active ingredients in the medication have highly addictive properties structurally similar to heroin. It is recommended using the medication as directed by a physician in order to avoid addiction and possible overdose. Findings from the survey found that 5 percent of those with a prescription did not use as directed and 4 percent of all adults used pain medication for recreation or non-medical use. Based on the overwhelming and escalating prescription drug abuse problem facing Ohio, these figures are likely under-reported. See Tables 10a-d for more detailed information about self-reported prescription medication use.

Table 3.10 Most common pain medications reported by active ingredient¹

Active ingredient	With a prescription	Without a prescription
Hydrocodone	34%	31%
Oxycodone	20%	29%
Other drug	18%	16%
Don't know	21%	14%

¹Source: Ohio BRFSS, ODH, 2010

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 7a. Number of deaths resulting from unintentional drug poisoning by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	411	555	702	658	904	1,020	1,261	1,351	1,475	1,423	1,544
Sex											
Males	287	364	454	443	604	654	828	871	937	898	989
Females	124	191	248	215	300	366	433	480	538	525	555
Age											
< 1 yr	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1-4 yrs	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
5-14 yrs	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
15-24 yrs	15	54	58	88	103	103	109	120	117	104	138
25-34 yrs	72	90	124	128	147	204	234	258	306	332	345
35-44 yrs	168	204	249	183	275	282	268	364	374	370	381
45-54 yrs	116	157	195	183	280	318	412	449	461	434	463
55-64 yrs	22	23	46	33	65	81	108	125	163	137	183
65-74 yrs	6	9	14	12	16	13	12	22	28	24	19
75-84 yrs	6	10	12	11	10	12	7	6	15	13	7
85 or older	<5	7	<5	17	6	<5	<5	5	6	5	6
Race/Ethnicity											
White‡	332	435	574	552	748	875	1,076	1,172	1,292	1,253	1,377
Black‡	73	97	107	92	140	124	173	165	160	145	141
Hispanic	<5	17	12	<5	12	18	<5	11	16	20	23
Other‡	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 7b. Death rates per 100,000 resulting from unintentional drug poisoning, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	3.6	4.9	6.2	5.8	7.9	8.9	11.0	11.7	12.8	12.5	13.4	1.0
Sex†												
Males	5.2	6.5	8.2	7.9	10.7	11.6	14.7	15.4	16.5	15.9	17.5	1.3
Females	2.1	3.2	4.2	3.6	5.1	6.2	7.4	8.1	9.1	9.1	9.5	0.8
Age												
< 1 yr	*	*	*	*	*	*	*	*	*	*	*	*
1-4 yrs	*	*	*	*	*	*	*	*	*	*	*	*
5-14 yrs	*	*	*	*	*	*	*	*	*	*	*	*
15-24 yrs	*	3.4	3.7	5.5	6.5	6.5	6.9	7.6	7.5	6.6	8.8	*
25-34 yrs	4.8	6.0	8.4	8.7	10.0	13.9	16.0	17.6	20.8	22.5	23.3	2.0
35-44 yrs	9.3	11.5	14.3	10.7	16.4	17.1	22.6	22.8	24.0	24.3	25.1	1.7
45-54 yrs	7.4	9.6	11.8	10.9	16.5	18.5	23.7	25.6	26.3	24.7	26.4	2.1
55-64 yrs	2.2	2.2	4.2	2.9	5.5	6.7	8.6	9.6	12.2	9.9	13.2	1.1
65-74 yrs	*	*	*	*	*	*	*	2.8	3.4	2.9	*	*
75-84 yrs	*	*	*	*	*	*	*	*	*	*	*	*
85 or older	*	*	*	*	*	*	*	*	*	*	*	*
Race/Ethnicity†												
White‡	3.4	4.5	6.0	5.8	7.8	9.1	11.3	12.3	13.5	13.4	14.6	1.2
Black‡	6.1	7.8	8.6	7.3	11.1	9.5	13.2	12.3	12.0	10.7	10.3	0.5
Hispanic	*	*	*	*	*	*	*	*	*	*	8.0	*
Other‡	*	*	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to less than 20 deaths

†Age adjusted to 2000 U.S. standard population

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 8a. Number of hospitalization resulting from unintentional drug poisonings, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	1,685	1,948	2,141	2,312	2,726	2,805	2,706	2,711	2,700
Sex									
Males	838	1,012	1,013	1,134	1,400	1,350	1,299	1,317	1,324
Females	847	1,014	1,128	1,178	1,326	1,455	1,407	1,394	1,376
Age									
0-4 yr	122	141	125	136	159	191	196	174	95
5-14 yrs	64	54	65	47	43	56	75	48	39
15-24 yrs	224	280	291	286	345	313	293	326	322
25-34 yrs	174	229	236	294	319	360	316	370	356
35-44 yrs	324	340	377	396	455	439	418	383	409
45-54 yrs	288	351	416	457	578	569	570	564	568
55-64 yrs	158	192	210	254	361	343	365	367	427
65-74 yrs	154	145	193	223	219	244	229	235	220
75-84 yrs	122	155	162	139	165	201	167	169	189
85 or older	55	61	66	80	82	89	77	75	75

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 8b. Hospitalization rates per 100,000 resulting from drug unintentional poisonings, by year, Ohio, 2002-2010[†]

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	14.0	16.6	17.6	19.0	22.5	23.0	22.4	22.2	22.1	1.0
Sex†										
Males	14.0	16.6	16.8	18.9	23.3	22.5	21.7	21.8	21.9	1.0
Females	14.1	16.8	18.7	19.4	21.9	23.9	23.3	22.9	22.5	1.1
Age										
0-4 yr	16.3	18.9	16.8	18.4	21.6	25.8	25.9	23.8	18.9	0.8 (NL)
5-14 yrs	4.0	3.4	4.1	3.0	2.8	3.7	4.4	4.1	2.6	<-0.1 (NL)
15-24 yrs	14.2	17.6	18.2	18.0	21.8	19.9	19.3	19.7	20.4	0.6
25-34 yrs	11.8	15.6	16.2	20.2	21.9	24.6	23.7	24.0	26.0	1.7
35-44 yrs	18.6	19.9	22.5	24.0	28.0	27.5	26.0	27.1	27.0	1.1
45-54 yrs	17.5	21.0	24.5	26.6	33.3	32.6	32.2	31.9	32.5	1.9
55-64 yrs	14.6	17.1	18.0	20.9	28.7	26.4	26.7	25.6	27.7	1.7
65-74 yrs	20.0	18.9	25.1	29.1	28.5	31.2	29.9	28.5	28.5	1.2
75-84 yrs	22.1	27.9	29.1	25.1	30.0	37.0	34.0	31.9	32.9	1.3
85 or older	29.1	31.1	32.9	38.7	38.2	40.0	42.4	37.4	27.3	0.5 (NL)

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 8c. Number of hospitalizations resulting from unintentional drug poisonings, by drug type, Ohio, 2002-2010

Drug/medication	2002-2006		2007-2010		Change
	N	Annual Ave	N	Annual Ave	
All opioids	2,936	587	3,555	889	51%
Prescription opioid	2,785	557	3,364	841	51%
Alcohol	2,041	408	2,091	523	28%
Benzodiazepines	1,707	341	1,991	498	46%
Cocaine	1,534	307	1,226	307	0%
Tranquilizers	1,006	201	1,149	287	43%
Methadone	436	87	756	189	117%
Heroin	430	86	531	133	54%
Barbituates	393	79	407	102	29%

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 9a. Number of ED visits resulting from unintentional drug poisonings, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	4,125	4,662	5,072	5,638	6,352	6,581	6,893	7,025	7,172
Sex									
Males	1,954	2,165	2,347	2,651	3,070	3,121	3,315	3,429	3,525
Females	2,171	2,497	2,725	2,987	3,282	3,460	3,578	3,596	3,647
Age									
< 1 yr	101	89	81	108	117	128	130	129	97
1-4 yr	1,178	1,235	1,304	1,437	1,669	1,803	1,833	1,786	1,538
5-14 yrs	270	299	321	370	401	390	420	370	363
15-24 yrs	708	876	887	954	1,067	992	1,077	1,149	1,284
25-34 yrs	472	539	574	685	748	795	846	970	1,090
35-44 yrs	478	533	641	634	674	694	740	706	748
45-54 yrs	361	436	487	572	672	668	704	759	826
55-64 yrs	181	245	302	352	382	416	504	507	540
65-74 yrs	183	187	229	227	247	324	292	298	313
75-84 yrs	153	166	185	225	277	270	242	252	276
85 or older	40	57	61	74	98	101	105	99	101

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 9b. ED visit rates per 100,000 resulting from unintentional drug poisonings, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	36.8	41.5	45.1	50.1	56.6	58.7	61.3	62.3	64.0	3.5
Sex†										
Males	35.2	39.0	42.3	47.8	55.6	56.5	59.7	61.6	63.8	3.8
Females	38.2	43.7	47.9	52.2	57.4	60.7	62.8	62.9	63.9	3.3
Age										
< 1 yr	68.6	60.4	54.3	73.7	79.0	84.4	85.2	87.3	69.8	2.6
1-4 yr	195.8	206.5	219.0	241.8	284.3	306.7	310.1	301.8	264.3	13.5
5-14 yrs	16.7	18.7	20.3	23.8	26.1	25.7	28.1	24.8	23.8	1.1
15-24 yrs	44.7	54.9	55.6	59.9	67.4	63.0	68.5	73.4	80.9	3.8
25-34 yrs	32.0	36.8	39.3	47.0	51.4	54.4	57.8	65.6	77.3	5.2
35-44 yrs	27.4	31.2	38.3	38.5	41.5	43.6	47.6	46.4	50.5	2.7
45-54 yrs	21.9	26.1	28.7	33.3	38.7	38.2	40.2	43.3	47.4	3.0
55-64 yrs	16.7	21.8	25.8	29.0	30.4	32.0	37.8	36.6	37.2	2.6
65-74 yrs	23.7	24.3	29.8	29.6	32.1	41.4	36.2	35.7	36.8	1.8
75-84 yrs	27.7	29.9	33.3	40.6	50.4	49.7	45.2	46.5	51.0	2.9
85 or older	21.2	29.1	30.4	35.8	45.6	45.4	45.9	43.5	43.8	2.9

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

Table 9c. Number of ED visits resulting from unintentional drug poisonings, by type of drug and year, Ohio, 2002-2010

Drug	2002	2003	2004	2005	2006	2007	2008	2009	2010	2002-2006 Annual Ave.	2007-2010 Annual Ave.	Change
Barbituates	46	39	38	52	38	53	61	60	53	43	57	33%
Alcohol	275	295	336	333	386	349	371	381	408	325	377	16%
Benzodiazepines	339	353	450	513	553	568	654	675	641	442	635	44%
Cocaine	117	62	80	127	153	128	136	85	90	108	110	2%
Heroin	104	138	157	221	268	294	361	472	641	178	442	149%
Methadone	40	69	125	159	257	320	401	465	712	130	475	265%
Prescription opioid	384	515	539	671	434	753	880	952	1,049	509	909	79%
All opioid	456	609	647	765	832	934	1,099	1,239	1,467	662	1185	79%
Tranquilizers	238	255	335	348	472	510	582	568	567	330	557	69%

Source: Ohio Hospital Association

Table 10a. Prevalence of prescription pain medication use in last 12 months among adults 18 or older, Ohio, 2010

	N	Percent	95% CI
Overall	2,041	31.7	(30.0-33.3)
Male	677	27.8	(25.2-30.4)
Female	1,364	35.2	(33.1-37.3)
18-24	34	29.5	(18.9-40.0)
25-34	136	31.0	(25.7-36.3)
35-44	250	28.1	(24.4-31.8)
45-54	435	33.8	(30.5-37.0)
55-64	565	35.1	(32.1-38.2)
65 or older	621	32.8	(30.1-35.4)
Married or unmarried couple	1,035	29.4	(27.4-31.4)
Widow, divorce, or separated adult	763	39.3	(36.2-42.4)
Never married	238	33.2	(28.0-38.4)
Employed	815	26.2	(24.1-28.4)
Not employed	142	33.6	(27.0-40.2)
Other	1,079	41.0	(38.3-43.7)
Did not graduate from HS	210	52.2	(45.2-59.2)
HS grad/GED	686	32.2	(29.3-35.1)
Some college	602	37.3	(33.8-40.8)
College graduate	538	23.2	(20.7-25.7)
Below poverty	235	45.2	(38.7-51.7)
Above poverty < 200%	454	39.3	(35.2-43.3)
Above poverty ≥ 200%	1,072	27.2	(25.2-29.2)
Missing household/income	279	30.9	(26.2-35.5)
Metropolitan	1,268	32.1	(29.9-34.3)
Suburban	296	29.1	(25.2-32.9)
Rural	201	30.5	(25.9-35.2)
Appalachian	259	35.8	(31.2-40.5)

Source: Ohio Behavioral Risk Factor Surveillance System

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 10b. Prevalence of prescription pain medication use among adults age 18 or older who have used with a prescription in last 12 months, by drug used, Ohio, 2010

	N	2010 Ohio BRFSS	
		Percent	95% CI
Hydrocodone	607	33.6	(30.6-36.6)
Oxycodone	355	19.8	(17.3-22.3)
Other prescription drug	388	18.4	(16.0-20.7)
Tramadol	128	5.9	(4.4-7.3)
Propoxyphene	144	5.2	(4.1-6.3)
Tylenol with codeine	75	3.8	(2.7-4.9)
Codeine	38	2.3	(1.3-3.2)
Morphine	39	1.4	(0.7-2.2)
Hydromorphone	15	0.9	(0.3-1.5)
Methadone	14	0.6	(0.3-1.0)
Fentanyl	12	0.5	(0.2-0.9)
Meperidine	10	0.4	(0.1-0.7)
Don't know or refused	473	20.7	(18.3-23.1)

Source: Ohio Behavioral Risk Factor Surveillance System

Table 10c. Prevalence of pain medication use among adults ages 18 or older who have used and not been prescribed in last 12 months, by drug used, Ohio, 2010

	N	2010 Ohio BRFSS	
		Percent	95% CI
Hydrocodone	38	31.4	(19.4-43.4)
Oxycodone	35	28.7	(17.5-39.9)
Other prescription drug	25	15.9	(8.0-23.8)
Tylenol with codeine	12	5.9	(1.8-10.0)
Tramadol	7	4.1	(0.0-9.0)
Propoxyphene	7	4.1	(0.0-9.2)
Morphine	<5	3.7	(0.0-8.7)
Codeine	6	2.0	(0.0-3.9)
Hydromorphone	0	0.0	-
Methadone	0	0.0	-
Fentanyl	0	0.0	-
Meperidine	0	0.0	-
Don't know or refused	21	14.3	(4.0-24.6)

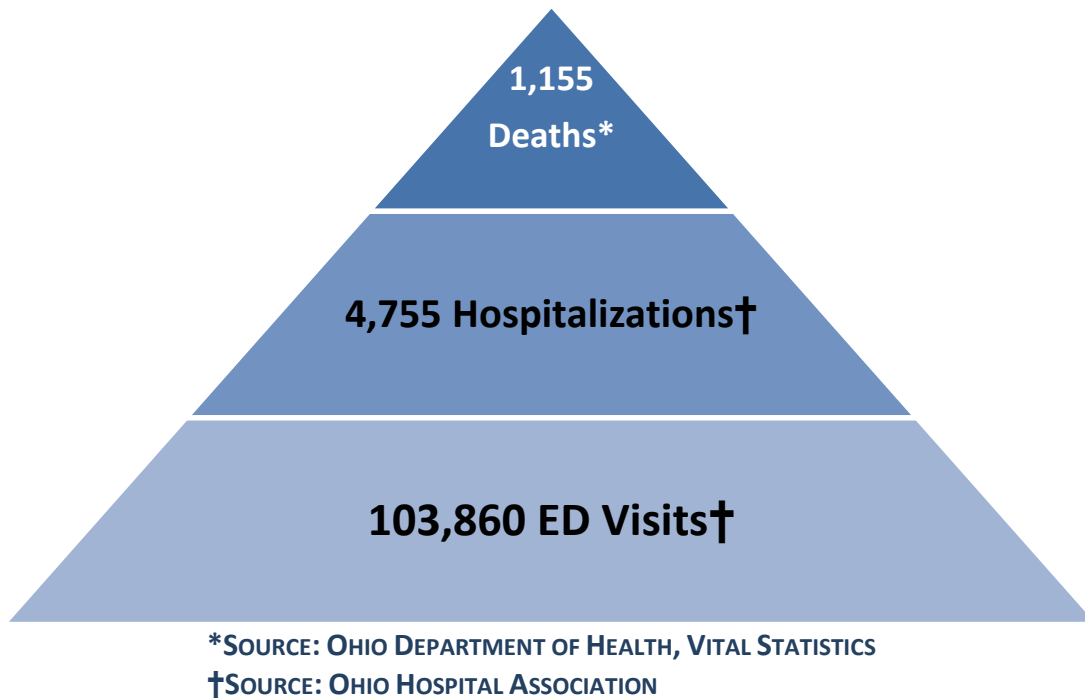
Source: Ohio Behavioral Risk Factor Surveillance System

Table 10d. Prevalence of dispersion methods among prescription pain medication users who had medication leftover from last prescription by dispersion type, Ohio 2010

2010 Ohio BRFSS			
	N	Percent	95% CI
Kept it	723	68.8	(64.6-73.0)
Disposed of it	246	28.0	(24.0-32.1)
Gave it someone else	12	1.8	(0.5-3.0)
Other	10	0.7	(0.2-1.3)
Sold it	<5	0.6	(0.0-1.9)

Source: Ohio Behavioral Risk Factor Surveillance System

SECTION 3.2: MOTOR VEHICLE TRAFFIC CRASHES



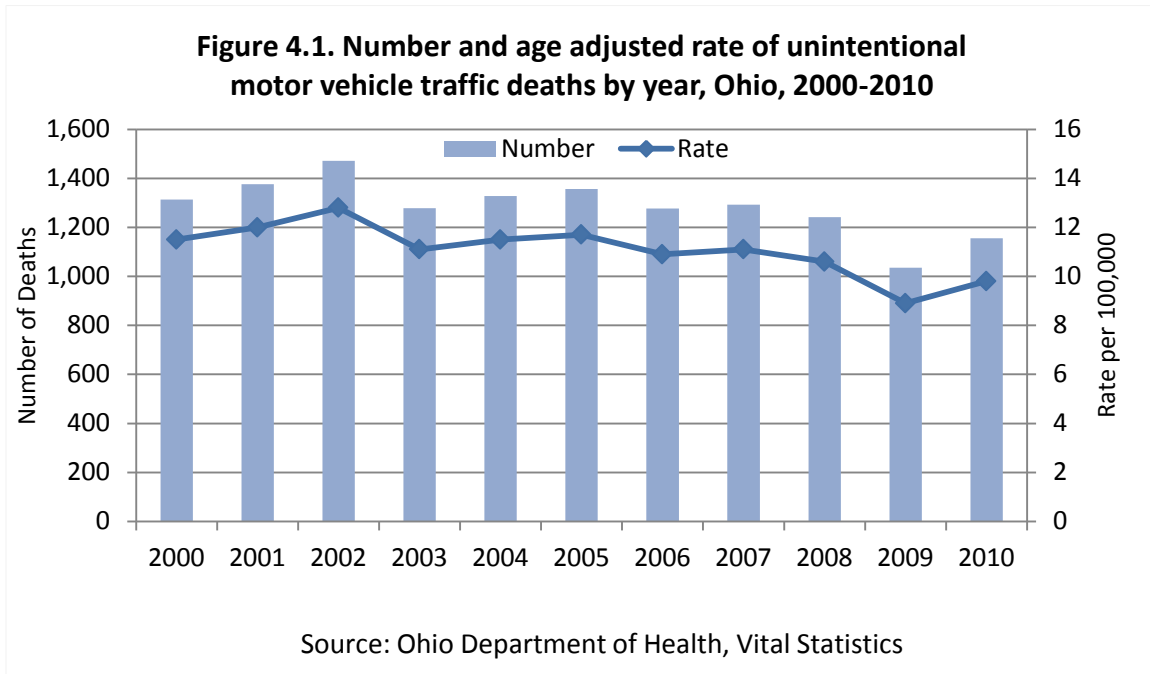
CHAPTER HIGHLIGHTS:

Patterns:

- Motor vehicle crashes were one of the leading causes of fatal and non-fatal unintentional injuries.
- Males were more likely to experience fatal injury and hospitalization than females.
- Young drivers and older adults were most likely to experience an injury.
- Most adults reported regular seat belt use while less than half of high school students reported regular seat belt use.

Trends:

- Death and hospitalization rates are on the decline while ED visit rates increased slightly.
- Fatal and non-fatal injury rates have decreased the most among ages 15-34.
- Percentage of adults who reported always using their seat belt increased from 76 percent in 2002 to 83 percent in 2010. These self-reported data are consistent with observational seat belt use data as well.



DEATHS:

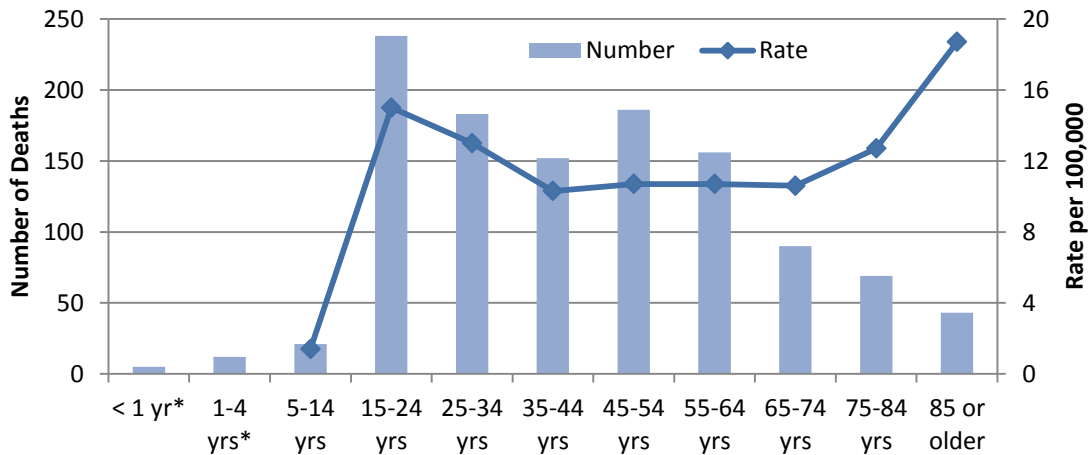
In 2010, 1,155 deaths resulted from unintentional motor vehicle traffic crashes. The fatality rate was 9.8 per 100,000 (Figure 4.1). Fatality rates among males were nearly three times higher than females (14.7 compared to 5.7 per 100,000). The largest number of deaths occurred among ages 15-24 years while the highest rates of fatalities were found among adults age 85 or older (Figure 4.2). Motor vehicle traffic fatalities varied by race and ethnic groups. The highest rates were found among white, non-Hispanics (10.1 per 100,000) followed by Hispanics (8.3 per 100,000) and black, non-Hispanics (8.2 per 100,000). See Table 4.1 for an unintentional motor vehicle traffic death risk profile.

Table 4.1 Unintentional Motor Vehicle Traffic Crash Death Risk Profile		
	2010 At Risk Groups	Annual trend since 2000
Overall		-15%
Sex	Males	Similar for males and females
Age	85 or older	15-24 (largest decrease)
Race and ethnicity	Whites	Whites (largest decrease)

TRENDS:

Fatalities resulting from unintentional motor vehicle traffic crashes decreased 15 percent from 11.5 per 100,000 in 2000 to 9.8 per 100,000 in 2010. The average decrease was -0.3 deaths per 100,000 per year. The decrease in death rates was similar among males and females. Decreases were found in several age groups with the largest decrease among ages 15-24 (-0.8 per 100,000 per year). Rates among ages 25-34, 45-74, and 85 or older did not follow a linear trend. Decreases in rates were found among whites (-0.3 per 100,000 per year) while rates among blacks did not follow a consistent pattern. See Tables 11a-b located at the end of this section for more detailed information about the number and rates of unintentional motor vehicle crashes in Ohio.

Figure 4.2. Number and rates of unintentional motor vehicle traffic related death rates by age group, Ohio, 2010



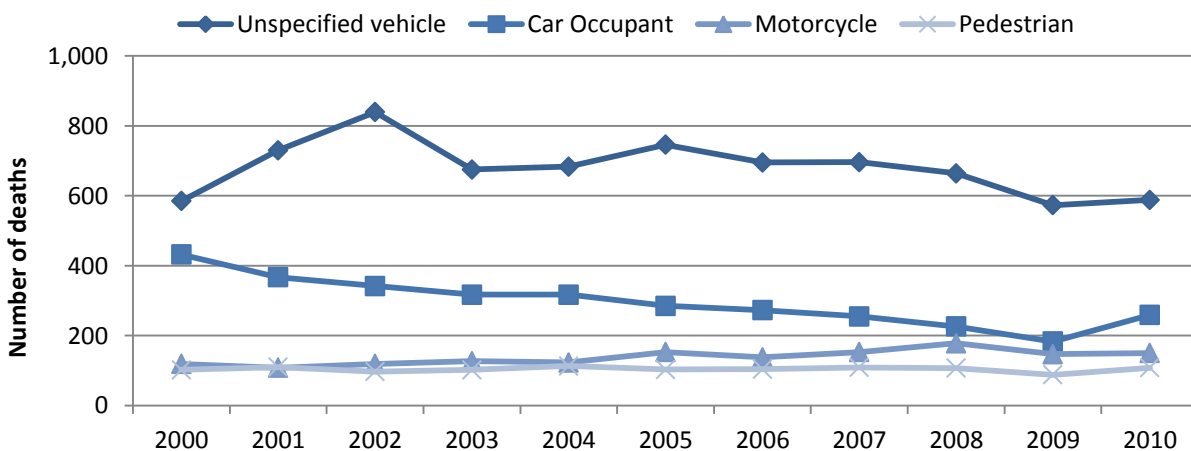
Source: Ohio Department of Health, Vital Statistics

*Rate suppressed due to fewer than 20 deaths

PERSON INJURED:

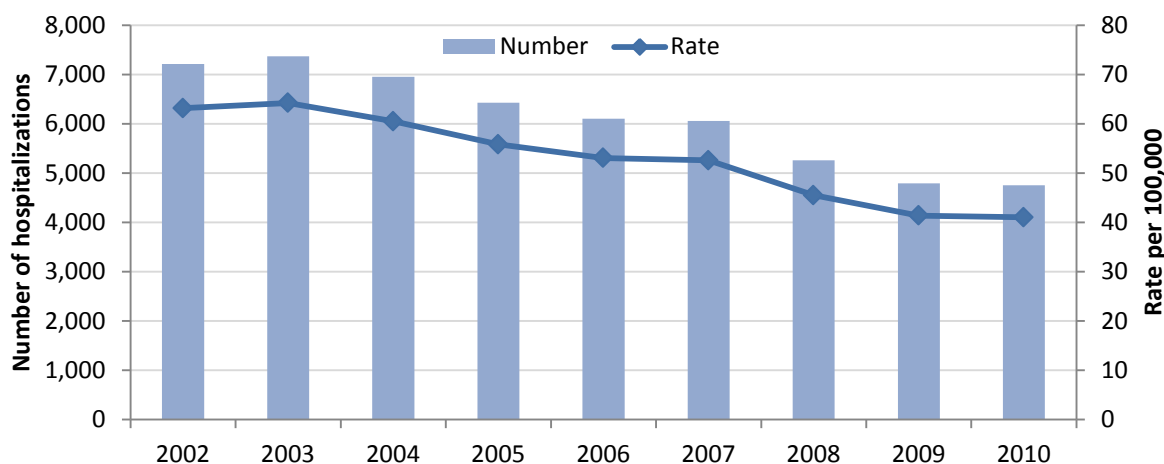
In 2010, the person injured in approximately one-half (588 deaths) was unspecified. The most common specified fatally injured persons were car occupants (259 deaths), motorcyclists (150 deaths), and pedestrians (108 deaths) (see Table 11c). The number of car occupant deaths decreased by 20 deaths per year while deaths of motorcyclists increased by 5 per year. The number of deaths with an unspecified person and pedestrian deaths did not follow a consistent trend. See Table 11c located at the end of this section for more detailed information on the number of persons fatally injured in motor vehicle traffic crashes in Ohio.

Figure 4.3. Number of deaths resulting from unintentional motor vehicle traffic related injury by the person injured, year, Ohio, 2000-2010



Source: Ohio Department of Health, Vital Statistics

Figure 4.4. Number and age adjusted rate of hospitalizations for unintentional motor vehicle traffic related injury by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

Nearly 4,800 inpatient hospitalizations resulted from unintentional motor vehicle traffic-related injury in Ohio in 2010. The motor vehicle traffic related hospitalization rate was 41 per 100,000 (Figure 4.4). The hospitalization rate was higher for males (52 per 100,000) compared to females (30 per 100,000). The highest rates were found among individuals 15-24 years (64 per 100,000) and 25-34 years (55 per 100,000). The lowest rates were found among children 14 years of age or less (Figure 4.5). See Table 4.2 for an unintentional motor vehicle traffic crash hospitalization risk profile.

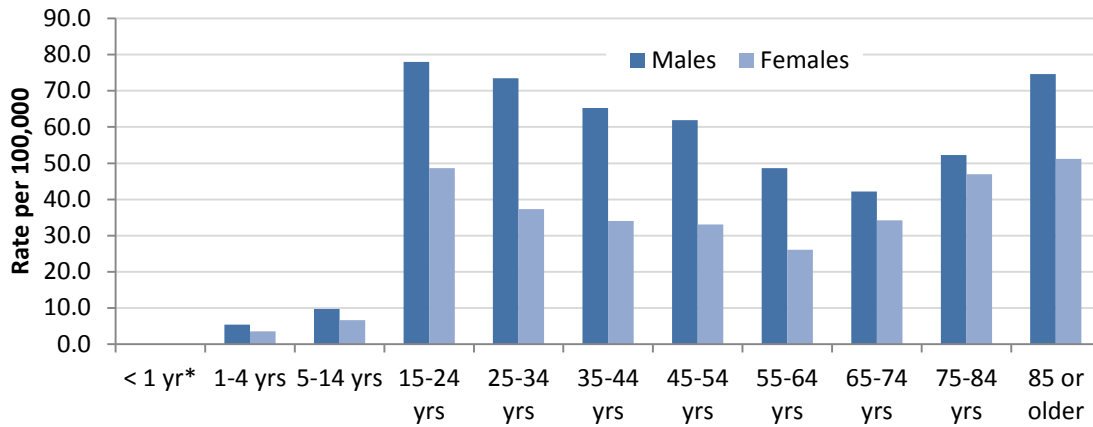
Table 4.2 Unintentional Motor Vehicle Traffic Crash Hospitalization Risk Profile

	2010 At Risk Groups	Annual trend since 2002
Overall		-34%
Sex	Males	Males (largest decrease)
Age	15-24	15-24 (largest decrease)

TRENDS:

As with deaths, hospitalizations resulting from unintentional motor vehicle traffic-related injury decreased 34 percent from 63 per 100,000 in 2002 to 41 per 100,000 in 2010. The average decrease was 3 hospitalizations per 100,000 per year. The decrease in hospitalizations was slightly higher among males (4 per 100,000) than females (3 per 100,000). Hospitalization rates decreased among ages 15 and older with the largest decrease occurring among ages 15-24 (7 per 100,000). See Tables 12a-b located at the end of this section for more detailed information on the number and rate of unintentional motor vehicle traffic crash hospitalizations.

Figure 4.5. Hospitalization rates from unintentional motor vehicle traffic crashes by age group and sex, Ohio, 2010



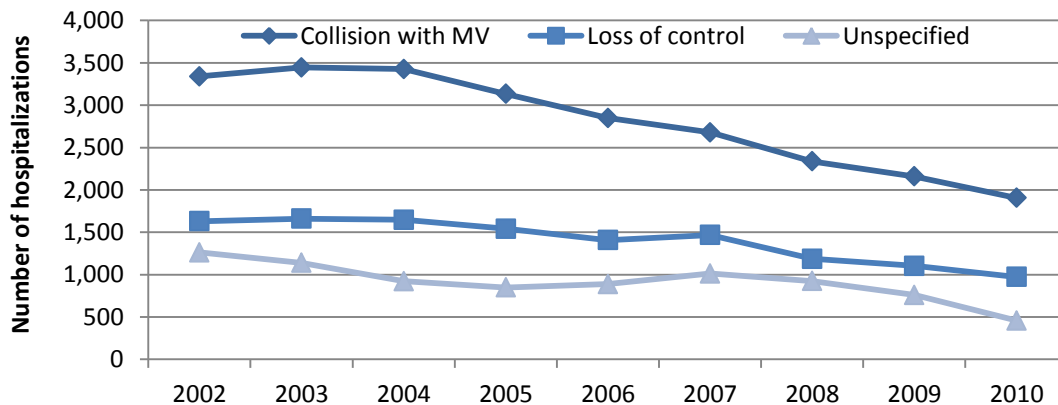
Source: Ohio Hospital Association

*Rate suppressed due to fewer than 20 Hospitalizations

NATURE OF CRASH:

The most common causes of motor vehicle traffic hospitalizations were a collision with another motor vehicle, loss of control (not on a highway), and a traffic crash of an unspecified nature. These categories combined account for nearly 75 percent of hospitalizations associated with motor vehicle traffic crashes each year. The number of hospitalizations for each of these categories has decreased from 2002 - 2010 with the largest decreases associated with collisions with other motor vehicles (204 per year). Hospitalizations resulting from motor vehicle traffic crashes associated with loss of control, not on highway (88 per year), and unspecified nature (70 per year) also experienced more modest decreases during this time period (Figure 4.6). See table 12c located at the end of this section for more detailed information on the number of hospitalizations by nature of traffic crash.

Figure 4.6. Number of hospitalizations resulting from unintentional motor vehicle traffic crashes by nature of crash, Ohio, 2002-2010



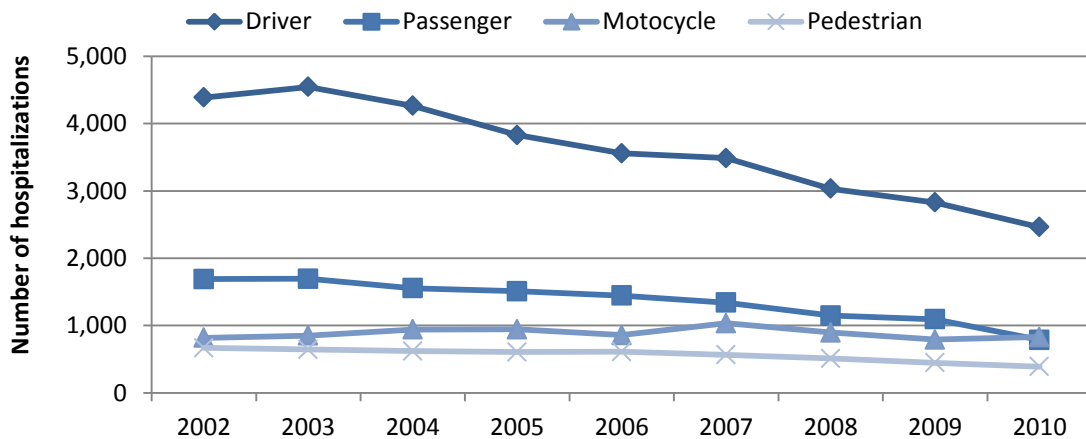
Source: Ohio Hospital Association

PERSON INJURED:

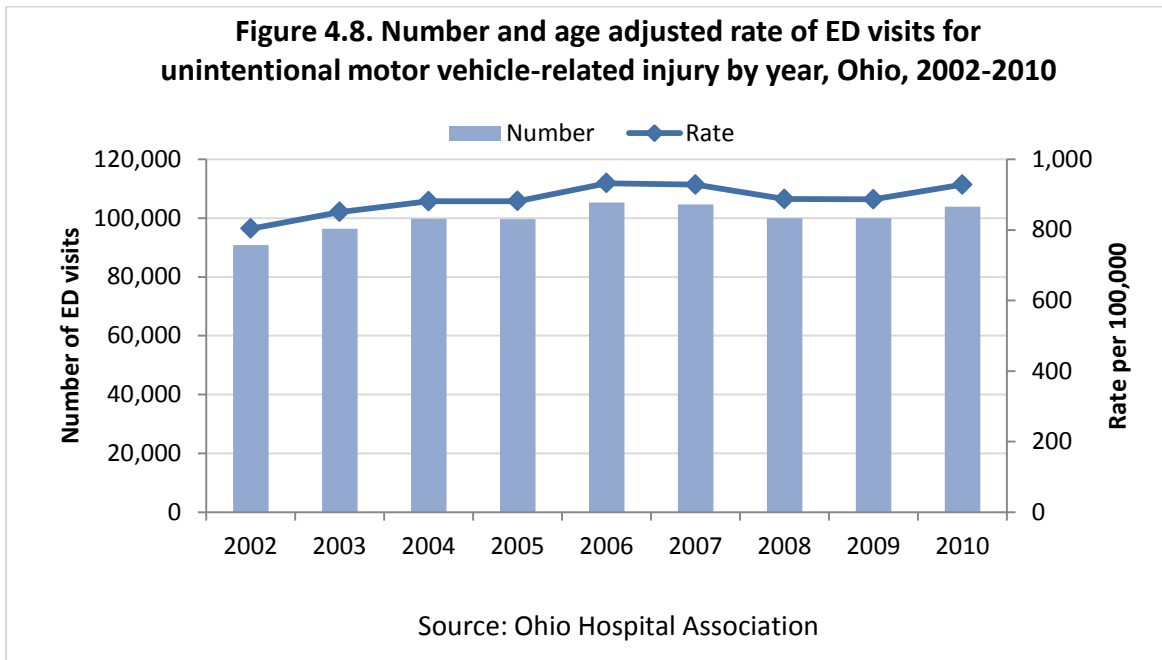
In 2010, most hospitalizations after a motor vehicle traffic crash were occupants of the vehicle. Approximately one-half of hospitalizations were the driver of the vehicle and nearly one in five were passengers in the vehicle or a motorcycle driver or passenger. Eight percent of the hospitalizations involved pedestrians injured in motor vehicle traffic crashes (Figure 4.7).

The decrease in motor vehicle traffic hospitalizations has been driven by decreases in hospitalizations among drivers (261 per year), passengers (107 per year), and pedestrians (33 per year). See tables 12d located at the end of this section for more detailed information on the number of persons injured in motor vehicle traffic related hospitalizations.

Figure 4.7. Number of hospitalizations resulting from unintentional motor vehicle traffic crashes by the person injured, Ohio, 2002-2010



Source: Ohio Hospital Association



EMERGENCY DEPARTMENT VISITS:

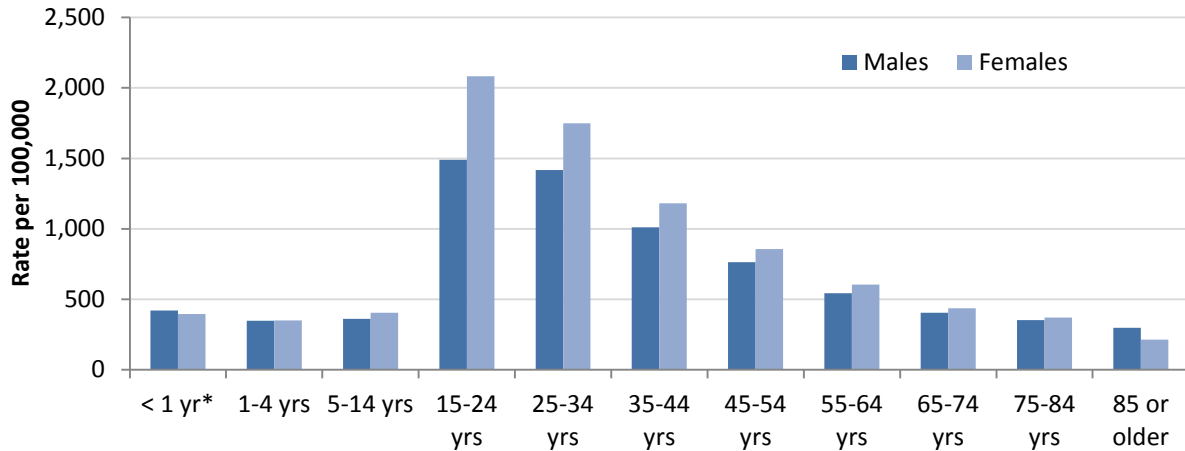
Approximately 104,000 emergency department (ED) visits resulted from unintentional motor vehicle traffic crash-related injury in 2010. The ED visit rate was 928 per 100,000 (Figure 4.8). The rate of unintentional motor vehicle traffic ED visits was higher among females (1,019 per 100,000) compared to males (839 per 100,000). ED visit rates were similar among children and teens ages 14 or younger but increased dramatically among driving-aged youth ages 15-24. Rates decreased with age among adults 25 or older (Figure 4.9). See Table 4.3 for an unintentional motor vehicle traffic crash ED visit risk profile.

Table 4.3 Unintentional Motor Vehicle Traffic Crash ED Visit Risk Profile		
	2010 At Risk Groups	Annual trend since 2002
Overall		+16%
Sex	Females	Females (largest increase)
Age	15-44	25-34 (largest increase)

TRENDS:

Since 2002, the rate of ED visits resulting from motor vehicle traffic crash-related injury increased from 803 per 100,000 in 2002 to 928 per 100,000 in 2010. The average annual increase was 11 per 100,000 per year. Rates increased 14 per 100,000 annually among females while rates did not follow a linear trend for males. The largest increase in annual rates was found among adults ages 25-34. See Tables 13a and 13b located at the end of this section for more detailed information on the number and rate of unintentional motor vehicle traffic crash ED visits.

Figure 4.9. ED visit rates per 100,000 resulting from unintentional motor vehicle traffic crash-related injury by age group and sex, Ohio, 2010

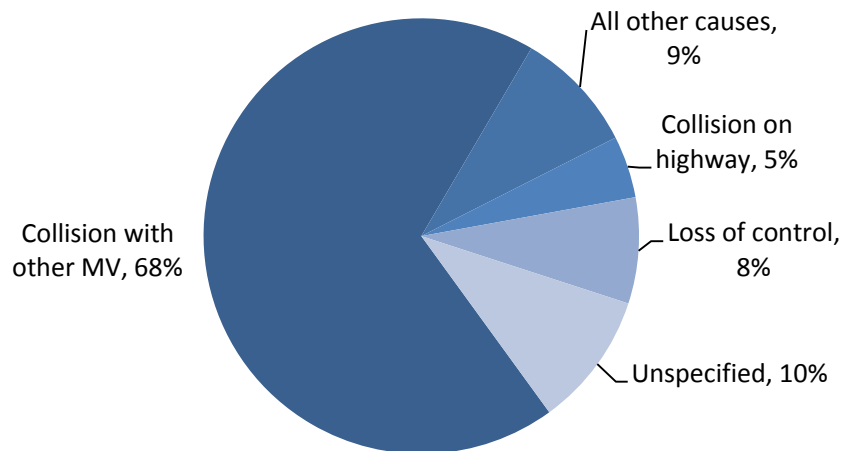


Source: Ohio Hospital Association

NATURE OF CRASH:

The most common causes of motor vehicle traffic crash-related ED visits were collision with another motor vehicle (68 percent), loss of control (8 percent), and collision on a highway (5 percent). These coding categories combined account for 81 percent of ED visits associated with motor vehicle traffic crashes each year. The number of ED visits associated with collisions on highways and collisions with pedestrians increased, but the other types of crashes did not follow a linear trend. See Table 13c located at the end of this section for more detailed information on the number and percentage of ED visits by nature of motor vehicle traffic crashes.

Figure 4.10. Distribution of ED visits resulting from motor vehicle traffic crashes by nature of crash, Ohio, 2010

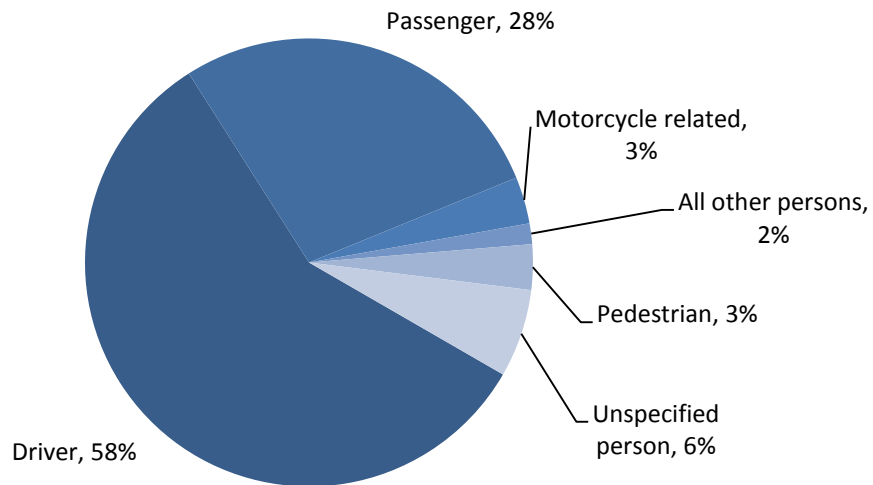


Source: Ohio Hospital Association

PERSON INJURED IN CRASH:

Most motor vehicle traffic-related ED visits involved an injury to either the driver (58 percent) or the passenger (28 percent) of the motor vehicle. In addition, 6 percent of ED visits were associated with an injury to an unspecified person and 3 percent were associated with injuries to pedestrians and persons riding a motorcycle. The largest increases in the number of ED visits were among passengers (378 per year), motorcyclists (119 per year), and pedestrians (97 per year). See Table 13d located at the end of this section for more detailed information on the number and percentage of persons injured in motor vehicle ED visits.

Figure 4.11. Distribution of ED visits resulting from motor vehicle traffic crashes by person injured, Ohio, 2010



Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 11a. Number of deaths resulting from unintentional motor vehicle traffic crash-related injury by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	1,314	1,376	1,471	1,279	1,328	1,357	1,277	1,293	1,242	1,036	1,155
Sex											
Males	868	938	982	845	931	902	880	899	882	695	803
Females	446	438	489	434	397	455	397	394	360	341	352
Age											
< 1 yr	<5	7	<5	<5	<5	<5	<5	<5	5	5	5
1-4 yrs	16	12	9	18	12	9	7	11	12	9	12
5-14 yrs	63	44	52	42	42	41	37	16	34	19	21
15-24 yrs	316	334	366	317	370	301	285	304	248	205	238
25-34 yrs	205	214	229	190	181	230	200	226	187	154	183
35-44 yrs	225	232	234	200	184	217	171	197	177	157	152
45-54 yrs	153	191	194	160	214	187	207	164	212	181	186
55-64 yrs	103	110	119	126	98	137	142	156	162	113	156
65-74 yrs	97	95	108	81	82	99	98	74	87	83	90
75-84 yrs	97	110	112	98	101	98	80	104	80	85	69
85 or older	37	27	46	45	40	38	47	37	38	25	43
Race/Ethnicity†											
White‡	1,133	1,231	1,286	1,109	1,159	1,183	1,120	1,116	1,079	890	988
Black‡	139	112	139	126	128	120	128	130	129	114	118
Hispanic	28	24	34	30	23	32	13	29	30	19	26
Other‡	13	8	7	8	12	13	14	16	<5	12	22

‡Non-Hispanic

Source: ODH Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 11b. Death rates per 100,000 resulting from unintentional motor vehicle traffic crash-related injury, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	11.5	12.0	12.8	11.1	11.5	11.7	10.9	11.1	10.6	8.9	9.8	-0.3
Sex†												
Males	16.1	17.1	17.9	15.4	16.7	16.3	15.7	16.1	15.6	12.3	14.1	-0.3
Females	7.5	7.2	8.1	7.2	6.5	7.5	6.5	6.5	5.9	5.5	5.7	-0.2
Age												
< 1 yr	*	*	*	*	*	*	*	*	*	*	*	*
1-4 yrs	*	*	*	*	*	*	*	*	*	*	*	*
5-14 yrs	3.8	2.7	3.2	2.6	2.7	2.6	2.4	*	2.3	*	1.4	*
15-24 yrs	20.3	21.3	23.1	19.9	23.3	19.0	18.1	19.3	15.8	13.1	15.0	-0.8
25-34 yrs	13.5	14.4	15.5	12.9	12.3	15.6	13.7	15.4	12.7	10.4	13.0	-0.2 (NL)
35-44 yrs	12.5	13.0	13.4	11.7	11.0	13.1	10.5	12.3	11.3	10.3	10.3	-0.2
45-54 yrs	9.7	11.7	11.8	9.6	12.6	10.9	11.9	9.4	12.1	10.3	10.7	0.0 (NL)
55-64 yrs	10.2	10.7	11.0	11.2	8.4	11.3	11.3	12.0	12.1	8.2	10.7	0.0 (NL)
65-74 yrs	12.3	12.2	14.0	10.5	10.7	12.9	12.7	9.4	10.7	9.9	10.6	-0.3 (NL)
75-84 yrs	17.9	20.0	20.1	17.5	18.0	17.5	14.3	18.7	14.6	15.7	12.7	-0.6
85 or older	20.8	14.9	24.9	23.6	20.6	19.0	22.7	17.2	17.2	11.0	18.7	-0.5 (NL)
Race/Ethnicity†												
White‡	11.7	12.6	13.2	11.4	11.9	12.1	11.4	11.4	10.9	9.1	10.1	-0.3
Black‡	10.9	8.6	10.5	9.6	9.5	9.0	9.4	9.4	9.7	8.5	8.2	-0.2 (NL)
Hispanic	13.7	12.9	14.5	14.4	7.6	13.1	*	10.6	10.7	*	8.3	*
Other‡	*	*	*	*	*	*	*	*	*	*	9.6	*

*Rates suppressed due to less than 20.

†Age adjusted to 2000 U.S. standard population

‡Non-Hispanic

NL: Interpret with caution because trend does not follow linear pattern

Source: ODH Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 11c: Number of unintentional motor vehicle deaths, by occupant injured and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Pedestrian	102	110	97	102	113	103	104	109	107	88	108	9%	<-1 (NL)
Pedal cycle	13	11	15	7	14	11	18	19	14	16	11	1%	*
Motorcycle	119	108	119	127	123	153	138	153	178	147	150	13%	5
3 wheeled vehicle	0	0	0	0	0	0	0	0	0	0	0	0%	*
Car	432	367	342	317	317	285	273	255	226	183	259	22%	-19
Pickup truck or van	51	46	47	43	42	47	39	45	42	27	27	2%	-2
Heavy transport vehicle	12	4	12	7	21	12	9	15	10	2	7	1%	*
Bus	0	0	0	1	1	0	1	1	1	0	5	0%	*
Other or unspecified vehicle	585	730	839	675	683	746	695	696	664	573	588	51%	-10 (NL)

NL: Interpret with caution because trend does not follow linear pattern

Source: ODH Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 12a. Number of hospitalization resulting from unintentional motor vehicle traffic crash-related injury, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	7,215	7,369	6,953	6,428	6,102	6,055	5,257	4,792	4,755
Sex									
Males	4,364	4,371	4,187	3,900	3,702	3,755	3,211	2,894	2,921
Females	2,851	2,998	2,766	2,528	2,400	2,300	2,046	1,898	1,834
Age									
< 1 yr	<5	<5	<5	<5	<5	<5	<5	<5	<5
1-4 yrs	77	53	68	74	82	59	56	59	26
5-14 yrs	323	312	267	293	350	324	300	212	125
15-24 yrs	1,858	1,880	1,679	1,550	1,439	1,361	1,144	1,044	1,008
25-34 yrs	1,196	1,186	1,124	1,022	975	1,025	823	770	780
35-44 yrs	1,265	1,252	1,185	1,016	944	921	785	743	733
45-54 yrs	978	1,036	1,064	971	915	940	842	754	822
55-64 yrs	566	655	621	619	587	596	561	531	537
65-74 yrs	399	436	382	385	353	376	309	297	322
75-84 yrs	401	409	424	373	334	314	308	269	266
85 or older	146	143	132	114	115	129	121	107	135

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 12b. Hospitalization rates per 100,000 resulting from unintentional motor vehicle traffic crash-related injury, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per year)
Overall†	63.2	64.2	60.5	55.8	53.1	52.6	45.5	41.4	41.0	-3.2
Sex†										
Males	78.8	78.6	75.1	69.7	66.1	67.1	57.3	51.4	52.0	-3.8
Females	47.9	50.2	46.3	42.3	40.3	38.5	34.1	31.7	30.4	-2.6
Age										
< 1 yr	*	*	*	*	*	*	*	*	*	*
1-4 yrs	12.8	8.9	11.4	12.5	14.0	10.0	9.5	10.0	4.5	-0.6 (NL)
5-14 yrs	20.0	19.5	16.9	18.9	22.8	21.4	20.0	14.2	8.2	-0.9 (NL)
15-24 yrs	117.4	117.9	105.2	97.3	91.0	86.4	72.8	66.7	63.5	-7.4
25-34 yrs	81.1	80.9	76.9	70.1	66.9	70.1	56.2	52.1	55.3	-3.8
35-44 yrs	72.5	73.4	70.7	61.7	58.2	57.8	50.5	48.9	49.5	-3.5
45-54 yrs	59.4	62.0	62.7	56.5	52.7	53.8	48.1	43.0	47.2	-2.3
55-64 yrs	52.2	58.2	53.1	51.0	46.7	45.9	42.1	38.3	37.0	-2.5
65-74 yrs	51.7	56.7	49.8	50.3	45.9	48.1	38.3	35.5	37.9	-2.4
75-84 yrs	72.5	73.6	76.3	67.3	60.8	57.8	57.6	49.6	49.1	-3.5
85 or older	77.3	73.0	65.9	55.1	53.5	58.0	52.9	47.0	58.6	-2.9

*Rates suppressed due to less than 20 hospitalizations.

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 12c. Number of unintentional motor vehicle traffic hospitalizations by nature of collision and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per year)
Nature of Collision											
Collision with train	55	65	43	12	32	17	18	11	6	*	*
Re-entrant collision with other MV	15	30	16	11	8	7	<5	7	<5	*	*
Collision with other MV	3,339	3,445	3,427	3,133	2,849	2,678	2,337	2,160	1,907	40.1%	-204
Collision with other non-motor vehicle	240	233	205	201	237	227	263	235	276	5.8%	5 (NL)
Collision with pedestrian	576	587	565	562	556	511	462	405	361	7.6%	-28
Collision on highway	700	793	726	668	596	602	577	550	542	11.4%	-29
Loss of control, not on highway	1,630	1,660	1,648	1,541	1,408	1,468	1,187	1,103	973	20.5%	-88
Noncollision while boarding or alighting	64	76	84	59	62	58	39	66	36	0.8%	-4 (NL)
Other noncollision	287	327	288	308	295	284	246	229	194	4.1%	-13
Unspecified	1,263	1,140	922	848	889	1,013	924	759	457	9.6%	-70

*Suppressed due to less than 20 hospitalizations

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 12d. Number of unintentional motor vehicle traffic hospitalizations by person injured and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Person Injured											
Driver	4,387	4,545	4,265	3,828	3,558	3,486	3,033	2,828	2,463	51.8%	-261
Passenger	1,690	1,695	1,555	1,510	1,444	1,341	1,149	1,093	787	16.6%	-107
Motorcyclists	817	852	941	944	859	1035	896	792	830	17.5%	-2 (NL)
Street care occupant	<5	0	<5	<5	<5	<5	<5	5	<5	*	*
Occupant of animal drawn vehicle	6	<5	<5	5	7	8	8	0	8	*	*
Pedal cyclist	112	122	112	112	141	126	165	110	107	2.3%	1 NL
Pedestrian	667	644	621	607	611	566	511	447	391	8.2%	-33
Other specified person	62	55	42	35	41	27	36	32	29	0.6%	-4
Unspecified person	371	361	310	301	267	274	257	218	139	2.9%	-25

*Rates suppressed due to less than 20 hospitalizations

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 13a. Number of ED visits resulting from unintentional motor vehicle traffic crash-related injury by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	90,873	96,350	99,747	99,644	105,304	104,675	99,927	99,984	103,862
Sex									
Males	41,513	43,766	45,184	45,278	47,731	47,686	45,399	45,089	46,463
Females	49,360	52,584	54,563	54,366	57,573	56,989	54,528	54,895	57,397
Age									
< 1 yr	405	450	550	452	555	565	579	563	568
1-4 yrs	1,872	1,858	1,806	1,852	2,008	2,055	2,046	2,169	2,029
5-14 yrs	6,006	6,207	6,194	6,177	6,692	6,300	6,185	5,955	5,832
15-24 yrs	28,482	30,405	30,733	30,112	30,914	29,734	27,665	27,893	28,278
25-34 yrs	18,110	19,032	20,065	20,292	21,230	21,571	20,779	20,867	22,332
35-44 yrs	15,181	15,726	16,070	16,271	16,763	17,016	15,849	15,524	16,230
45-54 yrs	10,507	11,501	12,238	12,495	13,878	14,021	13,725	13,452	14,131
55-64 yrs	5,246	5,798	6,321	6,397	7,186	7,352	7,421	7,696	8,350
65-74 yrs	2,832	3,018	3,282	3,169	3,438	3,424	3,363	3,416	3,593
75-84 yrs	1,830	1,911	2,026	2,021	2,119	2,086	1,811	1,943	1,963
85 or older	402	444	462	406	521	551	504	506	556

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 13b. ED visit rates per 100,000 resulting from unintentional motor vehicle traffic crash-related injury by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall	803	851	881	882	932	928	887	886	928	11.1
Sex										
Males	744	782	808	810	854	854	813	807	839	8.4 (NL)
Females	863	920	954	954	1,011	1,004	963	968	1,019	13.9
Age										
< 1 yr	275	305	369	309	375	373	379	381	409	14.1
1-4 yrs	311	311	303	312	342	350	346	367	349	7.4
5-14 yrs	372	388	392	398	436	416	413	398	383	2.3 (NL)
15-24 yrs	1,800	1,906	1,926	1,890	1,954	1,889	1,760	1,782	1,782	13.0 (NL)
25-34 yrs	1,227	1,298	1,373	1,392	1,458	1,476	1,420	1,412	1,584	32.4
35-44 yrs	870	921	959	987	1,033	1,068	1,019	1,021	1,097	23.5
45-54 yrs	638	688	722	728	799	802	784	767	811	18.8
55-64 yrs	484	515	541	527	572	566	557	555	575	9.2
65-74 yrs	367	393	428	414	447	438	417	409	423	4.5 (NL)
75-84 yrs	331	344	365	365	386	384	339	358	363	2.3 (NL)
85 or older	213	227	230	196	243	248	220	222	241	2.2 (NL)

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 13c. Number of ED visits from motor vehicle traffic crash-related injury by nature of crash and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Nature of crash											
Collision with train	149	392	38	48	334	111	71	61	57	0%	-21 (NL)
Re-entrant collision with other MV	106	196	40	94	139	58	85	50	51	0%	-10 (NL)
Collision with other MV	60,018	65,249	68,369	68,119	71,058	69,413	65,801	67,364	70,334	68%	729 (NL)
Collision with other non-motor vehicle	2,748	1,766	1,887	1,823	2,206	2,665	2,652	2,948	3,159	3%	126 (NL)
Collision with pedestrian	2,355	2,437	2,503	2,659	3,168	3,057	3,088	2,972	2,880	3%	87.9
Collision on highway	3,110	4,112	4,040	4,249	4,149	4,765	5,109	4,720	4,730	5%	182.6
Loss of control	7,915	8,456	8,634	9,324	8,894	9,095	8,928	8,000	8,089	8%	-5 (NL)
Noncollision while boarding or alighting	953	856	843	877	1,121	1,216	1,203	1,128	1,061	1%	38 (NL)
Other noncollision	2,211	2,082	2,205	2,319	2,722	2,873	2,792	3,025	3,231	3%	144 (NL)
Unspecified	11,324	10,813	11,191	10,135	11,528	11,427	10,204	9,726	10,270	10%	-136 (NL)

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

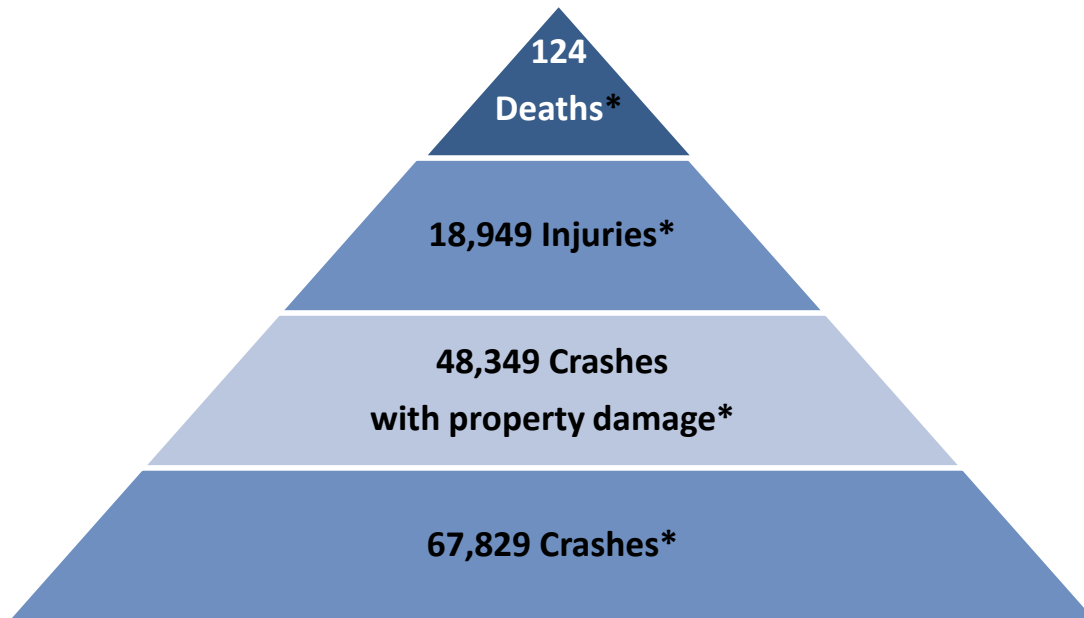
Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 13d. Number of ED visits from motor vehicle traffic crash-related injury by person injured and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Person injured											
Driver	53,187	56,713	58,693	58,653	60,369	60,330	57,037	56,815	59,948	58%	428 (NL)
Passenger	25,429	26,427	27,357	27,193	29,063	28,725	27,522	28,627	28,983	28%	378
Motorcyclist	2,248	2,618	3,022	3,184	3,325	3,603	3,581	3,072	3,244	3%	115
Passenger of motorcyclist	216	237	245	321	281	327	637	323	334	0%	25 (NL)
Occupant of streetcar	51	21	24	29	35	24	23	31	34	0%	-1 (NL)
Animal related	21	17	24	29	43	41	22	25	32	0%	1 (NL)
Pedal cyclist	860	854	830	907	1,039	1,094	1,097	1,069	1,079	1%	37.4
Pedestrian	2,593	2,692	2,727	2,951	3,408	3,388	3,335	3,277	3,198	3%	97
Other specified person	294	348	416	319	303	317	292	361	354	0%	0.5 (NL)
Unspecified person	5,870	5,903	6,400	6,060	7,244	6,831	6,664	6,394	6,656	6%	99 (NL)

Source: Ohio Hospital Association

SECTION 3.2A: TEEN DRIVERS



*SOURCE: OHIO TRAFFIC CRASH STATISTICS, 2011

While the number of injuries treated in health care facilities has decreased over the past decade, motor vehicle traffic crashes among teen drivers remains a public health and safety issue. In 2011, nearly 290,000 motor vehicle traffic crashes were reported to the Ohio Department of Public Safety. Of these crashes, 67,829 or 14 percent involved drivers ages 16-20. The crashes ranged in severity with 124 resulting in death, nearly 19,000 resulting in injury, and approximately 48,000 resulting in property damage. Teen drivers were disproportionately involved in crashes compared to all other age groups. Teenage males were more likely to be involved in a crash than females.

RISK FACTORS

There are many well-known factors that raise a driver's risk of being killed or injured in a crash:

- **Speed** – Among Ohio drivers of all age groups in 2010:
 - 156 fatal crashes were caused by speeding or driving at unsafe speeds.
 - 5,306 crashes resulting in injuries were caused by speeding or driving at unsafe speeds.
 - 9,376 crashes resulting in property damage were caused by speeding or driving at unsafe speeds.
- **Alcohol** - Among Ohio drivers ages 16-20 in 2010:
 - 36 fatal crashes were caused by alcohol impaired drivers.
 - 91 percent of fatal crashes involved a driver ages 16-20 with a blood alcohol concentration of 0.08 or higher.

Ohio Violence and Injury Prevention Program, Ohio Department of Health

- 7 percent of high school students in Ohio reported driving a car or other vehicle when they had been drinking alcohol in 2011. No differences in the percentage of students reporting episodes of drinking and driving were found by sex while students in grade 12 were more likely to drive after drinking alcohol (13 percent) than students in grade 10 (4 percent).
- **Lack of seat belt use** -
 - Only 29 percent of occupants aged 16-20 who were killed in traffic crashes were restrained.
 - 10 percent of high school students in Ohio reported “never” or “rarely” wearing a seat belt when driving a car. Males were more likely to “never” or “rarely” wear a seat belt (13 percent) than females (6 percent). No differences were found by grade level.
- **Driving at night** – The fatal crash rate of 16-year-olds is nearly twice as high at night.¹
- **Driver distractions** such as talking on a cell phone and carrying multiple peer passengers are risky. Teen passengers and cell phones are two distractions proven to kill teens.² Two or more peer passengers more than triples the risk of a fatal crash with a teen at the wheel.³ The risk is not just for the driver. Most teen passengers who die in crashes are riding with a teen driver.

REFERENCES:

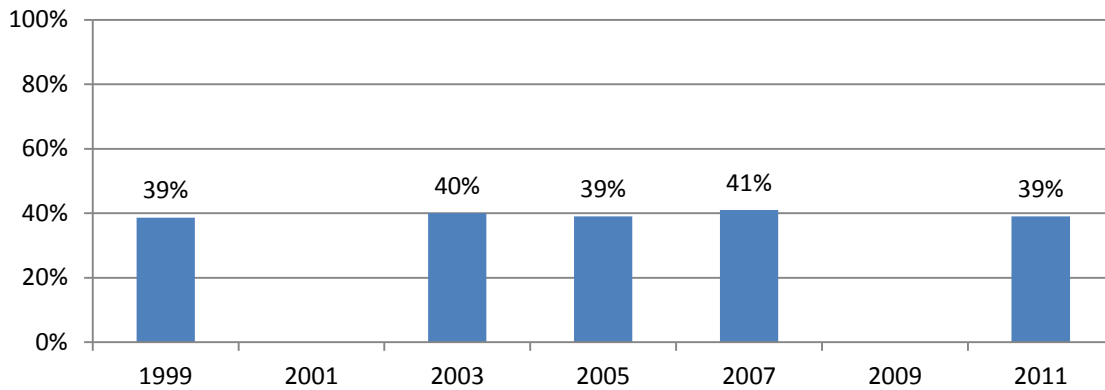
¹ Insurance Institute for Highway Safety (IIHS). Beginning Teenage Drivers. 2007. Available at: http://www.iihs.org/brochures/pdf/beginning_drivers.pdf. Accessed April 7, 2010.

² Winston FK, et al. Eds. Driving Through the Eyes of Teens, A Closer Look. Published by The Children’s Hospital of Philadelphia and State Farm Insurance Companies®. 2009

³ Teen Driver Source, Children’s Hospital of Philadelphia website http://www.teendriversource.org/support_gov

SECTION 3.2B: YOUTH SEAT BELT USE

Figure 4.12. Percentage of high school students who reported always wearing a seatbelt when riding in a motor vehicle, Ohio, 1999, 2003, 2005, 2007, and 2011



Source: Ohio Youth Risk Behavior Survey

SELF REPORTED SEAT BELT USE:

Approximately 4 in 10 high school students reported “always” using a seat belt when they ride in a motor vehicle in 2011 (Figure 4.12). Reported seat belt use was similar for males (37 percent) and females (41 percent). Reported seat belt use increased by grade level with students in grade 12 (44 percent) being more likely to “always” use seat belts than students in grade 9 (35 percent). White students (42 percent) were more likely report “always” using a seat belt than African American (27 percent) or Hispanic (30 percent) students.

TRENDS IN SEAT BELT USE:

The percentage of high school students who “always” reported wearing a seat belt has not changed since 1999. Seat belt use patterns by sex, grade, race or ethnicity did not change during the period. See Tables 4a-b located on the following page for more detailed information on the reported seat belt use among high school students in Ohio.

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 14a. Percentage of high school students who reported seat belt when they ride in a vehicle by frequency, Ohio, 1999, 2003, 2005, 2007, and 2011

	1999	2001	2003	2005	2007	2009	2011
Frequency of Seat Belt Use							
Always	38.6%	NA	40.1%	38.9%	40.8%	NA	38.5%
Most of the time	30.1%		28.5%	29.4%	28.9%		30.7%
Sometimes	15.5%		16.0%	15.1%	16.0%		14.1%
Rarely	10.4%		9.9%	10.5%	10.1%		11.0%
Never	5.4%		5.6%	6.0%	4.2%		5.8%

NA: Did not receive sufficient response rate for weighted data

Source: Ohio Youth Risk Behavior Survey

Table 14b. Percentage of high school students who reported always wearing a seat belt when they ride in a vehicle, Ohio, 1999, 2003, 2005, 2007, 2011

	1999	2001	2003	2005	2007	2009	2011
Overall	38.6%	NA	40.1%	38.9%	40.8%	NA	38.5%
Sex							
Males	32.6%		38.4%	35.8%	37.5%		36.6%
Females	44.9%		42.2%	42.1%	44.3%		40.5%
Grade							
9th	35.9%		32.5%	35.5%	32.1%		34.7%
10th	38.1%		39.2%	36.9%	42.2%		39.7%
11th	38.9%		41.3%	41.7%	43.8%		37.7%
12th	42.6%		48.2%	42.4%	47.6%		43.9%
Race/Ethnicity							
White, non-Hispanic	40.5%		44.0%	42.6%	42.9%		42.2%
Black, non-Hispanic	30.8%		*	20.0%	28.5%		26.5%
Hispanic	*		*	*	38.1%		30.0%

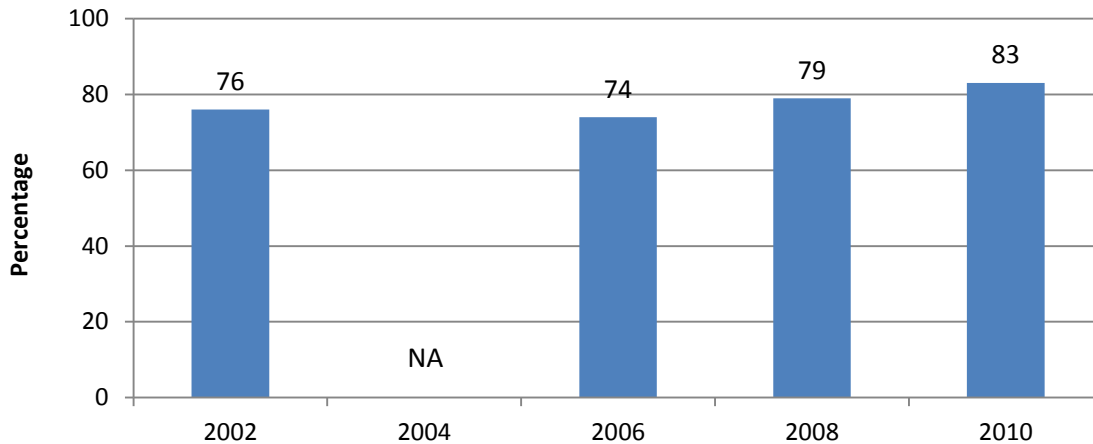
*Percentage suppressed due to few than 100 respondents in subgroup.

NA: Did not receive sufficient response rate for weighted data

Source: Ohio Youth Risk Behavior Survey

SECTION 3.2c: ADULT SEAT BELT USE

Figure 4.13. Percentage of adults who reported always using a seat belt when riding in a motor vehicle, Ohio, 2002, 2006, 2008 and 2010



Source: Ohio Behavioral Risk Factor Surveillance System

SELF REPORTED SEAT BELT USE:

Approximately 8 in 10 adults reported “always” using a seat belt when they ride in a motor vehicle in 2010 (Figure 4.13). Several important patterns were found in frequent seat belt use. Females were more likely to report “always” wearing a seat belt (86 percent) compared to males (79 percent). Adults ages 55 or older were more likely to report “always” wearing a seat belt than adults ages 44 or younger. No differences were found by education, household poverty, employment, or marital status.

TRENDS:

The percentage of adults who reported “always” using a seat belt increased from 76 percent in 2002 to 83 percent in 2010 (Figure 4.13). Significant increases were observed in both males and females as well as adults aged 35 or older, completing post secondary education, household incomes well above poverty, married couples, and currently employed. See Tables 15a-b located on the following page for more details about self-reported seat belt use among adult Ohioans.

Table 15a. Prevalence of seat belt use among adults ages 18 or older by frequency of use, Ohio, 2002-2010

	2002		2006		2008		2010	
	Percent	95% CI*	Percent	95% CI*	Percent	95% CI*	Percent	95% CI*
Always	76.3	(74.7-77.9)	74.0	(71.5-76.4)	78.8	(77.7-80.0)	82.6	(81.2-84.0)
Nearly Always	10.3	(9.2-11.5)	14.2	(12.3-16.1)	11.8	(10.9-12.7)	8.8	(7.8-9.9)
Sometimes	6.0	(5.1-6.9)	6.1	(4.8-7.4)	4.6	(4.0-5.2)	4.0	(3.3-4.7)
Seldom	3.0	(2.4-3.7)	2.7	(1.8-3.7)	2.2	(1.8-2.6)	2.0	(1.5-2.5)
Never	4.1	(3.4-4.8)	2.8	(1.7-4.0)	2.3	(1.9-2.8)	2.5	(1.8-3.1)
Never ride in a car	0.2	(0.1-0.4)	0.1	(0.0-0.2)	0.2	(0.0-0.3)	0.1	(0.1-0.2)

Source: Ohio Behavioral Risk Factor Surveillance System

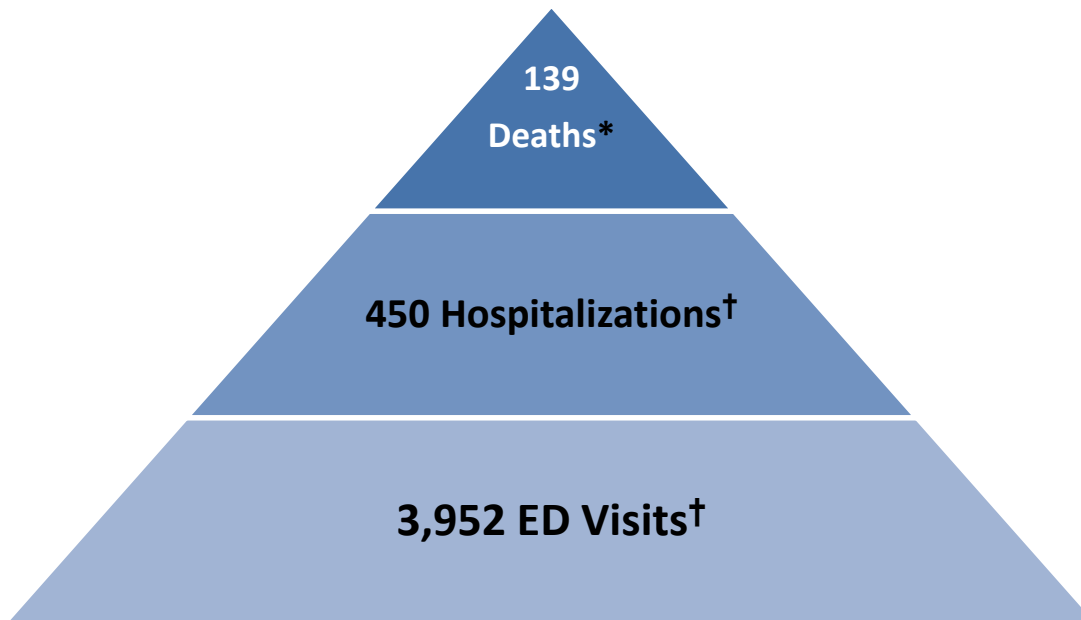
Table 15b. Prevalence of adults ages 18 or older who reported always using a seat belt, Ohio, 2002-2010

	2002		2006		2008		2010	
	Percent	95% CI*	Percent	95% CI*	Percent	95% CI*	Percent	95% CI*
Sex								
Males	72.2	(69.6-74.7)	69.0	(64.9-73.0)	73.6	(71.7-75.5)	79.0	(76.6-81.4)
Females	80.0	(78.1-81.9)	78.5	(75.7-81.4)	83.6	(82.4-84.9)	85.9	(84.4-87.4)
Age Group								
18-24	69.3	(63.2-75.5)	70.3	(59.8-80.8)	70.9	(65.3-76.5)	72.7	(63.0-82.4)
25-34	75.4	(71.6-79.2)	68.7	(61.9-75.6)	75.0	(71.5-78.4)	75.2	(70.4-80.0)
35-44	75.1	(71.7-78.4)	70.5	(64.8-76.2)	77.8	(75.3-80.3)	84.3	(81.2-87.3)
45-54	78.6	(75.5-81.7)	73.8	(69.1-78.5)	80.3	(78.3-82.4)	84.2	(81.8-86.7)
55-64	76.7	(72.8-80.6)	80.5	(76.2-84.8)	82.4	(80.6-84.2)	83.3	(81.0-85.7)
65 or older	80.8	(77.4-84.2)	80.2	(76.3-84.0)	84.1	(82.7-85.5)	86.7	(84.9-88.6)
Education Level								
Did not complete HS	71.7	(65.5-77.9)	66.3	(56.5-76.1)	70.2	(65.1-75.3)	74.3	(67.9-80.7)
Completed HS/GED	73.1	(70.5-75.8)	71.9	(67.7-76.0)	74.6	(72.5-76.7)	77.9	(75.2-80.6)
Some college	74.5	(71.3-77.6)	73.8	(69.1-78.4)	79.2	(77.0-81.4)	82.8	(80.2-85.5)
College graduate	84.3	(81.8-86.8)	79.0	(74.8-83.2)	85.3	(83.6-86.9)	88.4	(86.5-90.4)
Poverty Status								
Below poverty	72.2	(66.5-78.0)	68.0	(58.8-77.3)	68.2	(63.3-73.1)	75.4	(70.0-80.8)
Above poverty < 200%	74.6	(71.2-78.1)	75.3	(70.4-80.1)	75.6	(72.7-78.5)	76.5	(72.8-80.2)
Above poverty > 200%	77.5	(75.5-79.4)	74.6	(71.6-77.7)	81.1	(79.8-82.4)	85.4	(83.8-87.0)
Missing household or income information	77.8	(73.2-82.4)	75.8	(68.0-83.5)	80.3	(77.2-83.5)	85.4	(81.8-89.0)
Marital Status								
Married or unmarried couple	78.8	(76.9-80.8)	74.4	(71.4-77.4)	81.1	(79.8-82.4)	84.9	(83.2-86.5)
Separated, widowed or divorced	74.9	(71.7-78.0)	75.5	(71.3-79.7)	77.2	(75.1-79.4)	80.6	(77.8-83.3)
Never married	69.8	(65.5-74.0)	70.7	(63.3-78.1)	72.2	(68.5-76.0)	74.4	(69.6-79.1)
Employment Status								
Employed	75.4	(73.3-77.4)	72.8	(69.6-76.0)	78.4	(76.9-79.9)	82.2	(80.3-84.1)
Not employed	66.7	(58.6-74.8)	56.7	(41.4-72.1)	70.7	(64.6-76.7)	73.1	(66.8-79.5)
Other	79.4	(76.8-82.1)	77.9	(74.1-81.8)	81.0	(79.3-82.7)	85.7	(83.8-87.6)

*95% CI: 95% confidence interval.

Source: Ohio Behavioral Risk Factor Surveillance System

SECTION 3.3: PEDESTRIAN INJURIES



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

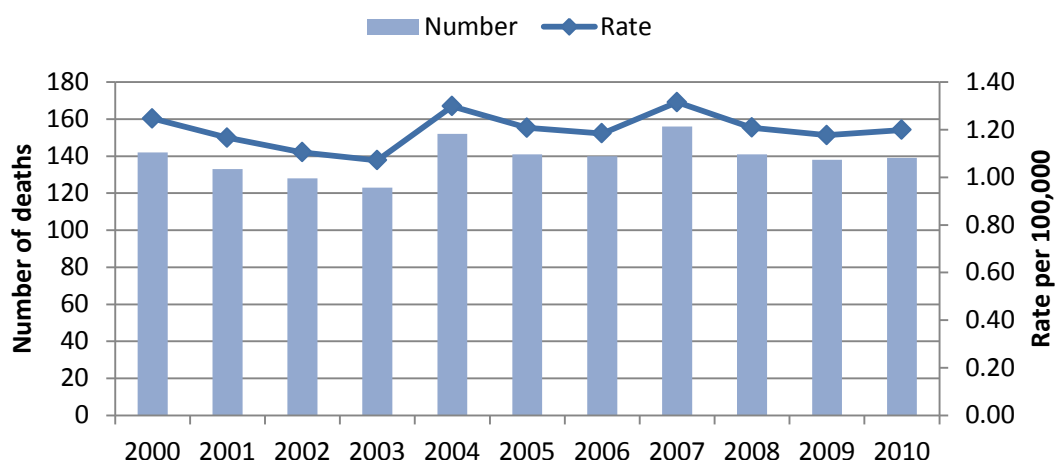
Patterns:

- The highest fatality rates were found among adults ages 75-84 and blacks.
- The highest rates of non-fatal pedestrian injuries occurred among youth and adults ages 15-24.
- Most fatal and non-fatal pedestrian injuries resulted from motor vehicle traffic crashes.

Trends:

- Death and ED visit rates have largely remained the same over time.
- Hospitalization rates have increased 31 percent since 2002.
- Most fatal and non-fatal pedestrian injuries were associated with motor vehicle traffic crashes throughout the study period.

Figure 5.1. Number and age adjusted rate of pedestrian deaths by year, Ohio, 2000-2010



Source: Ohio Department of Health, Vital Statistics

DEATHS:

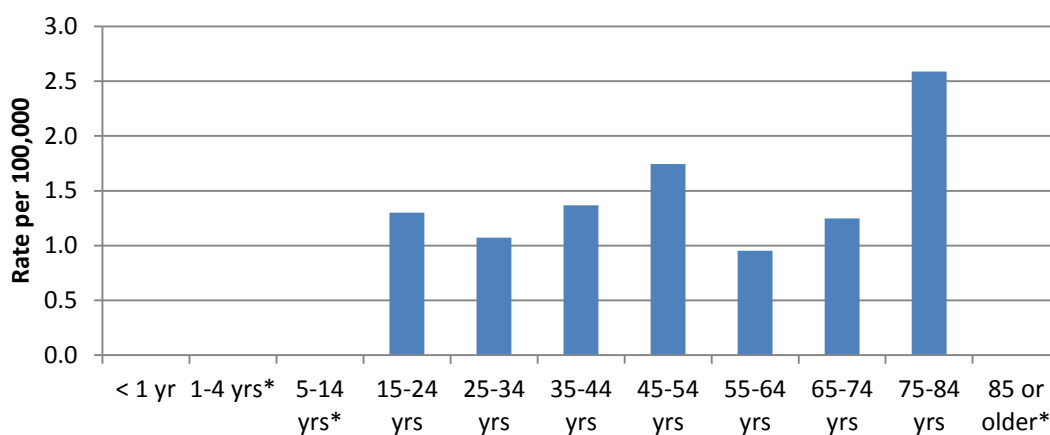
In 2010, 139 deaths resulted from pedestrian injuries. The death rate was 1.2 per 100,000 (Figure 5.1). Death rates were two times higher among males (1.7 per 100,000) compared to females (0.8 per 100,000). The highest death rates were found among adults 75-84 years (2.6 per 100,000) and 45-54 years (1.8 per 100,000) (Figure 5.2). Fatality rates among blacks (2.0 per 100,000) were two times higher than whites (1.1 per 100,000). See Table 5.1 for a pedestrian injury death risk profile. Approximately 80 percent of pedestrian fatalities were associated with motor vehicle traffic and 15 percent were associated with non-traffic situations while 5 percent were unspecified (Figure 5.3).

Table 5.1 Pedestrian Death Risk Profile		
	2010 At Risk Groups	Annual trend since 2000
Overall		Inconsistent
Sex	Males	Inconsistent
Age	75-84	45-54 (+0.07/100,000)
Race and ethnicity	Blacks	Whites (-0.05/100,000)

TRENDS:

Pedestrian fatality rates decreased slightly from 1.25 per 100,000 in 2000 to 1.20 per 100,000 in 2010 (Figure 5.1). The annual rate changes were inconsistent over time for both males and females. Slight increases were found in average annual rates among ages 45-54 years (0.07 per 100,000 per year) and 15-24 years (0.03 per 100,000 per year) while a slight decrease was found among ages 55-64 years (-0.03 per 100,000 per year). Fatality rates decreased on average by -0.05 per 100,000 per year among whites while rates did not follow a consistent trend among blacks. See Tables 16a-c located at the end of this section for more detailed information on the number and rate of pedestrian deaths in Ohio.

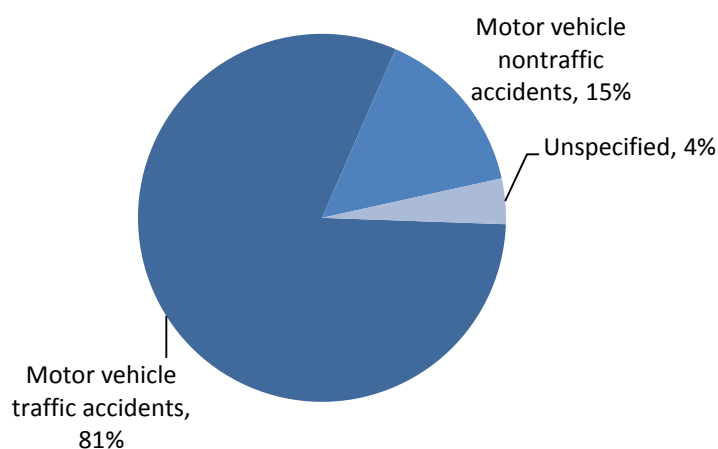
Figure 5.2. Death rates resulting from pedestrian injuries, by age, Ohio, 2009-2010



Source: Ohio Department of Health, Vital Statistics

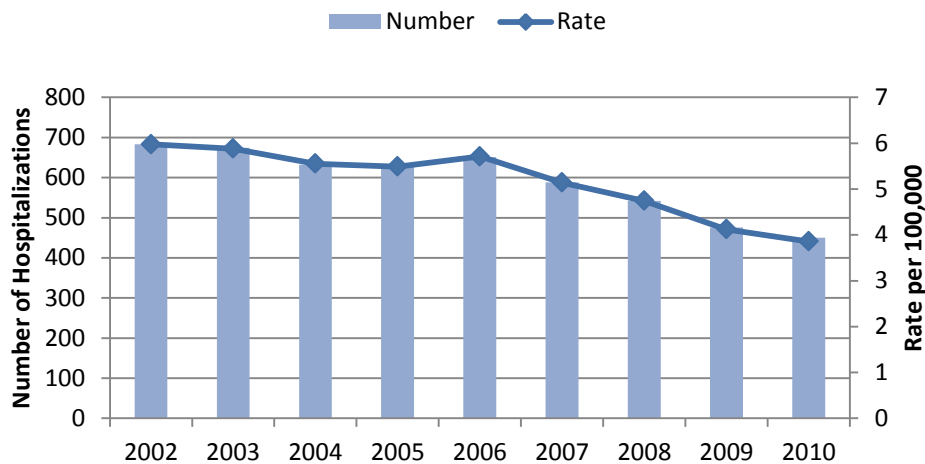
*Rates suppress due to small cell sizes

Figure 5.3. Distribution of deathss resulting from pedestrian injuries by cause, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

Figure 5.4. Number and age adjusted rate for pedestrian injury hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

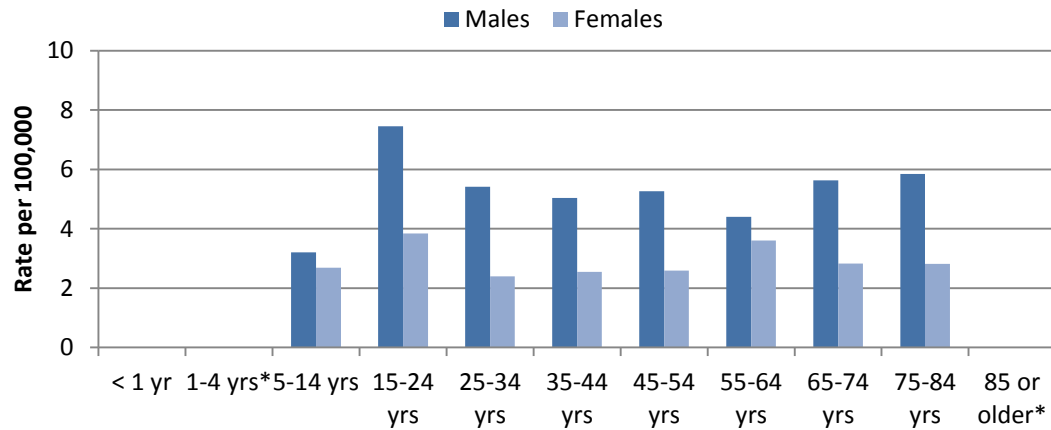
In 2010, 450 hospitalizations resulted from pedestrian injuries. The hospitalization rate was 3.9 per 100,000 (Figure 5.4). Rates among males were two times higher than females (5.6 versus 2.8 per 100,000). For males, hospitalization rates increased from birth through age 24 then decreased among ages 25-34 and leveled off ages 35 or older. For females, hospitalizations were fairly consistent across the lifespan (Figure 5.5). See Table 5.2 for a pedestrian injury hospitalization risk profile. Nearly 90 percent of pedestrian injuries were associated with motor vehicle traffic crashes (Figure 5.6).

Table 5.2 Pedestrian Injury Hospitalization Risk Profile		
	2010 At Risk Groups	Annual trend since 2002
Overall		-35%
Sex	Males	Females (largest decrease)
Age	15-24	75-84 and 5-14 (largest decreases)

TRENDS:

Hospitalization rates decreased from 6.0 per 100,000 in 2010 to 3.9 per 100,000 in 2002 (Figure 5.4). The average annual decrease was -0.2 per 100,000 per year. Rates decreased -0.2 per 100,000 per year among females while rates among males did not follow a consistent trend. Hospitalization rates decreased among all age groups with the largest decreases found among ages 75-84 (0.5 per 100,000 per year) and children ages 5-14 (0.4 per 100,000 per year). The number of hospitalizations associated with motor vehicle traffic crashes decreased 28 per year while non-traffic related hospitalizations did not follow a consistent trend over time. See Tables 17a-c located at the end of this section for more detailed information on unintentional pedestrian injury hospitalizations.

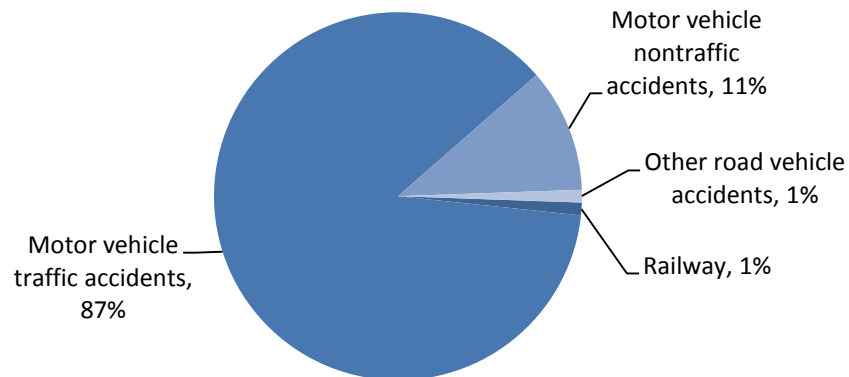
Figure 5.5. Hospitalization rates resulting from pedestrian injuries, by age and sex, Ohio, 2010



Source: Ohio Hospital Association

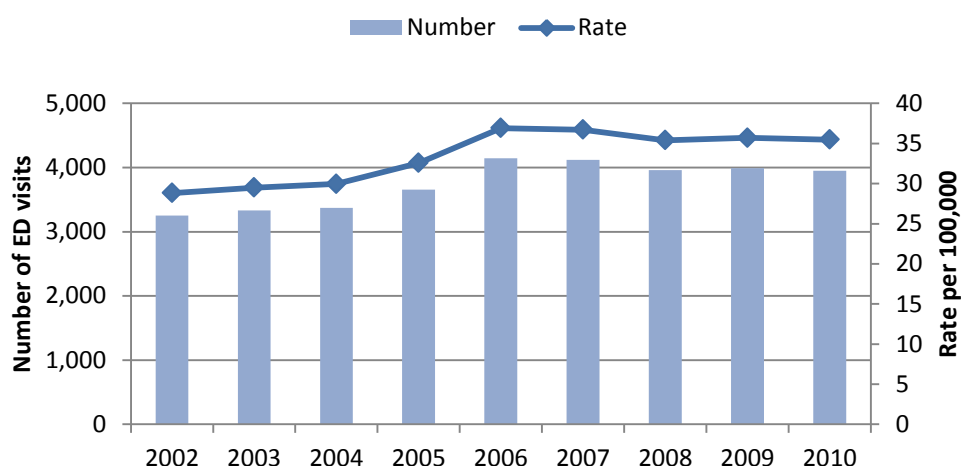
*Rates suppress due to small cell sizes

Figure 5.6. Distribution of hospitalizations resulting from pedestrian injuries by cause, Ohio, 2010



Source: Ohio Hospital Association

Figure 5.7. Number and age adjusted rate for pedestrian injury ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

In 2010, roughly 4,000 ED visits resulted from pedestrian injuries. The ED visit rate was 35.5 per 100,000 (Figure 5.7). The rate of ED visits was higher among males (42 per 100,000) than females (29 per 100,000). For both males and females, ED visit rates increased with age from birth through age 24 then steadily decreased after age 25 (Figure 5.8). See Table 5.3 for a pedestrian injury ED visit risk profile. Approximately 81 percent of pedestrian injury related ED visits were associated with motor vehicle traffic crashes. Nearly 12 percent of ED visits were associated with motor vehicle non-traffic crashes and 7 percent involved other road vehicles (Figure 5.9).

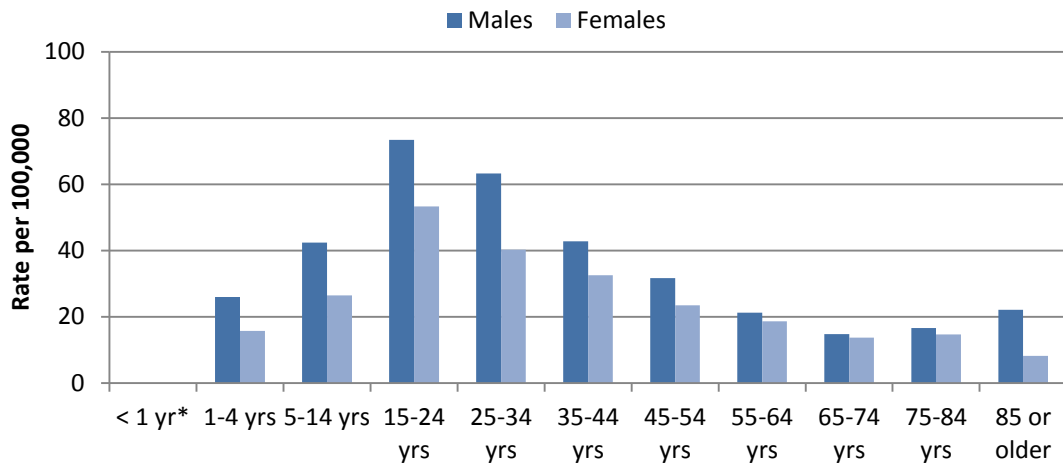
Table 5.3 Pedestrian Injury ED Visit Risk Profile

	2010 At Risk Groups	Annual trend since 2002
Overall		+24%
Sex	Males	Males (largest increase)
Age	15-24	15-24 (largest increase)

TRENDS:

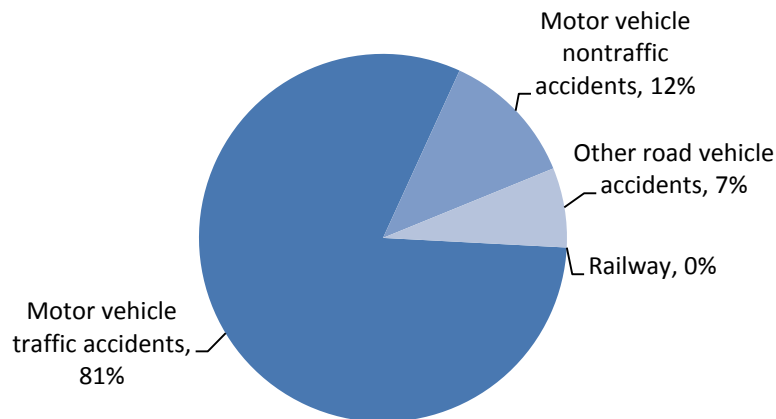
ED visit rates increased from 29 per 100,000 in 2002 to 36 per 100,000 in 2010 (Figure 5.7). The average annual increase was 1.0 per 100,000 per year. The average annual increase was two times higher among males (1.7 per 100,000 per year) than females (0.9 per 100,000 per year). Increases in rates were found among ages 15-64 with the largest increase found among ages 15-24 (2.5 per 100,000 per year). Rates among children and adults ages 65 or older did not follow a linear trend. ED visits resulting from motor vehicle traffic crashes increased on average by 97 ED visits per year. Non-traffic and other road crashes did not follow a consistent trend over time. See Tables 18a-c for more detailed information on the number and rate of ED visits associated with unintentional pedestrian injuries.

Figure 5.8. ED visit rates resulting from pedestrian injuries by age and sex, Ohio, 2010



Source: Ohio Hospital Association
 *Suppressed due to small cell sizes

Figure 5.9. Distribution of ED visits resulting from pedestrian injuries by cause, Ohio, 2010



Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 16a. Number of deaths resulting from unintentional pedestrian injuries, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	142	133	128	123	152	141	140	156	141	138	139
Sex											
Males	90	96	86	84	113	89	94	105	106	94	94
Females	52	37	42	39	39	52	46	51	35	44	45
Age											
< 1 yr	0	0	0	0	0	0	0	0	0	0	0
1-4 yrs	7	6	5	12	9	5	<5	7	6	<5	5
5-14 yrs	21	16	10	12	9	13	9	10	13	9	<5
15-24 yrs	20	17	14	10	27	21	17	22	21	17	24
25-34 yrs	13	18	19	10	13	17	20	17	17	14	17
35-44 yrs	25	24	14	24	18	18	14	16	18	19	22
45-54 yrs	18	14	23	15	26	17	31	28	30	33	28
55-64 yrs	12	15	13	14	17	18	15	19	13	13	14
65-74 yrs	13	9	9	9	8	9	10	13	10	9	12
75-84 yrs	10	12	14	9	20	13	14	18	8	18	10
85 or older	<5	<5	7	8	5	10	6	6	5	<5	<5
Race and ethnicity											
White‡	109	105	102	95	121	106	105	124	111	113	101
Black‡	24	21	19	18	25	26	34	24	25	17	29
Hispanic	9	6	5	10	<5	6	<5	7	5	5	<5
Other‡	0	<5	<5	0	<5	<5	0	<5	0	<5	6
‡Non-Hispanic											

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 16b. Death rates per 100,000 resulting from unintentional pedestrian injuries, by year, Ohio, 2000-2010¹

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	1.25	1.17	1.10	1.07	1.30	1.21	1.18	1.32	1.21	1.18	1.20	<0.01 (NL)
Sex†												
Males	1.64	1.75	1.59	1.58	2.06	1.60	1.67	1.88	1.91	1.69	1.66	<0.01 (NL)
Females	0.87	0.61	0.67	0.64	0.64	0.83	0.74	0.82	0.57	0.71	0.75	<-0.01 (NL)
Age												
< 1 yr		0.00		0.00		0.00		0.00		0.00		*
1-4 yrs		*		1.75		*		*		*		*
5-14 yrs		0.96		0.66		0.71		0.76		*		*
15-24 yrs		1.08		1.17		1.20		1.37		1.30		0.03
25-34 yrs		1.11		0.78		1.26		1.16		1.07		0.01 (NL)
35-44 yrs		1.18		1.24		0.98		1.08		1.37		<0.01 (NL)
45-54 yrs		1.13		1.22		1.39		1.65		1.75		0.07
55-64 yrs		1.28		1.35		1.33		1.21		0.95		-0.03
65-74 yrs		1.32		*		*		1.43		1.25		*
75-84 yrs		2.19		2.59		2.42		2.36		2.59		0.03 (NL)
85 or older		*		*		*		*		*		*
Race and ethnicity†												
White‡	1.1	1.1	1.0	1.0	1.2	1.1	1.0	1.2	1.1	1.1	1.1	-0.05
Black‡	1.9	1.6	*	*	1.8	1.8	2.5	1.7	1.9	*	2.0	*
Hispanic	*	*	*	*	*	*	*	*	*	*	*	*
Other‡	*	*	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to fewer than 20 deaths.

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Table 16c. Number of deaths resulting from unintentional pedestrian injuries, by mechanism and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Traffic	105	103	98	101	119	104	104	109	112	96	113	81%	0.5 (NL)
Nontraffic	24	9	23	13	24	29	19	26	22	30	21	15%	*
Unspecified	13	21	7	9	9	8	17	21	7	12	5	4%	*

NL: Interpret with caution because trend does not follow linear pattern

*Suppressed due to fewer than 20 deaths.

Source: Ohio Department of Health, Office of Vital Statistics

Table 17a. Number of hospitalizations resulting from pedestrian injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	683	674	632	628	651	588	542	476	450
Sex									
Males	412	414	411	368	410	368	320	311	281
Females	271	260	221	260	241	220	222	165	169
Age									
< 1 yr	0	0	0	0	0	<5	<5	0	0
1-4 yrs	25	26	23	22	33	22	19	20	10
5-14 yrs	117	100	89	91	97	103	90	59	45
15-24 yrs	118	111	102	103	124	98	87	84	90
25-34 yrs	65	75	76	73	78	67	76	57	55
35-44 yrs	112	104	116	97	91	76	61	65	56
45-54 yrs	85	91	100	85	78	85	91	66	68
55-64 yrs	51	67	42	57	61	64	45	61	58
65-74 yrs	40	47	34	44	34	25	33	25	35
75-84 yrs	54	38	40	38	40	37	26	31	22
85 or older	16	15	10	18	15	9	13	8	11

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 17b. Hospitalization rates per 100,000 resulting from pedestrian injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	6.0	5.9	5.6	5.5	5.7	5.1	4.7	4.1	3.9	-0.26
Sex†										
Males	7.5	4.8	7.4	6.6	7.4	6.6	5.7	5.6	5.0	-0.18 (NL)
Females	4.6	4.3	3.7	4.3	4.1	3.7	3.8	2.8	2.8	-0.20
Age										
< 1 yr	0.0	0.0	0.0	0.0	0.0	*	*	0.0	0.0	*
1-4 yrs	4.2	4.3	3.9	3.7	5.6	3.7	3.2	3.4	*	*
5-14 yrs	7.2	6.3	5.6	5.9	6.3	6.8	6.0	3.9	3.0	-0.37
15-24 yrs	7.5	7.0	6.4	6.5	7.8	6.2	5.5	5.4	5.7	-0.23
25-34 yrs	4.4	5.1	5.2	5.0	5.4	4.6	5.2	3.9	3.9	-0.10 (NL)
35-44 yrs	6.4	6.1	6.9	5.9	5.6	4.8	3.9	4.3	3.8	-0.39
45-54 yrs	5.2	5.4	5.9	4.9	4.5	4.9	5.2	3.8	3.9	-0.19
55-64 yrs	4.7	6.0	3.6	4.7	4.9	4.9	3.4	4.4	4.0	-0.13 (NL)
65-74 yrs	5.2	6.1	4.4	5.7	4.4	3.2	4.1	3.0	4.1	-0.28
75-84 yrs	9.8	6.8	7.2	6.9	7.3	6.8	4.9	5.7	4.1	-0.51
85 or older	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to less than 20 hospitalizations

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 17c. Number of hospitalizations resulting from pedestrian injuries by type and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Railway	<5	6	8	10	<5	5	6	0	5	1%	*
Motor vehicle traffic crashes	617	607	573	576	577	532	488	417	391	87%	-28
Motor vehicle nontraffic crashes	56	53	37	38	59	47	40	51	49	11%	<-1 (NL)
Other road vehicle crashes	6	8	14	13	11	<5	8	8	5	1%	*

*Suppressed due to less than 20 hospitalizations

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 18a. Number of ED visits resulting from pedestrian injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	3,254	3,332	3,374	3,658	4,144	4,122	3,959	3,988	3,952
Sex									
Males	1,888	1,978	2,018	2,167	2,436	2,405	2,326	2,375	2,293
Females	1,366	1,354	1,356	1,491	1,708	1,717	1,633	1,613	1,659
Age									
< 1 yr	<5	<5	5	<5	5	<5	<5	<5	6
1-4 yrs	148	151	131	147	173	149	130	147	122
5-14 yrs	661	637	637	616	712	682	606	547	527
15-24 yrs	818	807	828	896	989	1,063	1,017	1,072	1,008
25-34 yrs	492	479	542	597	684	706	689	717	729
35-44 yrs	461	488	482	555	568	514	535	555	557
45-54 yrs	343	390	361	424	522	471	516	472	479
55-64 yrs	154	167	195	211	261	286	251	261	290
65-74 yrs	91	114	100	99	107	125	112	131	121
75-84 yrs	70	67	77	83	94	94	68	67	84
85 or older	15	31	16	28	29	29	33	17	29

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 18b. ED visit rates per 100,000 resulting from pedestrian injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	28.8	29.5	30.0	32.6	36.9	36.7	35.4	35.7	35.5	1.0
Sex†										
Males	33.7	24.3	36.2	39.0	43.8	43.2	41.8	42.8	41.6	1.7
Females	23.9	23.7	23.8	26.2	30.1	30.3	29.1	28.6	29.4	0.9
Age										
< 1 yr	*	*	*	*	*	*	*	*	*	*
1-4 yrs	24.6	25.2	22.0	24.7	29.5	25.3	22.0	24.8	21.0	NL
5-14 yrs	40.9	39.9	40.3	39.6	46.4	45.0	40.5	36.6	34.6	NL
15-24 yrs	51.7	50.6	51.9	56.2	62.5	67.5	64.7	68.5	63.5	2.3
25-34 yrs	33.3	32.7	37.1	41.0	47.0	48.3	47.1	48.5	51.7	2.5
35-44 yrs	26.4	28.6	28.8	33.7	35.0	32.3	34.4	36.5	37.6	1.3
45-54 yrs	20.8	23.3	21.3	24.7	30.1	27.0	29.5	26.9	27.5	0.9
55-64 yrs	14.2	14.8	16.7	17.4	20.8	22.0	18.8	18.8	20.0	0.7
65-74 yrs	11.8	14.8	13.0	12.9	13.9	16.0	13.9	15.7	14.2	NL
75-84 yrs	12.7	12.1	13.9	15.0	17.1	17.3	12.7	12.4	15.5	NL
85 or older	*	15.8	*	13.5	13.5	13.0	14.4	*	12.6	*

*Rates suppressed due to fewer than 20 ED visits.

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 18c. Number of ED visit rates resulting from pedestrian injuries by type and year, Ohio, 2002-2010

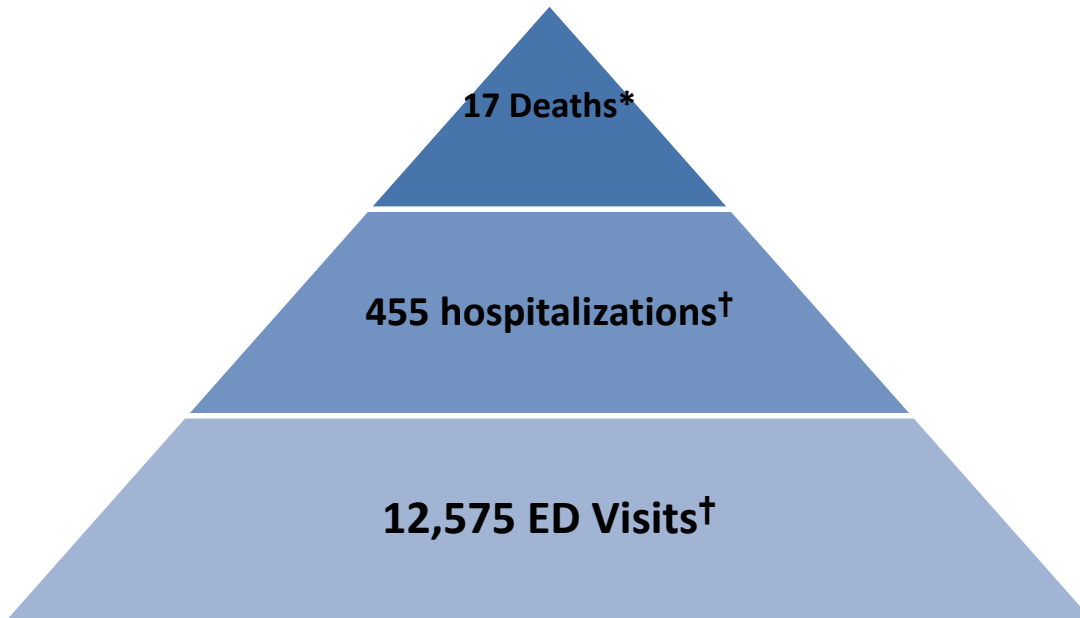
	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Railway	5	9	2	13	15	7	7	5	<5	*	*
Motor vehicle traffic crashes	2,593	2,692	2,727	2,951	3,408	3,388	3,335	3,277	3,198	81%	97
Motor vehicle nontraffic crashes	389	406	452	471	486	456	424	430	464	12%	5 (NL)
Other road vehicle crashes	267	225	194	223	235	271	193	277	287	7%	5 (NL)

Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

*Suppressed due to less than 20 ED visits

SECTION 3.4: PEDAL CYCLE INJURIES



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

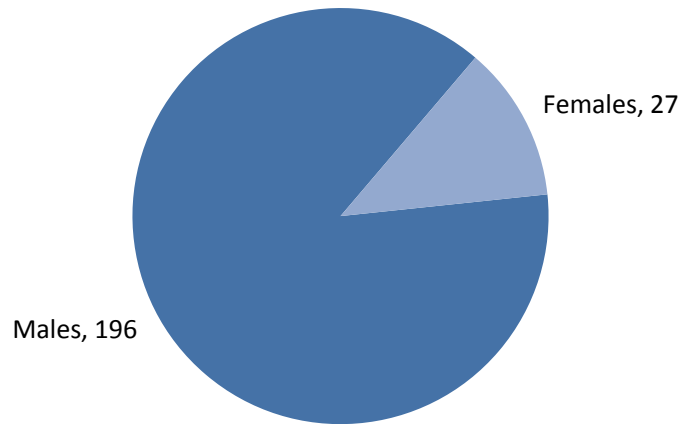
Patterns:

- Males were 8 times more likely than females to die from pedal cycle related injury.
- Approximately one pedal cycle related hospitalization occurs each day in Ohio.
- 39 visits are made to an emergency department every day in Ohio for a pedal cycle related injury.
- Male children ages 5-14 are most likely to experience a non-fatal pedal cycle injury.
- Most non-fatal pedal cycle injuries resulted from collisions with other road vehicles.
- Only 50% of children under 18 years of age frequently wear a helmet when riding a pedal cycle.

Trends:

- 223 pedal cycle related deaths have occurred in Ohio since 2000.
- Hospitalizations increased 33 percent in 2002-2008 then decreased 26 percent in 2008-2010.
- ED visits increased 9 percent in 2002-2010.
- Males were likely to experience a non-fatal pedal cycle injury throughout study period.
- Adults ages 45-54 were most likely to experience a hospitalization and children ages 5-14 were more likely to experience an ED visit.
- Most non-fatal pedal cycle injuries resulted from collisions with other road vehicles throughout the study period.

Figure 6.1. Number of pedal cycle deaths by sex, Ohio, 2000-2010



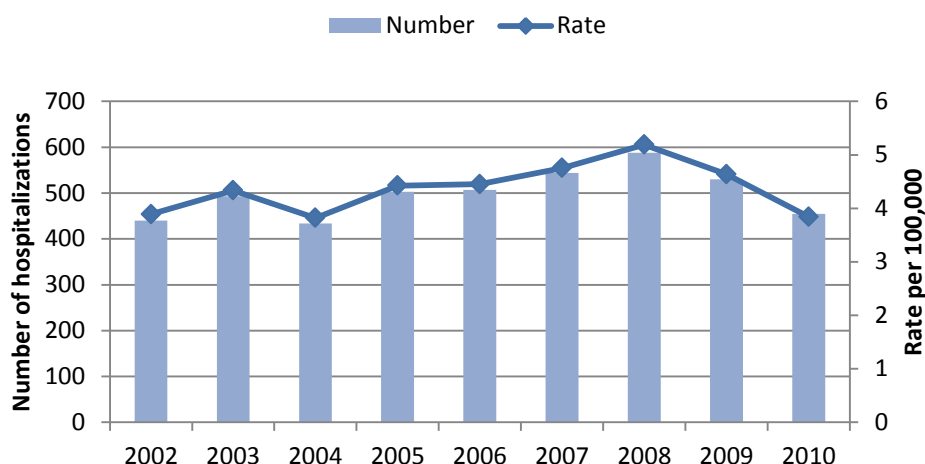
Source: Ohio Department of Health, Vital Statistics

DEATHS:

Since 2000, 223 deaths have resulted from pedal cycle injuries. The annual death rate for the period was 0.2 per 100,000. Males were 8 times more likely to die from a pedal cycle related injury than females. Little variation was found across age groups among ages 5-64. Pedal cycle deaths were very uncommon among children younger than 5 or adults ages 65 or older. Death rates were similar among whites and blacks while pedal cycle related deaths were rare among other race and ethnic groups. See Table 6.1 for a pedal cycle death risk profile. Nearly all deaths (92 percent) involved a motor vehicle traffic crash. See Tables 19a-c located at the end of this section for more detailed information on pedal cycle related deaths in Ohio.

Table 6.1 Pedal Cycle Death Risk Profile	
	At Risk Groups
Sex	Males
Age	Similar across age groups
Race and ethnicity	Similar among whites and blacks

Figure 6.2. Number and age adjusted rate for pedal cycle injury hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

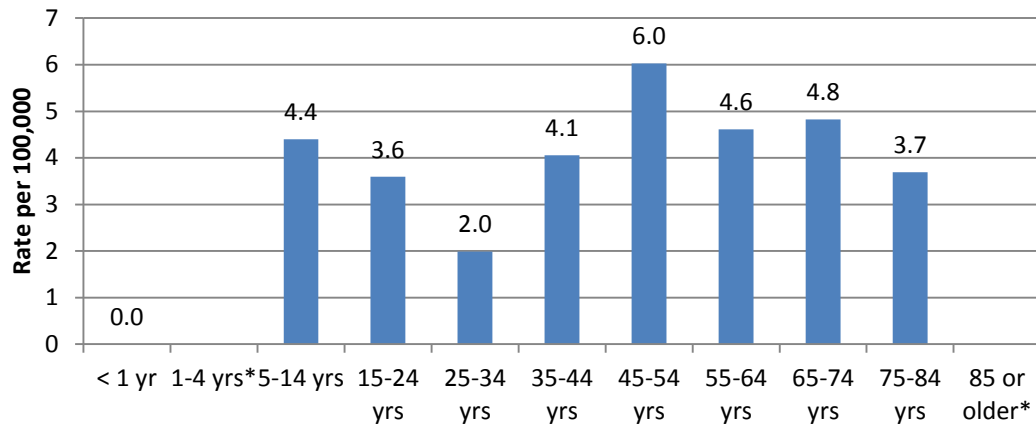
Approximately 450 hospitalizations resulted from pedal cycle injuries in 2010. The hospitalization rate was 3.8 per 100,000 (Figure 6.2). Males were 4 times more likely than females to be hospitalized due to pedal cycle injury. Hospitalization rates fluctuated throughout the lifespan with the highest rates found among children ages 5-14 and adults ages 45-74 (Figure 6.3). See Table 6.2 for a pedal cycle hospitalization risk profile. Most hospitalizations resulted from collisions with other road vehicles (76 percent) and motor vehicle traffic crashes (24 percent) (Figure 6.4).

Table 6.2 Pedal Cycle Hospitalization Risk Profile		
	2010 At Risk Groups	Annual Trend Since 2002
Overall		No change
Sex	Males	Similar for males and females
Age	45-54	45-54 (largest increase)

TRENDS:

The hospitalization rate for pedal cycle injuries did not change between 2002 and 2010 (Figure 6.2). Rates among males were consistently higher than females during the study period. In 2002-2009, the highest rates of hospitalization were found among children ages 5-14 years. A large decrease in rates among children ages 5-14 occurred from 2009 to 2010. In contrast, a steady rise in hospitalization rates was found among adults ages 45-74 in 2002-2010. Continued monitoring and evaluation is needed to understand the reasons for the decrease in rates by age group. Most hospitalizations resulted from collisions with other road vehicles and motor vehicle traffic crashes throughout the study period. See Tables 20a-c located at the end of this section for more information on hospitalizations resulting from pedal cycle injuries.

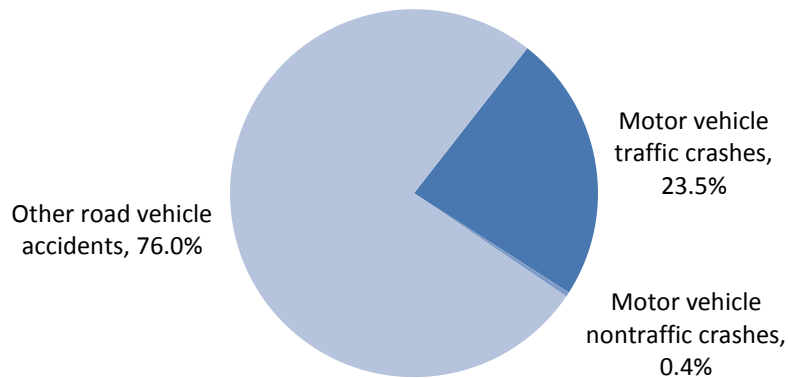
Figure 6.3. Hospitalization rates resulting from pedal cycle injuries, by age, Ohio, 2010



Source: Ohio Hospital Association

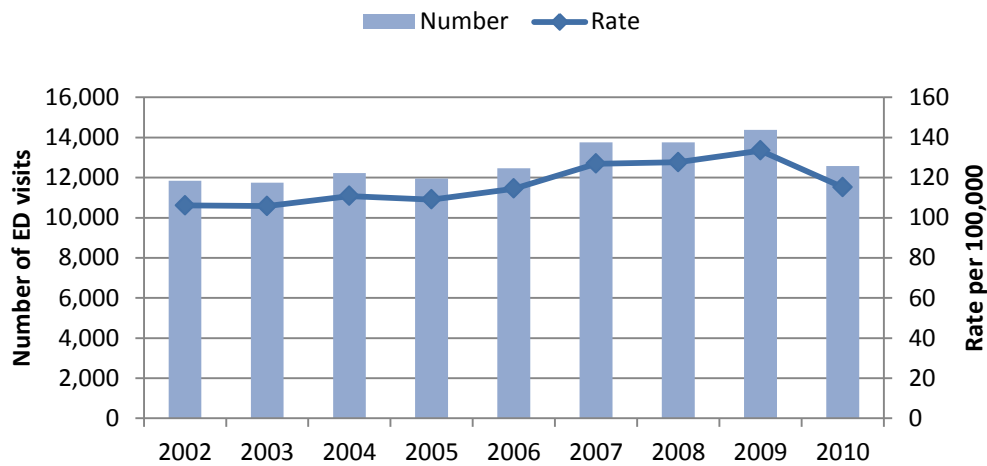
*Rates suppress due to small cell sizes

Figure 6.4. Distribution of hospitalizations resulting from pedal cycle injuries by cause, Ohio, 2010



Source: Ohio Hospital Association

Figure 6.5. Number and age adjusted rate for pedal cycle injury ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

In 2010, approximately 12,000 ED visits resulted from pedal cycle injuries. The ED visit rate was 115 per 100,000 (Figure 6.5). Males were more likely than females to experience an ED visit throughout the lifespan (Figure 6.6). The highest rates were found among children ages 5-14. See Table 6.3 for a pedal cycle injury ED visit risk profile. Nearly all ED visits were associated with a collision with any other road vehicle (91 percent) or motor vehicle traffic (9 percent) (Figure 6.7).

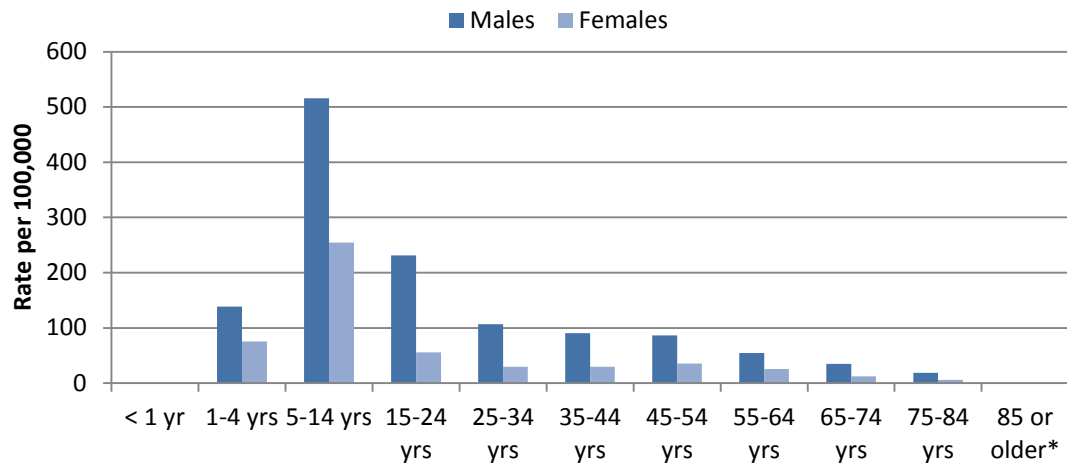
Table 6.3 Pedal Cycle Injury ED Visit Risk Profile

	2010 At Risk Groups	Annual trend since 2002
Overall		+8%
Sex	Males	Males (largest increase)
Age	5-14	15-24 (largest increase)

TRENDS:

ED visit rates resulting from pedal cycle injuries increased from 106 per 100,000 in 2002 to 115 per 100,000 in 2010 (Figure 6.5). The average annual increase was 2.8 per 100,000 per year. The average annual increase was greater among males (4.0 per 100,000 per year) than females (1.7 per 100,000 per year). The highest rates of ED visits were found among children ages 5-14 throughout the study period. The largest annual increases were found among youth and young adults ages 15-24 (6 per 100,000 per year) and adults ages 45-54 (4.4 per 100,000 per year). Almost all ED visits were associated with a collision with any other road vehicle throughout the study period. ED visits involving motor vehicle traffic collisions increased by 38 visits per year while trends in other road crashes and non-traffic crashes did not follow a linear pattern. See Table 21a-c located at the end of this section for more information on ED visits associated with pedal cycle injuries.

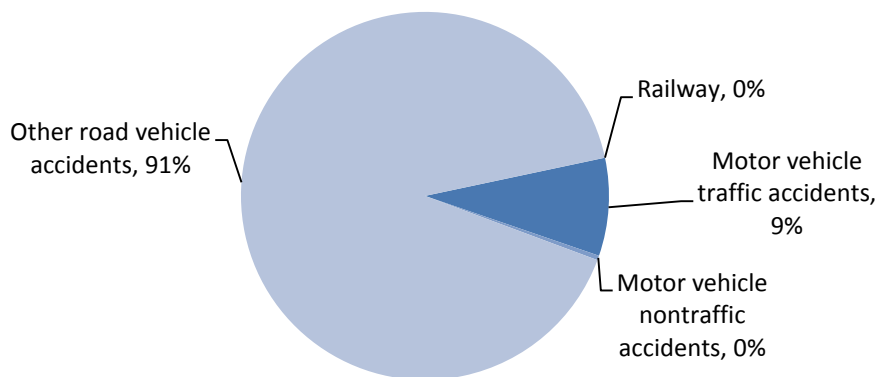
Figure 6.6. ED visit rates resulting from pedal cycle injuries by age and sex, Ohio, 2010



Source: Ohio Hospital Association

*Suppressed due to small cell sizes

Figure 6.7. Distribution of ED visits resulting from pedal cycle injuries by cause, Ohio, 2010



Source: Ohio Hospital Association

Table 19a. Number of deaths resulting from unintentional pedal cycle injuries, Ohio, 2000-2010

	2000-2010
Overall	223
Sex	
Males	196
Females	27
Age	
< 1 yr	0
1-4 yrs	3
5-14 yrs	35
15-24 yrs	24
25-34 yrs	24
35-44 yrs	32
45-54 yrs	46
55-64 yrs	31
65-74 yrs	13
75-84 yrs	12
85 or older	<5
Race and ethnicity†	
White‡	184
Black‡	33
Hispanic	5
Other‡	<5

Source: Ohio Department of Health, Office of Vital Statistics

Table 19b. Death rates per 100,000 resulting from unintentional pedal cycle injuries, Ohio, 2000-2010

	2000-2010
Overall†	0.17
Sex†	
Males	0.31
Females	0.04
Age	
< 1 yr	0.00
1-4 yrs	*
5-14 yrs	0.20
15-24 yrs	0.14
25-34 yrs	0.15
35-44 yrs	0.18
45-54 yrs	0.25
55-64 yrs	0.23
65-74 yrs	*
75-84 yrs	*
85 or older	*
Race and ethnicity†	
White‡	0.17
Black‡	0.21
Hispanic	*
Other‡	*

†Rates are age adjusted to 2000 U.S.
standard population

*Rates suppressed due to fewer than 20 deaths.

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 19c. Number of deaths resulting from unintentional pedal cycle injuries, by mechanism and year, Ohio, 2000-2010

	2000-2010	Percent
Traffic	205	92%
Nontraffic	18	8%

Source: Ohio Department of Health, Office of Vital Statistics

Table 20a. Number of hospitalizations resulting from pedal cycle injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	440	493	434	503	507	544	588	530	455
Sex									
Males	332	389	333	402	395	419	448	397	362
Females	108	104	101	101	112	125	140	133	93
Age									
< 1 yr	0	0	0	<5	0	<5	<5	0	0
1-4 yrs	11	7	8	7	12	12	6	7	3
5-14 yrs	177	182	145	160	179	175	204	159	67
15-24 yrs	70	80	54	80	76	83	79	81	57
25-34 yrs	35	33	35	33	27	36	40	34	28
35-44 yrs	47	50	53	61	41	37	47	47	60
45-54 yrs	43	66	62	73	87	103	98	86	105
55-64 yrs	33	35	37	53	48	57	59	57	67
65-74 yrs	15	22	20	22	19	24	36	38	41
75-84 yrs	7	15	20	10	13	14	17	20	20
85 or older	<5	<5	0	<5	5	<5	<5	<5	7

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 20b. Hospitalization rates per 100,000 resulting from pedal cycle injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	3.9	4.3	3.8	4.4	4.5	4.8	5.2	4.6	3.8	0.1 (NL)
Sex†										
Males	5.9	6.9	5.9	7.2	7.0	7.4	8.0	7.1	6.3	0.1 (NL)
Females	1.9	1.8	1.8	1.8	1.9	2.2	2.4	2.2	1.5	<0.1 (NL)
Age										
< 1 yr	0.0	0.0	0.0	*	0.0	*	*	0.0	0.0	*
1-4 yrs	*	*	*	*	*	*	*	*	*	*
5-14 yrs	11.0	11.4	9.2	10.3	11.7	11.6	13.6	10.6	4.4	-0.3 (NL)
15-24 yrs	4.4	5.0	3.4	5.0	4.8	5.3	5.0	5.2	3.6	<0.1 (NL)
25-34 yrs	2.4	2.3	2.4	2.3	1.9	2.5	2.7	2.3	2.0	<-0.1 (NL)
35-44 yrs	2.7	2.9	3.2	3.7	2.5	2.3	3.0	3.1	4.1	<0.1 (NL)
45-54 yrs	2.6	3.9	3.7	4.3	5.0	5.9	5.6	4.9	6.0	0.4
55-64 yrs	3.0	3.1	3.2	4.4	3.8	4.4	4.4	4.1	4.6	0.2
65-74 yrs	1.9	2.9	2.6	2.9	2.5	3.1	4.5	4.5	4.8	0.3
75-84 yrs	*	*	3.6	*	*	*	*	3.7	3.7	*
85 or older	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to cell sizes less than 20.

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 20c. Number of hospitalizations resulting from pedal cycle injuries by type and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Railway	0	0	0	<5	<5	0	<5	0	0	0%	*
Motor vehicle traffic crashes	102	116	104	107	136	120	156	107	107	24%	2 (NL)
Motor vehicle nontraffic crashes	7	<5	<5	<5	<5	<5	6	<5	<5	*	*
Other road vehicle crashes	331	373	326	391	368	422	425	420	346	76%	7 (NL)

*Suppressed due to less than 20 hospitalizations

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 21a. Number of ED visits resulting from pedal cycle injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	11,848	11,750	12,229	11,948	12,467	13,751	13,765	14,376	12,575
Sex									
Males	8,558	8,391	8,747	8,500	8,828	9,876	9,852	10,208	9,016
Females	3,290	3,359	3,482	3,448	3,639	3,875	3,913	4,168	3,559
Age									
< 1 yr	0	<5	0	<5	<5	0	<5	<5	0
1-4 yrs	681	672	706	664	658	677	719	784	627
5-14 yrs	6,996	7,011	7,083	6,576	6,596	7,078	6,891	7,335	5,911
15-24 yrs	1,844	1,821	1,981	2,066	2,198	2,483	2,480	2,504	2,296
25-34 yrs	686	660	683	740	792	948	980	1,058	958
35-44 yrs	805	699	789	776	875	953	969	898	887
45-54 yrs	488	531	596	686	796	977	1,009	1,028	1,055
55-64 yrs	211	218	237	274	356	433	482	486	575
65-74 yrs	92	92	99	117	131	139	164	192	193
75-84 yrs	38	35	48	39	59	55	58	71	60
85 or older	7	8	7	9	5	8	11	16	13

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 21b. ED visit rates per 100,000 resulting from pedal cycle injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall	106	106	111	109	114	127	128	133	115	2.8
Sex										
Males	151	149	157	153	160	180	181	187	164	4.0
Females	60	62	64	64	68	72	74	79	66	1.7
Age										
< 1 yr	0	*	0	*	*	0	*	*	0	*
1-4 yrs	113	112	119	112	112	115	122	132	108	0.8 (NL)
5-14 yrs	433	439	449	423	430	467	460	491	388	0.8 (NL)
15-24 yrs	117	114	124	130	139	158	158	160	145	5.8
25-34 yrs	46	45	47	51	54	65	67	72	68	3.7
35-44 yrs	46	41	47	47	54	60	62	59	60	2.5
45-54 yrs	30	32	35	40	46	56	58	59	61	4.4
55-64 yrs	19	19	20	23	28	33	36	35	40	2.8
65-74 yrs	12	12	13	15	17	18	20	23	23	1.6
75-84 yrs	7	6	9	7	11	10	11	13	11	0.7
85 or older	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to less than 20 ED visits

Source: Ohio Hospital Association

NL: Interpret with caution because trend
does not follow linear pattern

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 21c. Number of ED visit rates resulting from pedal cycle injuries by type and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Railway	<5	<5	<5	<5	<5	<5	<5	<5	0	*	*
Motor vehicle traffic crashes	860	854	830	907	1,039	1,094	1,107	1,069	1,078	8.6%	38
Motor vehicle nontraffic crashes	50	63	51	51	31	34	50	50	53	0.4%	-1 (NL)
Other road vehicle crashes	10,936	10,832	11,346	10,988	11,397	12,620	12,606	13,256	11,443	91.0%	224 (NL)

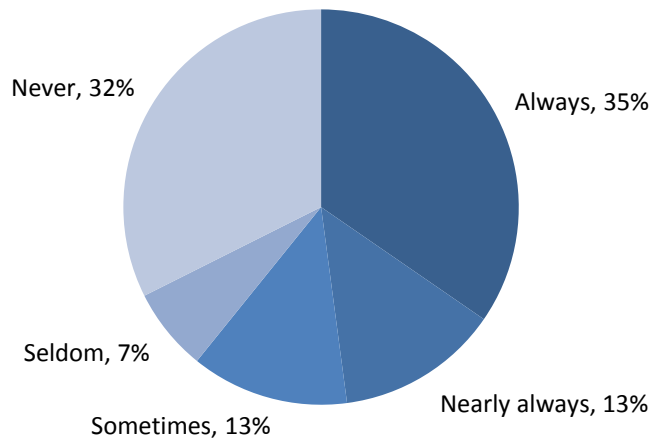
*Suppressed due to less than 20 ED visits

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

SECTION 3.4A: YOUTH BICYCLE HELMET USE

Figure 6.8. Percentage of children less than 18 years of age who wear a helmet when riding a bicycle, by frequency of helmet use, Ohio, 2010



Source: Ohio Behavioral Risk Factor Surveillance System

BICYCLE HELMET USE:

Research has shown wearing a bicycle helmet reduces an individual's risk for traumatic head and brain injuries¹. In 2010, approximately 50 percent of Ohio adults reported the oldest child in their household infrequently (e.g. "never", "rarely" or "sometimes") wears a helmet when riding a bicycle. The frequency of bicycle helmet use varied by levels of household income and county economic development. Adults from households with income levels below poverty and slightly above poverty (less than 200 percent) were more likely to report their children infrequently wears a helmet compared to households with income 200 percent or more above poverty. Adults from rural and Appalachian counties were more likely report their children infrequently use bicycle helmets compared to adults from metropolitan counties. See Tables 22a-b located at the end of this section for more detailed information on bicycle helmet use among children less than 18 years of age in Ohio. See Appendix 10 and 11 for more detailed information on household poverty and county economic development definitions.

Table 6.4 Bicycle Helmet Use Risk Profile	
	2010 At Risk Groups
Overall	52%
Household Poverty	Below poverty and slightly above poverty
County Development*	Rural and Appalachian

¹ Ivers R. Systematic reviews of bicycle helmet research. *Injury Prev.* 2007 June; 13(3): 190.

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 22a. Bicycle helmet use among oldest child in household who ride a bicycle, by frequency of use, Ohio, 2010

	2010 Ohio BRFSS		
	N	Percent	95% CI
Always	398	34.6	(31.1-38.1)
Nearly always	152	13.3	(10.8-15.9)
Sometimes	148	12.9	(10.4-15.4)
Seldom	85	6.8	(5.0-8.5)
Never	404	32.4	(29.0-35.8)

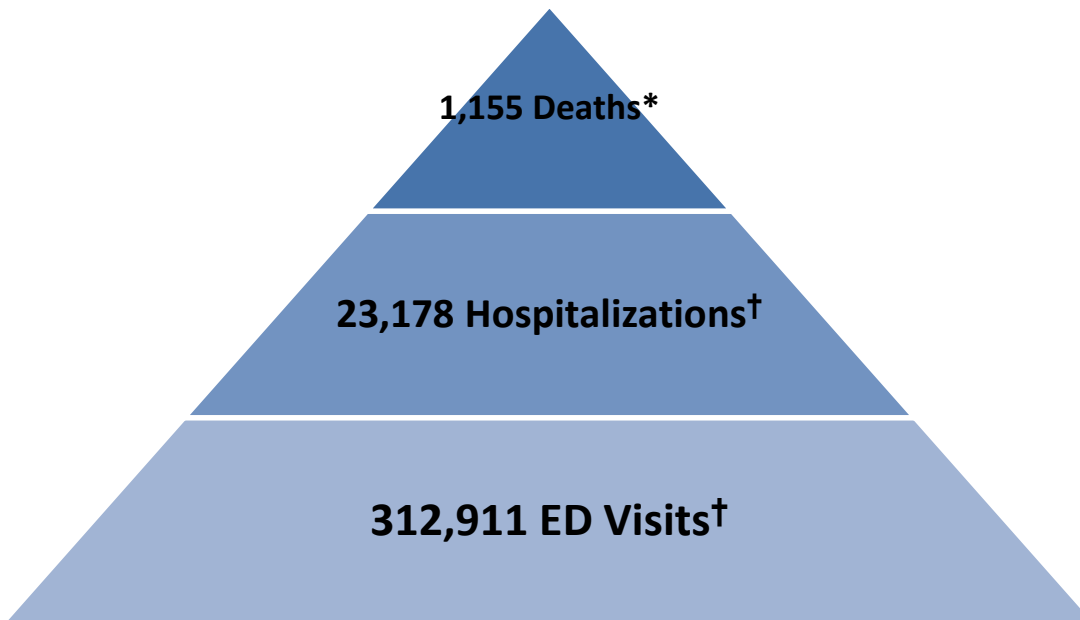
Source: Ohio Behavioral Risk Factor Surveillance System

Table 22b. Prevalence of respondents who reported the oldest child sometimes, rarely, or never wear a helmet when riding a bicycle, Ohio, 2010

	Percent	95% CI
Overall	52.0	(48.4-55.7)
Below poverty	66.2	(55.7-76.6)
Above poverty, less than 200%	62.7	(55.3-70.2)
Above poverty, 200% or more	45.0	(40.3-49.6)
Missing household/income	61.7	(47.7-75.9)
Metropolitan	46.2	(41.3-51.1)
Suburban	50.0	(41.4-58.6)
Rural	64.9	(55.5-74.3)
Appalachian	60.8	(50.4-71.2)

Source: Ohio Behavioral Risk Factor Surveillance System

SECTION 3.5: FALLS



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

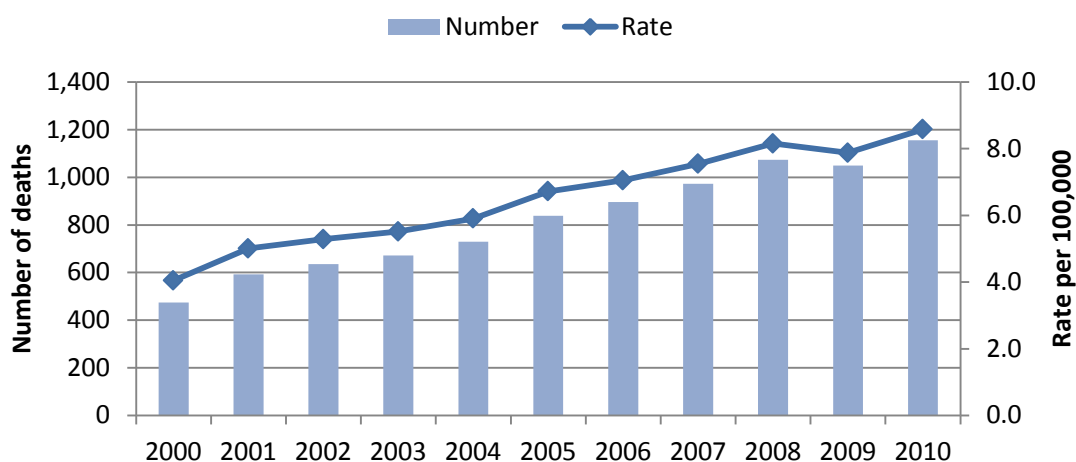
Patterns:

- Falls are one of the leading causes of fatal and non-fatal unintentional injuries in Ohio.
- Most fatal and non-fatal injuries caused occur among adults age 65 or older.
- Most non-fatal injuries result from slipping or tripping on an object on the same level, on a different level, and steps or stairs. A substantial percentage of non-fatal fall related injuries do not specify the cause of the fall.

Trends:

- Death rates have increased 115 percent since 2000 and ED visit rates increased 54 percent since 2002.
- Hospitalization rates have not changed since 2003.
- Most non-fatal injuries resulted from slipping or tripping on an object on the same level, on a different level, and steps or stairs throughout the study period.

Figure 7.1. Number and age adjusted rate of unintentional fall deaths by year, Ohio, 2000-2010



Source: Ohio Department of Health, Vital Statistics

DEATHS:

Nearly 1,200 deaths resulted from unintentional falls in 2010. The fall death rate was 8.6 per 100,000 (Figure 7.1). Males were more likely to die from a fall than females (10.5 versus 7.2 per 100,000). Fall fatality rates increased with age with the highest rates found among adults ages 85 or older (Figure 7.2). Whites were more likely to experience a fall related death (8.8 per 100,000) than blacks (6.3 per 100,000). See Table 7.1 for an unintentional falls death risk profile. Approximately one-half of fall related deaths had an unspecified cause. Other leading mechanisms included other fall from the same level (27 percent) and stairs or steps (10 percent) (Figure 7.3).

Table 7.1 Unintentional Falls Death Risk Profile		
	2010 At Risk Groups	Annual trend since 2000
Overall		+115%
Sex	Males	Males (largest increase)
Age	85 or older	85 or older (largest increase)
Race and ethnicity	Whites	Whites (largest increase)

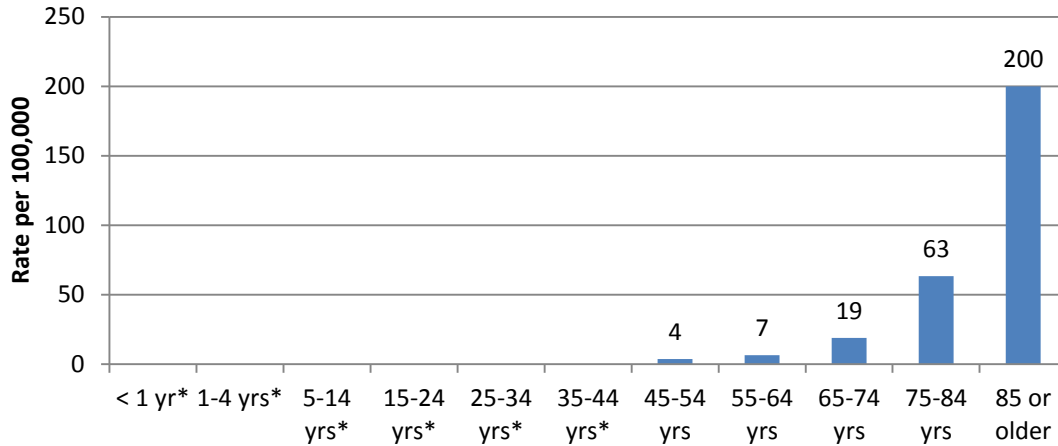
TRENDS:

Fall related fatality rates increased 115 percent from 4.0 per 100,000 in 2000 to 8.6 per 100,000 in 2010. The average annual increase in rates was 0.4 per 100,000 per year. The increase in rates was greater among males (0.5 per 100,000 per year) than females (0.4 per 100,000 per year). The highest rates of fall fatalities were found among adults ages 85 or older throughout the period. The rates increased by an average of 11 per 100,000 per year. Rates were consistently higher among whites than blacks throughout the period. Rates among whites increased by an average of 0.5 per 100,000 per year while rates among blacks did not follow a linear trend. The largest increases in the number of fall fatalities were found among falls with an unspecified

Ohio Violence and Injury Prevention Program, Ohio Department of Health

cause (39 per year) and other falls on the same level (23 per year). See Tables 22a-c located at the end of the section for more detailed information on fall related fatalities.

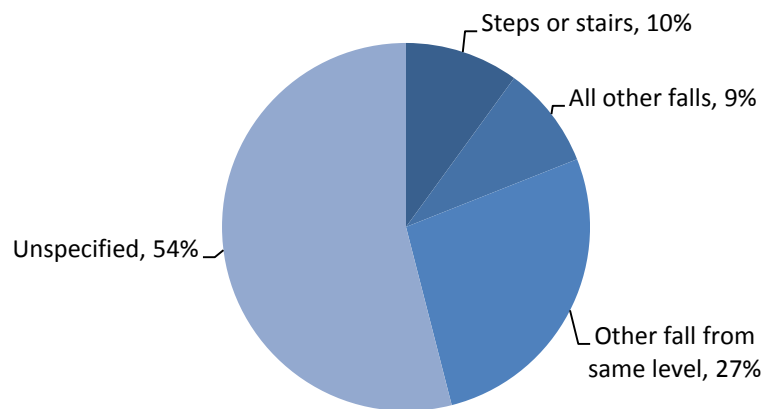
Figure 7.2. Death rates resulting from falls, by age, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

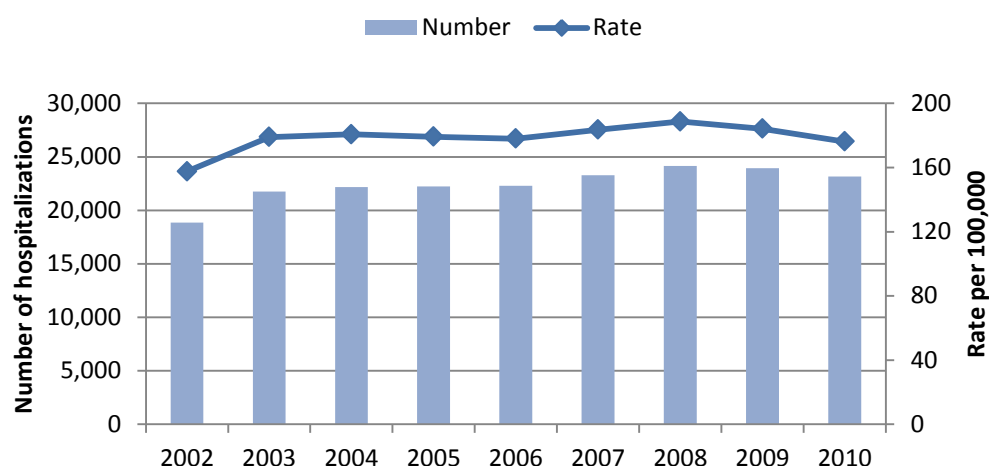
*Rates suppressed due to less than 20 deaths

Figure 7.3. Distribution of deaths resulting from unintentional falls by cause, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

Figure 7.4. Number and age adjusted rate for unintentional fall hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

In 2010, approximately 23,000 hospitalizations resulted from unintentional falls. The hospitalization rate was 176 per 100,000 (Figure 7.4). Overall hospitalization rates decreased with age from birth through age 14 and then increased with age among individuals 15 years or older. The highest rates were found among adults ages 75 or older (Figure 7.5). Hospitalization rates varied by sex with higher rates found among males from birth through age 54 while rates were higher among females among adults 55 or older. See Table 7.2 for an unintentional fall hospitalization risk profile.

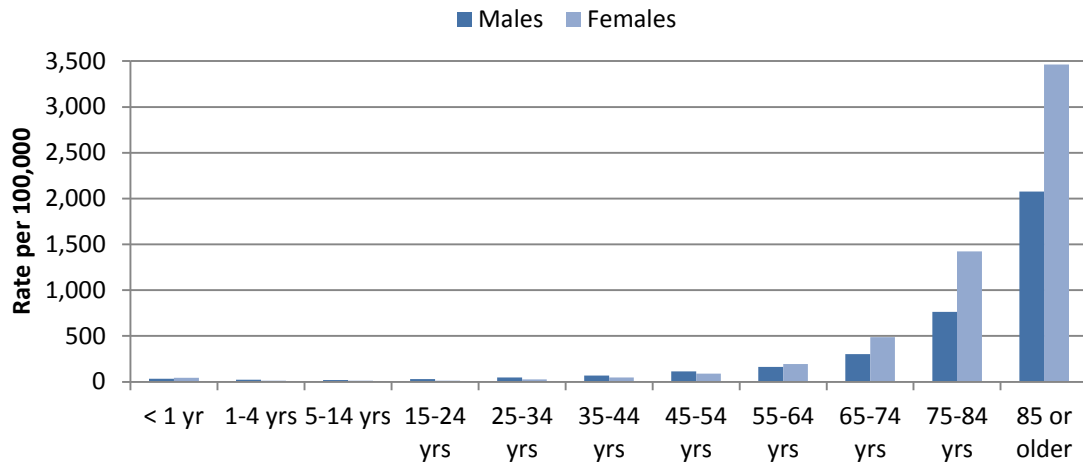
Table 7.2 Unintentional Falls Hospitalization Risk Profile		
	2010 At Risk Groups	Annual trend since 2002
Overall		No change
Sex	Females	Similar for males and females
Age	75 or older	85 or older (largest increase)

The most common causes of fall related hospitalizations were tripping or slipping on the same level (37 percent), falling from an object at a different level (11 percent), and falling from or on stairs or steps (10 percent). Approximately 37 percent of falls did not have a specified cause (Figure 7.6).

TRENDS:

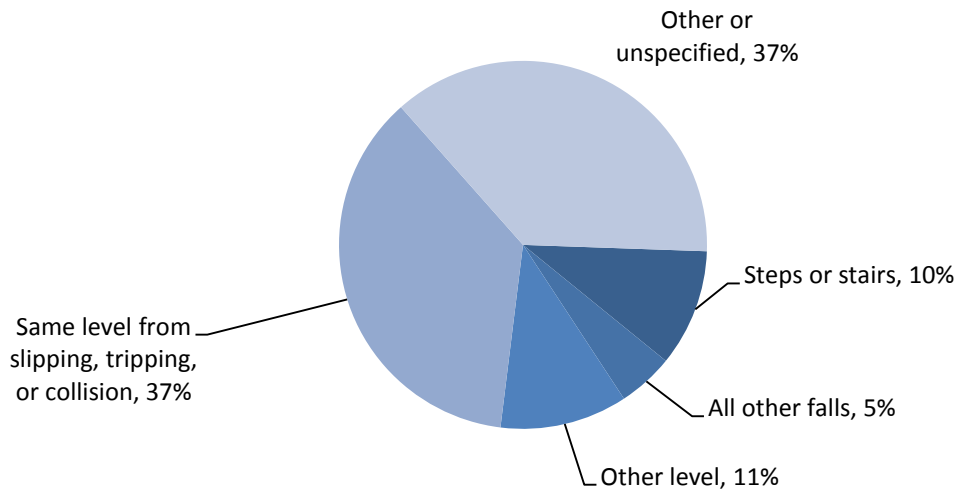
Hospitalizations resulting from unintentional falls largely remained the same in 2003-2010 (Figure 7.4). The pattern in hospitalizations did not follow a consistent trend for males or females. Hospitalization rates increased by an average of 44 per 100,000 per year among adults ages 85 or older while rates did not change or follow a consistent trend for all other age groups. The number of hospitalizations resulting from slipping, tripping, or stumbling on the same level increased by an average of 263 per year and falls resulting from other or unspecified mechanism increased by 159 per year. See Tables 24a-c located at the end of this section for more detailed information on the number and rate of unintentional fall related hospitalizations.

Figure 7.5. Hospitalization rates resulting from falls, by age and sex, Ohio, 2010



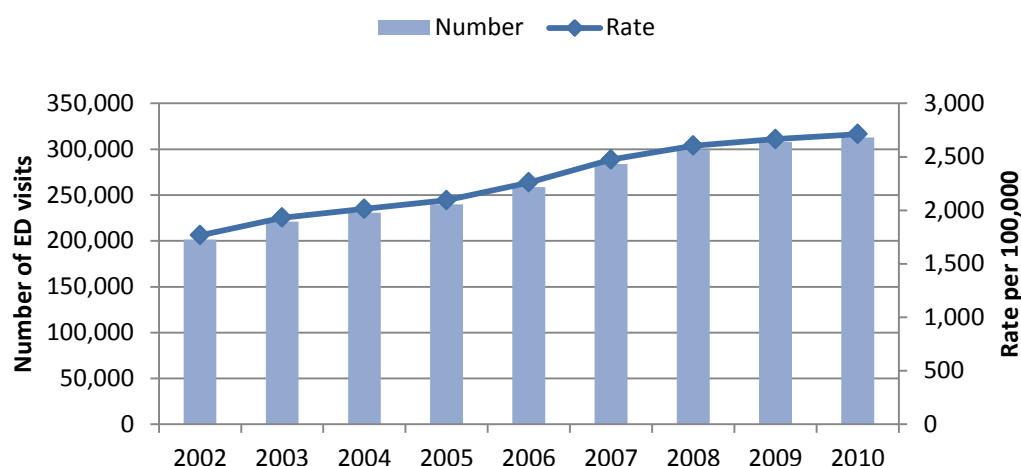
Source: Ohio Hospital Association

Figure 7.6. Distribution of hospitalizations resulting from unintentional falls by cause, Ohio, 2010



Source: Ohio Hospital Association

Figure 7.7. Number and age adjusted rate for unintentional fall ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

In 2010, 312,911 ED visits were associated with unintentional falls. The ED visit rate was 2,711 per 100,000 (Figure 7.7). The rate of ED visits was higher among males from birth through age 14 and higher among females among individuals aged 15 or older. The highest rates of fall related ED visits were found among children ages 1-4 years and adults 75 or older (Figure 7.8). See Table 7.3 for an unintentional falls ED visit risk profile.

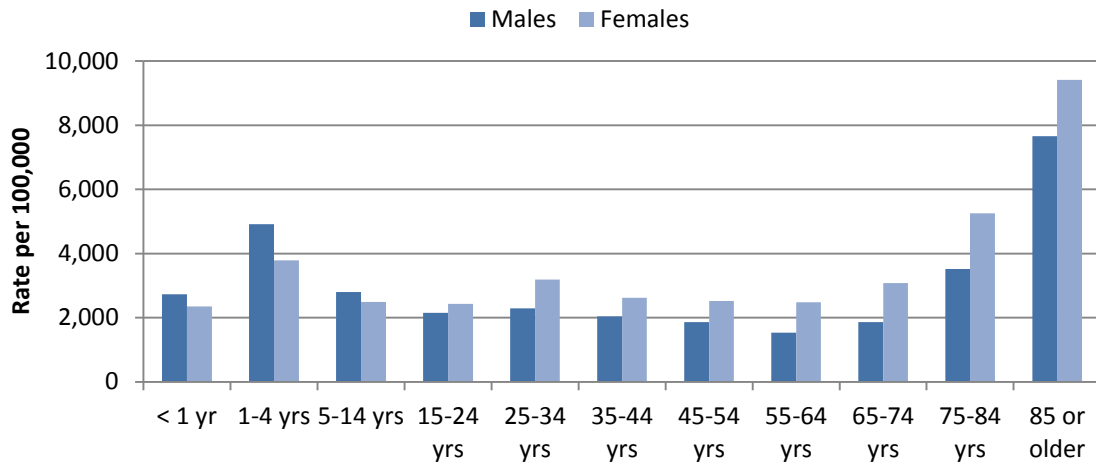
The most common causes of fall related ED visits were from slipping or tripping on the same level (36 percent), steps or stairs (14 percent), and from a different level (13 percent). In addition, 34 percent of falls had an unspecified cause (Figure 7.9).

Table 7.3 Unintentional Falls ED Visit Risk Profile		
	2010 At Risk Groups	Annual Trend since 2002
Overall		+54%
Sex	Females	Females (largest increase)
Age	75 or older	85 or older (largest increase)

TRENDS:

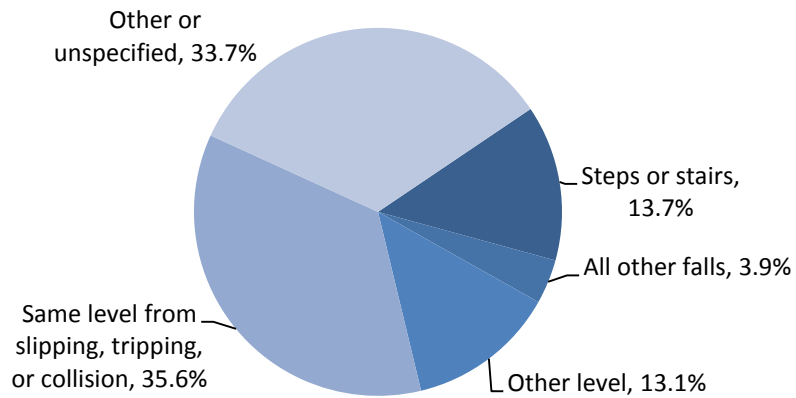
ED visits associated with unintentional falls increased 54 percent from 1,766 per 100,000 in 2002 to 2,771 per 100,000 in 2010 (Figure 7.7). The average annual increase was 126 per 100,000 per year. The increase in falls was higher among females (142 per 100,000 per year) compared to males (109 per 100,000). Rates increased among all age groups with the largest increases found among ages 85 or older (426 per 100,000 per year). The observed increase was largely driven by the substantial increase in falls caused by slipping or tripping on the same level (+5,933 per year), other or unspecified falls (4,795 per year) and stairs or steps (2,142 per year). See Tables 25a-c located at the end of this section for more detailed information on the number and rate of ED visits associated with unintentional falls.

Figure 7.8. ED visit rates resulting from falls, by age and sex, Ohio, 2010



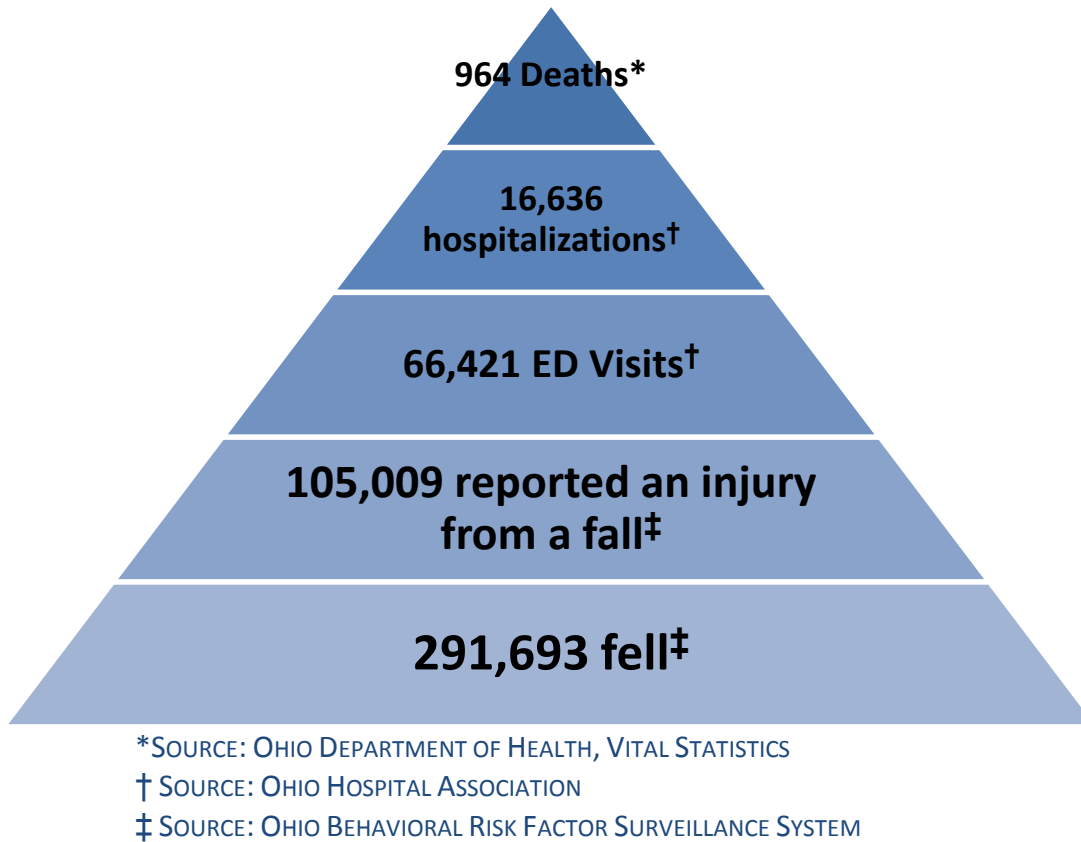
Source: Ohio Hospital Association

Figure 7.9. Distribution of ED visits resulting from unintentional falls by cause, Ohio, 2010



Source: Ohio Hospital Association

SECTION 3.6: FALLS AMONG ADULTS AGES 65 OR OLDER



CHAPTER HIGHLIGHTS:

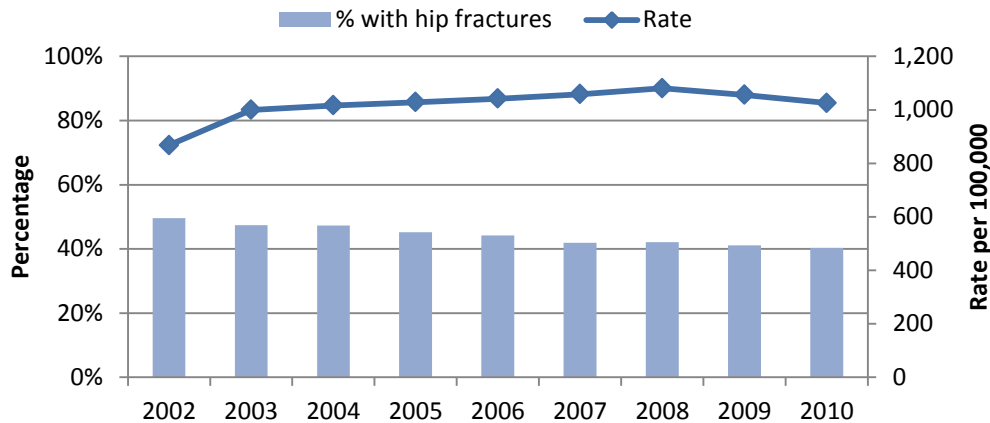
Patterns:

- Hip fractures are associated with 40 percent of fall related hospitalizations.
- 1 in 6 adults over the age of 45 reported a fall in the last 3 months.
 - Adults ages 45-54, retirees, and income levels near or below poverty were the most likely to report a fall.
- Among those who fell, 1 in 3 adults were injured by the fall.
 - Retirees and adults with incomes at or below poverty were the most likely to report a fall related injury.

Trends:

- The percentage of fall related hospitalizations with a hip fracture decreased since 2003.
- The percentage of adults who reported a fall in the last 3 months has not changed since 2006. However the percentage of adults who reported 4 or more falls has significantly increased.
- The percentage of adults who reported a fall-related injury has not changed since 2006.

Figure 7.10. Hospitalizations rates resulting from unintentional falls and percentage of falls with a hip fracture among adults 65 or older, by year, Ohio, 2002-2010



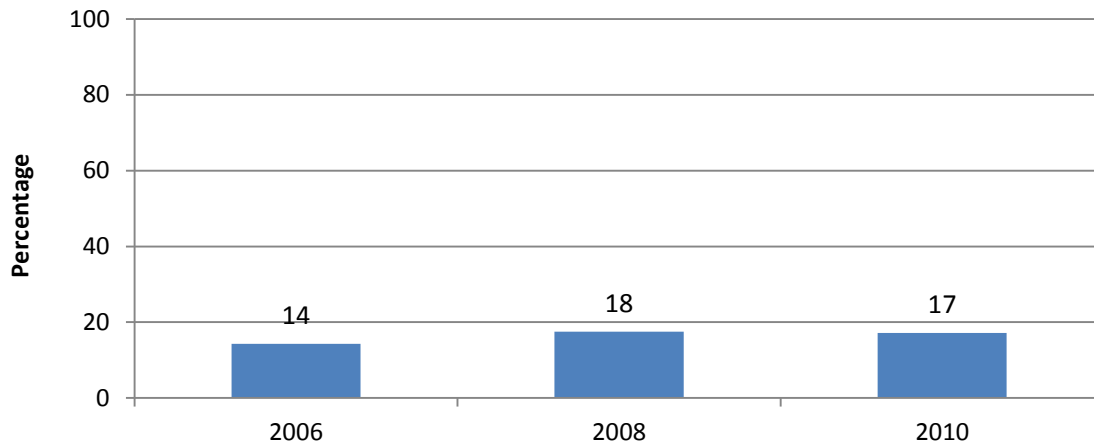
Source: Ohio Hospital Association

FALLS AND HIP FRACTURES AMONG OLDER ADULTS:

In 2010, 16,363 fall-related hospitalizations occurred among adults ages 65 or older. The age specific hospitalization rate was 1,026 per 100,000. Of the fall-related hospitalizations, 6,696 or 40 percent caused a hip fracture (Figure 7.10).

Fall related hospitalization rates remained the same since 2003 while the percentage of falls causing a hip fracture slightly decreased from 47 percent in 2003 to 40 percent in 2010 (Figure 7.10). The decrease in the percentage of fall related hip fractures is likely attributable to the decrease in external cause of injury coding rates. See Table 26a located at the end of this section for more details on hip fractures among adults ages 65 or older.

Figure 7.11. Percentage of adults aged 65 or older who reported a fall in the last 3 months, Ohio, 2006, 2008, and 2010



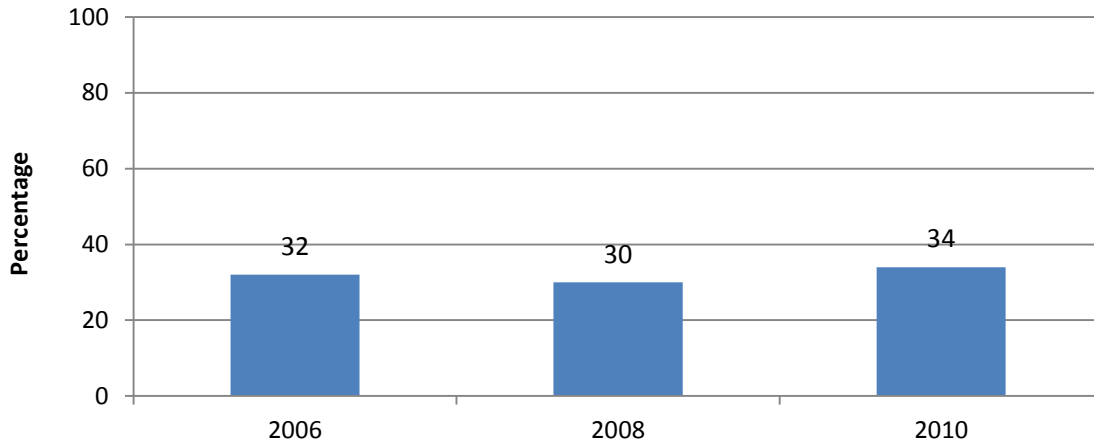
Source: Ohio Behavioral Risk Factor Surveillance System

FALL PATTERNS AND TRENDS:

Falls and health care resources associated with treating falls among older adults is a significant public health issue in Ohio. Nearly 300,000 or 17 percent of adults aged 65 or older reported a fall in the last 3 months in 2010 (Figure 7.11). Among those who reported a fall in the last 3 months, 61 percent fell one time, 31 percent fell 2 or 3 times, and 8 percent reported 4 or more falls.

Since 2006, the percentage of adults aged 65 or older who reported a fall in the last 3 months has not changed (Figure 7.11). See table 26a located at the end of this section for more detailed information on the prevalence of falls among adults ages 65 or older.

Figure 7.12. Percentage of adults aged 65 or older who reported a fall related injury among those who fell in the last 3 months, Ohio, 2006, 2008, and 2010



Source: Ohio Behavioral Risk Factor Surveillance System

FALL RELATED INJURY PATTERNS AND TRENDS:

Among adults who reported a fall in the last 3 months, approximately 100,000 or 34% reported an injury caused by a fall in 2010 (Figure 7.12). The percentage of adults who reported a fall related injury did not change significantly since 2006. See Table 26b located at the end of this section for more detailed information about and fall related injuries.

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 23a. Number of deaths resulting from unintentional falls, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	474	593	635	672	729	838	896	973	1,073	1,049	1,155
Sex											
Males	244	318	326	328	389	417	457	485	523	572	559
Females	230	275	309	344	340	421	439	488	550	477	596
Age											
< 1 yr	0	0	<5	<5	0	<5	<5	<5	<5	0	0
1-4 yrs	<5	0	0	5	<5	<5	<5	<5	<5	0	<5
5-14 yrs	<5	<5	<5	<5	<5	0	<5	<5	<5	<5	<5
15-24 yrs	5	6	3	9	6	6	6	10	6	7	<5
25-34 yrs	14	13	6	8	11	<5	8	11	5	6	15
35-44 yrs	18	25	21	20	26	30	23	24	20	18	10
45-54 yrs	26	49	50	32	33	52	49	50	69	73	64
55-64 yrs	41	48	37	43	83	59	72	63	87	88	96
65-74 yrs	65	80	82	89	87	104	112	137	112	121	161
75-84 yrs	146	184	202	213	235	278	286	279	334	318	343
85 or older	155	185	231	250	245	301	334	393	436	417	460
Race and ethnicity											
White‡	425	524	602	618	676	773	826	901	1,003	971	1,067
Black‡	41	61	28	43	42	51	62	52	57	63	75
Hispanic	<5	5	<5	8	<5	5	7	10	5	9	5
Other‡	<5	<5	<5	<5	<5	<5	<5	5	6	<5	7

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 23b. Death rates per 100,000 resulting from unintentional falls, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	4.0	5.0	5.3	5.5	5.9	6.7	7.1	7.5	8.2	7.9	8.6	0.44
Sex†												
Males	5.4	6.9	7.2	7.2	8.1	8.7	9.4	9.9	10.5	11.1	10.5	0.53
Females	3.1	3.7	4.0	4.4	4.3	5.3	5.4	6.0	6.6	5.6	7.2	0.37
Age												
< 1 yr	*	*	*	*	*	*	*	*	*	*	*	*
1-4 yrs	*	*	*	*	*	*	*	*	*	*	*	*
5-14 yrs	*	*	*	*	*	*	*	*	*	*	*	*
15-24 yrs	*	*	*	*	*	*	*	*	*	*	*	*
25-34 yrs	*	*	*	*	*	*	*	*	*	*	*	*
35-44 yrs	*	1.4	1.2	1.2	1.5	1.8	1.4	1.5	1.3	1.2	*	*
45-54 yrs	1.7	3.0	3.0	1.9	1.9	3.0	2.8	2.9	3.9	4.2	3.7	0.18
55-64 yrs	4.0	4.7	3.4	3.8	7.1	4.9	5.7	4.8	6.5	6.4	6.6	0.27
65-74 yrs	8.3	10.3	10.6	11.6	11.3	13.5	14.5	17.4	13.7	14.5	18.9	0.86
75-84 yrs	26.9	33.5	36.4	38.1	42.0	49.7	51.3	50.4	61.0	58.8	63.5	3.56
85 or older	87.2	102.1	125.1	131.5	126.4	151.2	161.5	183.4	197.9	183.8	199.9	11.34
Race and ethnicity†												
White‡	4.0	4.9	5.5	5.6	6.1	6.9	7.2	7.8	8.5	8.1	8.8	0.47
Black‡	4.1	5.8	6.0	4.1	3.7	4.7	5.6	4.9	5.2	5.4	6.3	0.10 (NL)
Hispanic	*	*	*	*	*	*	*	*	*	*	*	*
Other‡	*	*	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to fewer than 20 deaths

†Rates are age adjusted to 2000 U.S. standard population

‡Non-Hispanic

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 23c. Number of deaths resulting from unintentional falls, by mechanism and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Same level	26	19	17	22	28	18	10	17	22	25	18	2%	*
Carried by other persons	<5	<5	<5	0	0	<5	0	<5	<5	<5	0	0%	*
Wheelchair	<5	<5	5	9	19	13	12	13	24	14	17	1%	*
Bed	15	9	15	25	13	21	13	25	17	22	20	2%	*
Chair	6	5	6	8	<5	9	9	<5	<5	8	9	1%	*
Other furniture	<5	0	<5	<5	<5	<5	8	<5	5	<5	<5	*	*
Playground	0	0	0	0	0	0	0	0	0	0	0	0%	*
Stairs or steps	67	102	86	92	99	103	110	100	102	102	119	10%	3.1
Ladder or scaffolding	10	13	17	10	18	16	11	15	12	14	17	1%	*
From/out of building	16	27	14	10	24	19	27	20	22	17	14	1%	*
Tree	5	<5	<5	5	6	<5	5	5	<5	<5	<5	*	*
Cliff	<5	<5	<5	8	<5	<5	0	<5	0	<5	<5	*	*
Jumping or diving in water (not drowning)	<5	<5	0	5	8	<5	<5	<5	0	0	<5	*	*
Other fall from different level	21	33	18	16	19	22	20	23	18	28	8	1%	*
Other fall from same level	84	84	92	108	157	200	182	208	249	263	307	27%	23.0
Unspecified	215	292	354	353	330	410	487	533	592	547	619	54%	38.8

*Rates suppressed due to fewer than 20 deaths

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 24a. Number of hospitalization resulting from unintentional falls, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	18,868	21,761	22,168	22,234	22,310	23,271	24,149	23,945	23,178
Sex									
Males	6,524	7,506	7,757	7,415	7,362	7,809	8,240	8,108	7,847
Females	12,344	14,255	14,411	14,819	14,948	15,462	15,909	15,837	15,331
Age									
< 1 yr	47	52	56	75	95	75	80	71	55
1-4 yrs	168	145	167	200	266	249	264	254	107
5-14 yrs	403	399	383	445	532	581	554	440	241
15-24 yrs	436	528	483	458	475	488	446	465	364
25-34 yrs	569	638	621	563	523	535	608	517	540
35-44 yrs	1,118	1,128	1,152	971	916	941	910	871	860
45-54 yrs	1,454	1,700	1,716	1,691	1,503	1,746	1,862	1,855	1,778
55-64 yrs	1,539	1,964	2,100	2,125	2,020	2,272	2,454	2,519	2,597
65-74 yrs	2,609	3,028	3,085	3,073	2,987	3,190	3,355	3,330	3,421
75-84 yrs	5,567	6,555	6,570	6,580	6,631	6,576	6,775	6,455	6,242
85 or older	4,958	5,624	5,835	6,053	6,362	6,618	6,841	7,168	6,973
65 or older	13,134	15,207	15,490	15,706	15,980	16,384	16,971	16,953	16,636

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 24b. Hospitalization rates per 100,000 resulting from unintentional falls, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	157.6	179.0	180.8	179.2	178.0	183.6	188.7	184.2	176.3	2 (NL)
Sex†										
Males	132.3	149.4	152.7	144.6	142.5	148.5	154.9	151.7	142.8	1 (NL)
Females	169.2	193.3	193.6	197.6	196.7	202.0	206.6	202.1	195.4	3 (NL)
Age										
< 1 yr	31.9	35.3	37.5	51.2	64.1	49.5	52.4	48.1	39.6	2 (NL)
1-4 yrs	27.9	24.2	28.0	33.7	45.3	42.4	44.7	42.9	18.4	1 (NL)
5-14 yrs	24.9	25.0	24.3	28.6	34.7	38.4	37.0	29.4	15.8	<1 (NL)
15-24 yrs	27.6	33.1	30.3	28.8	30.0	31.0	28.4	29.7	22.9	-0.5 (NL)
25-34 yrs	38.6	43.5	42.5	38.6	35.9	36.6	41.5	35.0	38.3	-0.5 (NL)
35-44 yrs	64.0	66.1	68.7	58.9	56.5	59.1	58.5	57.3	58.1	-1 (NL)
45-54 yrs	88.3	101.7	101.2	98.5	86.5	99.9	106.3	105.7	102.1	1 (NL)
55-64 yrs	142.1	174.5	179.7	175.1	160.7	174.9	184.1	181.7	178.8	3 (NL)
65-74 yrs	338.2	393.9	402.0	401.2	388.3	407.8	415.6	398.4	402.4	5 (NL)
75-84 yrs	1,006.4	1,179.1	1,182.1	1,187.2	1,206.7	1,211.3	1,266.4	1,190.7	1,153.0	14 (NL)
85 or older	2,624.7	2,870.0	2,910.9	2,924.5	2,961.5	2,974.1	2,991.9	3,151.9	3,026.1	44

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 24c. Number of hospitalization resulting from unintentional falls, by type and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Steps or stairs	2,048	2,171	2,257	2,283	2,305	2,358	2,329	2,424	2,381	10.3%	0.4
Ladders or scaffolding	673	785	793	697	723	743	754	666	759	3.3%	-1 (NL)
Building or other structure	371	399	346	330	304	351	310	270	256	1.1%	-15
Hole or other opening	70	68	57	48	59	47	48	57	57	0.2%	-2 (NL)
Other level	2,398	2,557	2,539	2,675	2,866	2,805	2,826	2,883	2,601	11.2%	42 (NL)
Same level from slipping, tripping, or stumbling	5,977	7,582	8,049	7,835	7,480	8,395	9,050	8,680	8,463	36.5%	263
Same level from collision, pushing, or shoving by other person	124	127	119	92	110	114	101	97	73	0.3%	-5
Other or unspecified	7,209	8,073	8,008	8,274	8,463	8,459	8,731	8,868	8,588	37.1%	159

Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 25a. Number of ED visits resulting from unintentional falls by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	201,494	221,077	230,781	240,044	258,830	283,895	299,478	307,839	312,911
Sex									
Males	89,709	98,065	102,491	105,807	113,895	124,947	131,326	133,889	134,135
Females	111,785	123,012	128,290	134,237	144,935	158,948	168,152	173,950	178,776
Age									
< 1 yr	2,569	2,524	2,591	2,757	3,311	3,367	3,619	3,981	3,541
1-4 yrs	19,020	19,462	19,696	20,642	24,426	24,797	25,374	27,207	25,390
5-14 yrs	33,922	34,372	34,361	35,003	39,677	41,265	41,607	41,987	40,332
15-24 yrs	25,243	26,837	28,336	29,278	30,806	34,185	35,730	36,437	36,314
25-34 yrs	22,567	25,133	26,617	28,306	28,622	33,431	35,611	36,767	38,654
35-44 yrs	24,303	26,833	27,867	28,492	28,606	31,802	33,395	33,520	34,575
45-54 yrs	21,149	24,918	26,073	27,826	28,969	33,108	36,523	36,579	38,316
55-64 yrs	13,410	16,711	18,275	19,397	20,886	23,709	26,291	27,317	29,368
65-74 yrs	12,413	14,022	14,904	15,092	16,483	18,369	19,807	20,481	21,431
75-84 yrs	16,535	18,536	19,491	20,167	21,770	23,082	23,495	24,186	24,572
85 or older	10,363	11,729	12,570	13,084	15,274	16,780	18,026	19,377	20,418

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 25b. ED visit rates per 100,000 resulting from unintentional falls by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	1,766	1,931	2,014	2,095	2,260	2,474	2,604	2,666	2,711	125.8
Sex†										
Males	1,640	1,793	1,874	1,935	2,087	2,285	2,395	2,440	2,444	109.1
Females	1,858	2,035	2,119	2,219	2,392	2,623	2,774	2,855	2,942	141.8
Age										
< 1 yr	1,746	1,712	1,736	1,882	2,235	2,221	2,372	2,695	2,547	129.4
1-4 yrs	3,161	3,254	3,307	3,473	4,161	4,218	4,292	4,597	4,364	192.6
5-14 yrs	2,100	2,150	2,176	2,253	2,585	2,724	2,780	2,810	2,649	97.6
15-24 yrs	1,595	1,683	1,776	1,838	1,947	2,171	2,273	2,328	2,289	100.6
25-34 yrs	1,530	1,714	1,822	1,942	1,965	2,288	2,433	2,487	2,741	145.6
35-44 yrs	1,392	1,572	1,663	1,729	1,763	1,996	2,147	2,205	2,336	115.2
45-54 yrs	1,285	1,490	1,537	1,620	1,668	1,894	2,086	2,085	2,199	113.6
55-64 yrs	1,238	1,485	1,564	1,598	1,662	1,825	1,973	1,971	2,022	94.0
65-74 yrs	1,609	1,824	1,942	1,970	2,143	2,348	2,454	2,451	2,521	115.5
75-84 yrs	2,989	3,334	3,507	3,639	3,962	4,252	4,392	4,461	4,539	119.4
85 or older	5,486	5,985	6,271	6,322	7,110	7,541	7,884	8,520	8,861	425.8

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 25c. Number and percentage of ED visit rates resulting from unintentional falls by year and cause, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Steps or stairs	27,520	28,515	29,863	32,452	36,919	38,292	40,386	41,963	42,847	13.7%	2,142
Ladders or scaffolding	4,925	5,142	5,417	5,586	6,423	6,307	6,317	6,478	6,347	2.0%	204
Building or other structure	1,183	1,126	1,201	1,141	1,280	1,378	1,425	1,329	1,158	0.4%	20 (NL)
Hole or other opening	1,650	1,556	1,476	1,525	1,552	1,655	1,561	1,608	1,676	0.5%	9 (NL)
Other level	29,206	30,266	31,549	33,115	36,849	38,448	39,866	41,594	40,920	13.1%	1,713
Same level from slipping, tripping, or stumbling	63,412	77,448	80,965	81,981	81,104	97,727	108,420	108,688	111,305	35.6%	5,933
Same level from collision, pushing, or shoving by other person	3,778	4,095	3,511	3,786	4,196	4,082	4,037	4,109	3,141	1.0%	-19 (NL)
Other or unspecified	69,830	72,936	76,802	80,459	90,541	96,026	97,470	102,250	105,545	33.7%	4,795

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 26a. Prevalence of adults aged 65 or older who fell in last 3 months, Ohio, 2006, 2008, and 2010

	2006		2008		2010	
	Percent	95% CI	Percent	95% CI	Percent	95% CI
None	85.7	(82.7-88.7)	83.0	(81.6-84.5)	82.7	(81.1-84.4)
1 time	9.1	(6.7-11.4)	11.3	(10.1-12.5)	10.9	(9.6-12.3)
2 to 3 times	4.7	(2.7-6.7)	4.5	(3.6-5.3)	5.1	(4.1-6.2)
4 or more times	*	-	1.3	(0.8-1.7)	1.2	(0.8-1.7)

*Suppressed due to small cell sizes

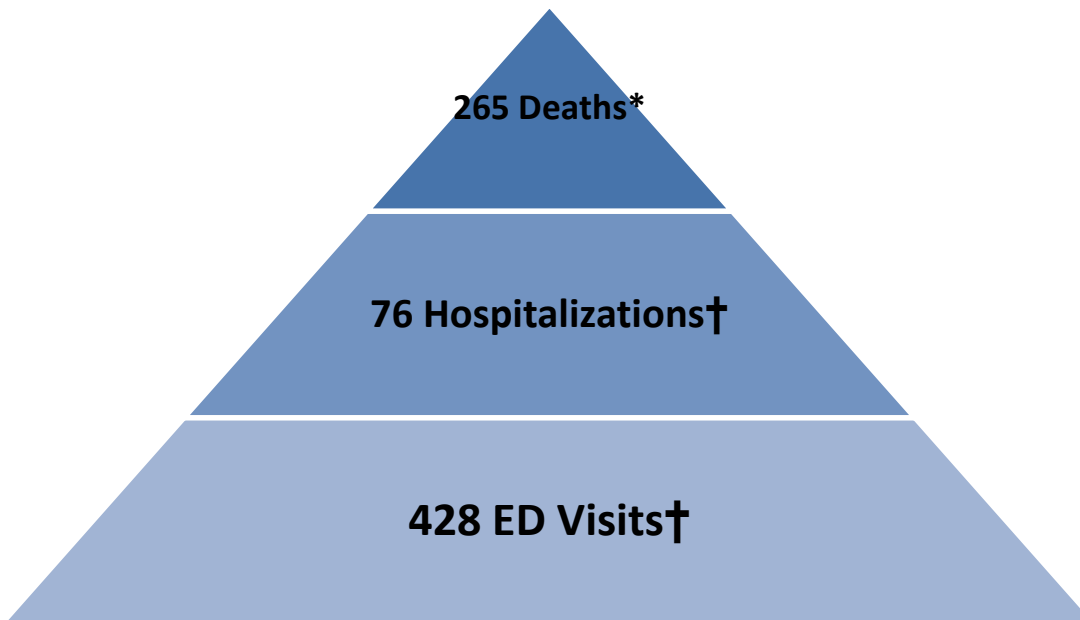
Source: Ohio Behavioral Risk Factor Surveillance System

Table 26c. Prevalence of adults aged 65 or older who injured by a fall in last 3 months, Ohio, 2006, 2008, and 2010

	2006		2008		2010	
	Percent	95% CI	Percent	95% CI	Percent	95% CI
Injured	31.6	(20.8-42.4)	30.2	(25.9-34.5)	33.9	(29.0-38.9)

Source: Ohio Behavioral Risk Factor Surveillance System

SECTION 3.6: SUFFOCATIONS



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS, 2010

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

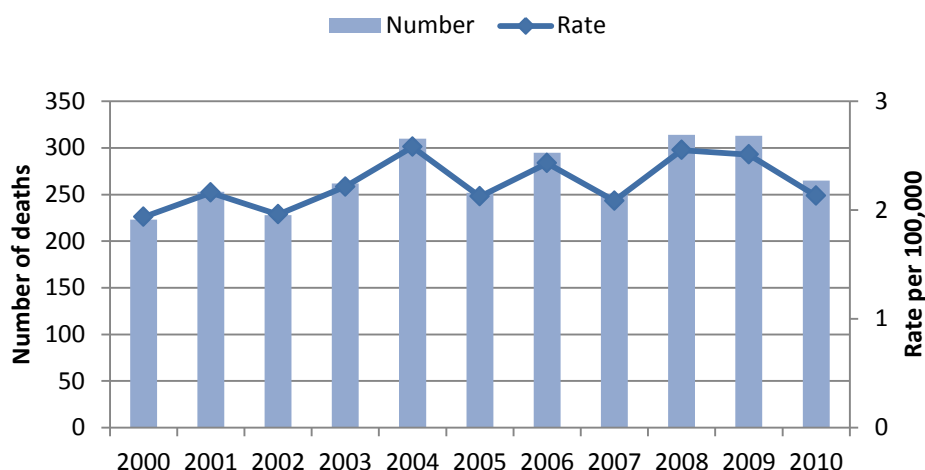
Patterns:

- Highest rates of fatal and non-fatal unintentional suffocations were found among children less than 5 years of age and adults 85 or older.
- Most fatal suffocations were caused by a non-food object for all ages while most fatal suffocations among infants occurred in a bed.
- Most non-fatal suffocations were caused by a non-food object for both children and adults.
- 29% of mothers reported unsafe sleeping practices with their infants.

Trends:

- Death and ED visit rates did not follow a consistent linear trend.
- Hospitalization rates have increased 46 percent since 2002.
- Death rates among infants increased 73 percent from 2000-2002 to 2008-2010.
- Fatal suffocations in bed and from food objects increased since 2000.
- Food and non-food objects have caused most non-fatal suffocations since 2002.
- 1 in 3 mothers reported unsafe sleep practices with their infants throughout the study period.

Figure 8.1. Number and age adjusted rate for unintentional suffocation deaths by year, Ohio, 2002-2010



Source: Ohio Hospital Association

DEATHS:

In 2010, 265 deaths resulted from unintentional suffocations in Ohio. The death rate was 2.1 per 100,000 (Figure 8.1). Males were more likely to die from suffocation than females (2.6 versus 1.8 per 100,000). The distribution of suffocation deaths varied by age. The highest rates were found among children less than 1 year (34.1 per 100,000) and adults ages 85 or older (30.6 per 100,000) (Figure 8.2). Suffocation fatality rates were similar among whites and blacks. See Table 8.1 for an unintentional suffocation death risk profile.

Nearly one-half of fatal suffocations were caused by the ingestion of non-food objects (49 percent). Food objects caused 22 percent of suffocations and 12 percent of suffocations were in bed (Figure 8.3).

Table 8.1 Unintentional Suffocation Death Risk Profile

	2010 At Risk Groups	Annual trend since 2000
Overall		Inconsistent trend
Sex	Males	Inconsistent trend
Age	< 1 yr	< 1 year (+2/100,000)
Race and ethnicity	Similar among whites and blacks	Inconsistent trend

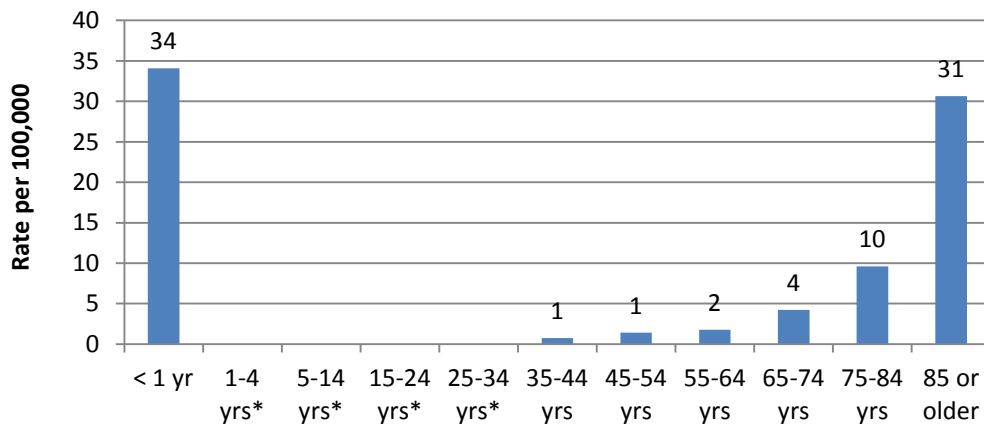
TRENDS:

The suffocation death rate did not follow a consistent trend since 2000 (Figure 8.1). Death rates among males were consistently higher than females throughout the study period. Fatality rates among children less than 1 year and adults ages 85 or older were consistently higher than other age groups. The suffocation fatality rate for children less than 1 year of age increased while rates fluctuated up and down for other age groups. Non-food objects, food objects, and suffocation in bed were the most common mechanisms of suffocation throughout the study period. The number of fatal suffocations in bed and resulting from food objects

Ohio Violence and Injury Prevention Program, Ohio Department of Health

increased while suffocations resulting from ingestion of non-food objects fluctuated during the study period. See Tables 27a-c located at the end of this section for more detailed information on the number and rate of suffocation deaths in Ohio.

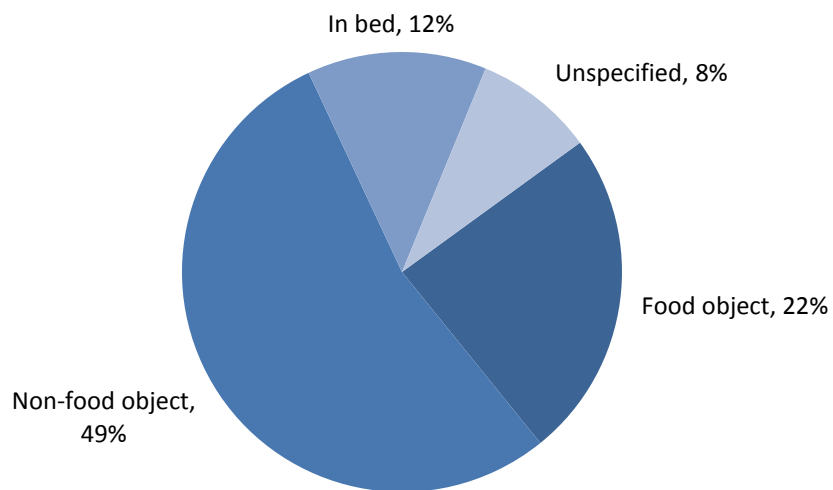
Figure 8.2. Rate of unintentional suffocation death rate by age group, Ohio, 2009-2010



Source: Ohio Department of Health, Vital Statistics

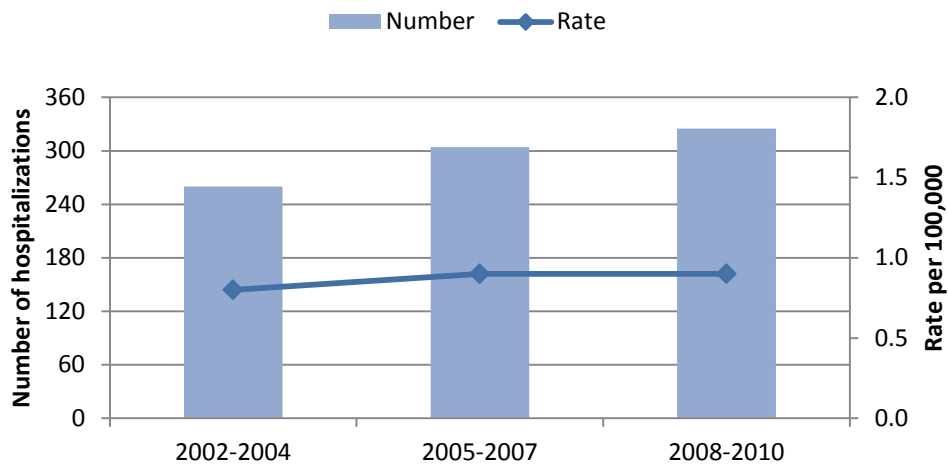
*Rates suppressed due to small cell sizes

Figure 8.3. Distribution of deaths resulting from unintentional suffocations by object, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

Figure 8.4. Number and age adjusted rate for unintentional suffocation hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

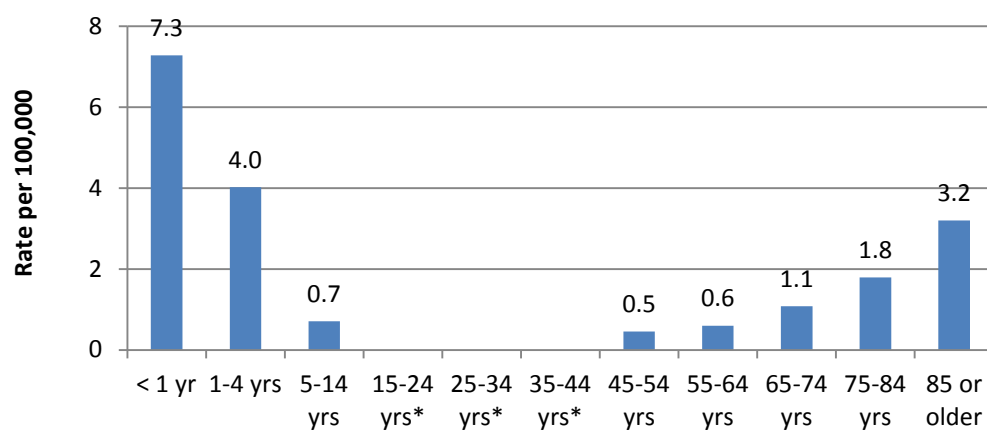
In 2008-2010, 325 hospitalizations resulted from unintentional suffocations. The suffocation hospitalization rate was 0.9 per 100,000 (Figure 8.4). The hospitalization rate was similar for males and females. The highest rates of hospitalizations were found among infants less than 1 year of age (7.3 per 100,000), children 1-4 years (4.0 per 100,000), and adults 85 or older (3.2 per 100,000). The lowest rates were found among individuals 5-54 years of age (Figure 8.5). Between 2008 and 2010, the majority of hospitalizations were caused by the ingestion or inhalation of a non-food object (54 percent) followed by ingestion or inhalation of a food object (41 percent) causing obstruction of the respiratory tract. Approximately 5 percent of hospitalizations were caused by unintentional mechanical suffocation.

Table 8.2 Unintentional Suffocation Hospitalization Risk Profile		
	2008-2010 At Risk Groups	Annual trend since 2002
Overall		+24%
Sex	Similar for males and females	Males (largest increase)
Age	< 1 year	1-4 (largest increase)

TRENDS:

Hospitalization rates resulting from unintentional suffocations increased 24 percent from 0.75 per 100,000 in 2002-2004 to 0.93 per 100,000 in 2008-2010. An increase was found among males while rates did not change among females. Hospitalization rates increased among children ages 5-14 or younger and adults ages 45-54 65-74 while rates decreased among adults ages 75-84. The distribution in the causes of the suffocation changed between 2002-2004 and 2008-2010. Suffocations resulting from non-food objects increased and surpassed food objects as the leading cause of suffocation related hospitalizations (Figure 8.6). See Tables 28a-c for more detailed information on the number and rate of unintentional suffocation hospitalizations.

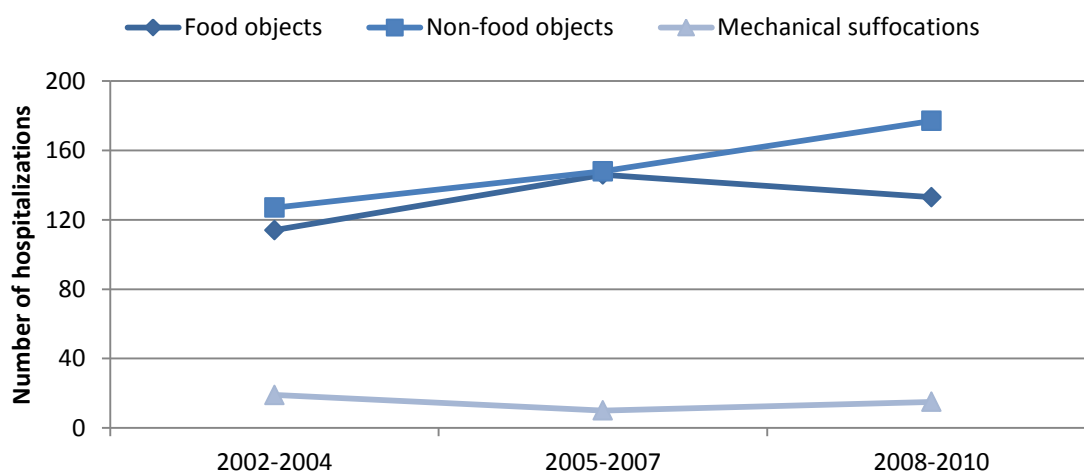
Figure 8.5. Rate of unintentional suffocation hospitalizations by age group, Ohio, 2008-2010



Source: Ohio Hospital Association

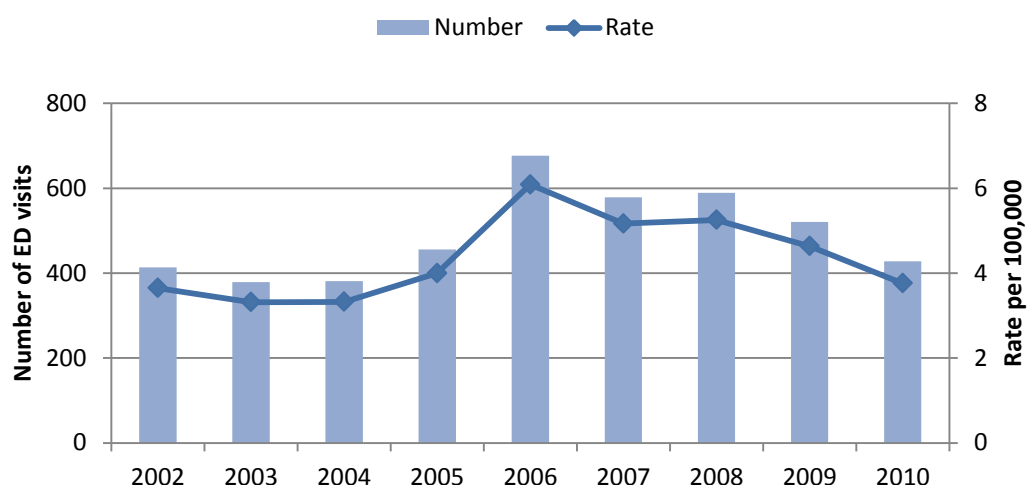
*Rates suppressed due to small cell sizes

Figure 8.6. Number of hospitalizations resulting from unintentional suffocations by object, Ohio, 2002-2010



Source: Ohio Hospital Association

Figure 8.7. Number and age adjusted rate for unintentional suffocation ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

Approximately 400 emergency department (ED) visits resulted from unintentional suffocations in 2010. The ED visit rate was 3.8 per 100,000 (Figure 8.7). The rate of unintentional suffocation ED visits was slightly higher among males compared to females (4.1 versus 3.4 per 100,000). The distribution of ED visits by age is bimodal with the highest rates occurring among children 4 years of age or younger and adults ages 85 or older. Rates of ED visits among individuals between ages 5 and 74 were low (Figure 8.8). See Table 8.3 for an unintentional suffocation ED visit risk profile.

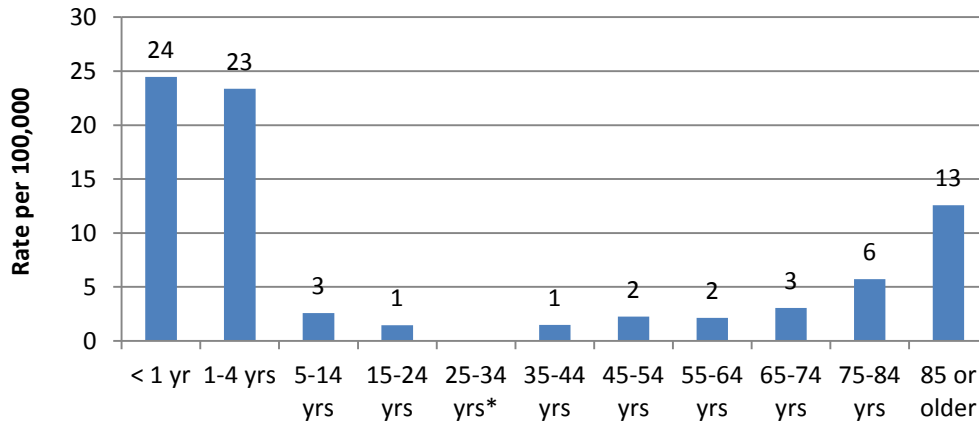
The majority of the suffocation ED visits resulted from inhalation or ingestion of a non-food (50 percent) or a food object (44 percent) that caused an obstruction in the respiratory tract. Approximately 5 percent were caused by an unintentional mechanical obstruction (Figure 8.9).

Table 8.3 Unintentional Suffocation ED Visit Risk Profile		
	2010 At Risk Groups	Annual Trend since 2002
Overall		Inconsistent trend
Sex	Males	Similar for males and females
Age	0-4 yrs	Inconsistent trend

TRENDS:

ED visit rates resulting from unintentional suffocations fluctuated throughout the study period but did not follow a consistent linear trend. This pattern was consistent among males and females as well as across all age groups. The distribution in the cause of the suffocation resulting in an ED visit did not change between 2002 and 2010. Food and non-food objects caused approximately 95 percent of suffocations throughout the study period. See Tables 29a-c located at the end of this section for more detailed information on the number and rate of unintentional suffocation ED visits.

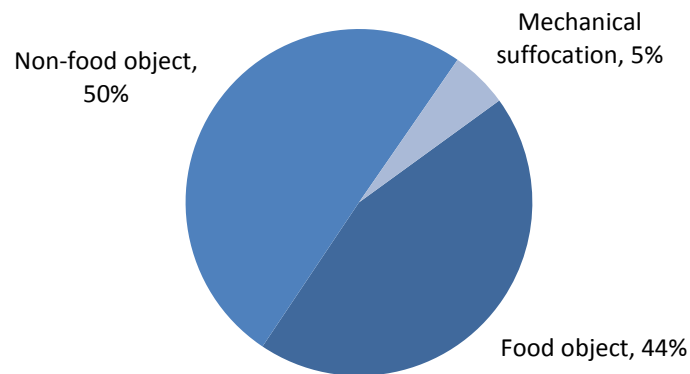
Figure 8.8. ED visit rates per 100,000 for unintentional suffocations by age, Ohio, 2008-2010



Source: Ohio Hospital Association

*Rates suppressed due to small cell sizes

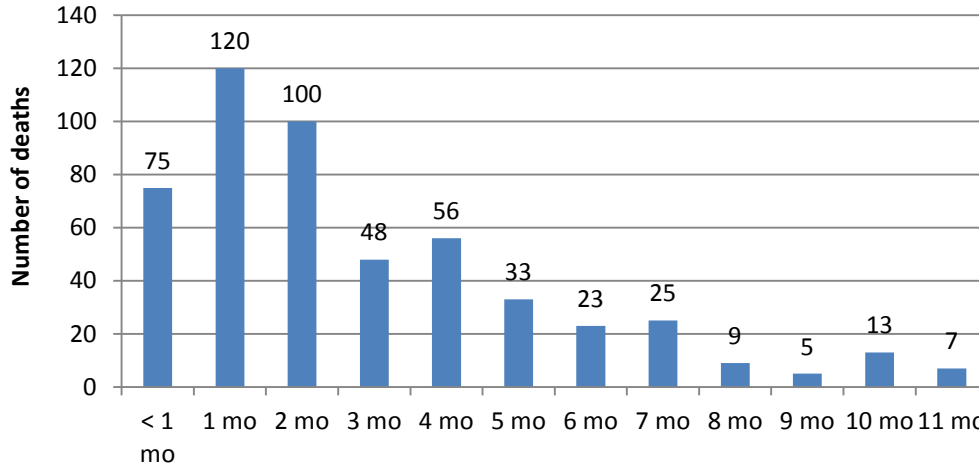
Figure 8.9. Distribution of ED visits resulting from unintentional suffocations by object, Ohio, 2010



Source: Ohio Hospital Association

SECTION 3.6A: INFANT SLEEP RELATED SUFFOCATION

Figure 8.10. Number of unintentional suffocation deaths among infants by age in months, Ohio, 2000-2010



Source: Ohio Department of Health, Vital Statistics

FINDINGS FROM DEATH CERTIFICATES

Nearly 500 infants less than 1 year of age died from an unintentional suffocation between 2000 and 2010. Most of the deaths occurred among males and infants aged 3 months or younger (see Figure 8.10). While most infant suffocation deaths occurred among whites, the death rate among black infants (66 per 100,000) was three times higher than among white infants (22 per 100,000). See Table 8.4 for an infant unintentional suffocation death risk profile.

Sixty-seven percent (329 deaths) of the fatal suffocations occurred in a bed. Approximately 20 percent of the suffocation deaths were unspecified and 8 percent were caused by other listed threats to breathing. See Table 30 located at the end of this section for more detailed information on the number of infant suffocation deaths in Ohio.

Table 8.4 Infant Unintentional Suffocation Death Risk Profile

	2010 At Risk Groups
Sex	Males
Age	< 4 months old
Race and ethnicity	Blacks

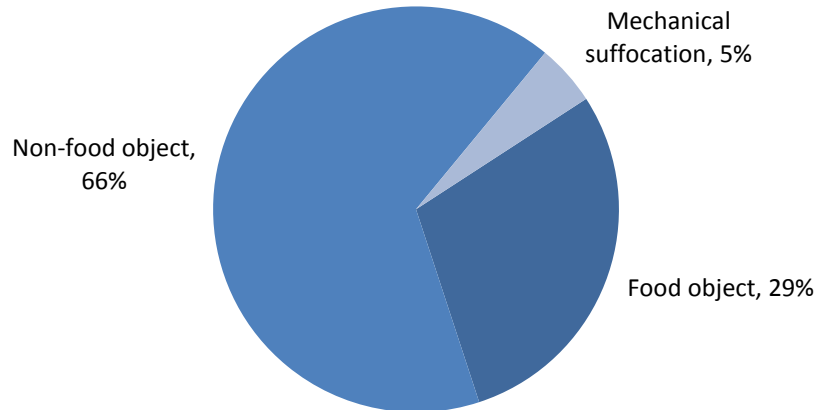
FINDINGS FROM CHILD FATALITY REVIEW

Approximately 1,000 deaths among infants less than 1 year of age were reviewed by child fatality review teams in Ohio in 2006-2009. Sleep-related deaths (including those attributed to sudden infant death syndrome or SIDS) accounted for 14 percent (153 deaths) of the total infant deaths reviewed. Sleep related deaths were the second leading cause of death reviewed after prematurity. Fifty-eight percent of sleep related deaths occurred on locations considered to be unsafe such as adult beds and couches. Approximately one-half of the deaths occurred to infants who were sharing a sleeping surface with someone at the time of

Ohio Violence and Injury Prevention Program, Ohio Department of Health

the death. See Ohio Child Fatality Review Eleventh Annual Report for more detailed information on findings from child fatality review teams.

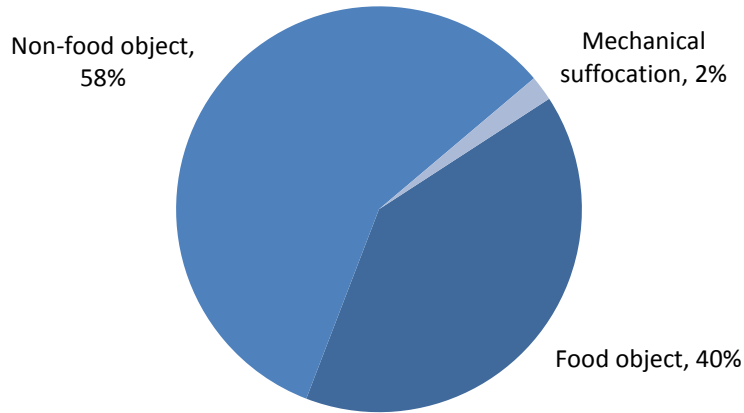
Figure 8.11. Distribution of hospitalizations resulting from unintentional suffocations by object among infants, Ohio, 2002-2010



HOSPITALIZATIONS:

Between 2002 and 2010, 103 hospitalizations resulted from an unintentional infant suffocation. Fifty-five percent of hospitalizations occurred among males while 45 percent were among females. Most suffocations were caused by a non-food object (66 percent) followed by a food object (29 percent) and a mechanical suffocation (5 percent) (Figure 8.11). Mechanical suffocations included suffocations that took place in a bed or cradle, were caused by a plastic bag, resulted from a lack of air in a closed place, or other specified means. See Table 31 located at the end of this section for more detailed information on unintentional suffocations among infants in Ohio.

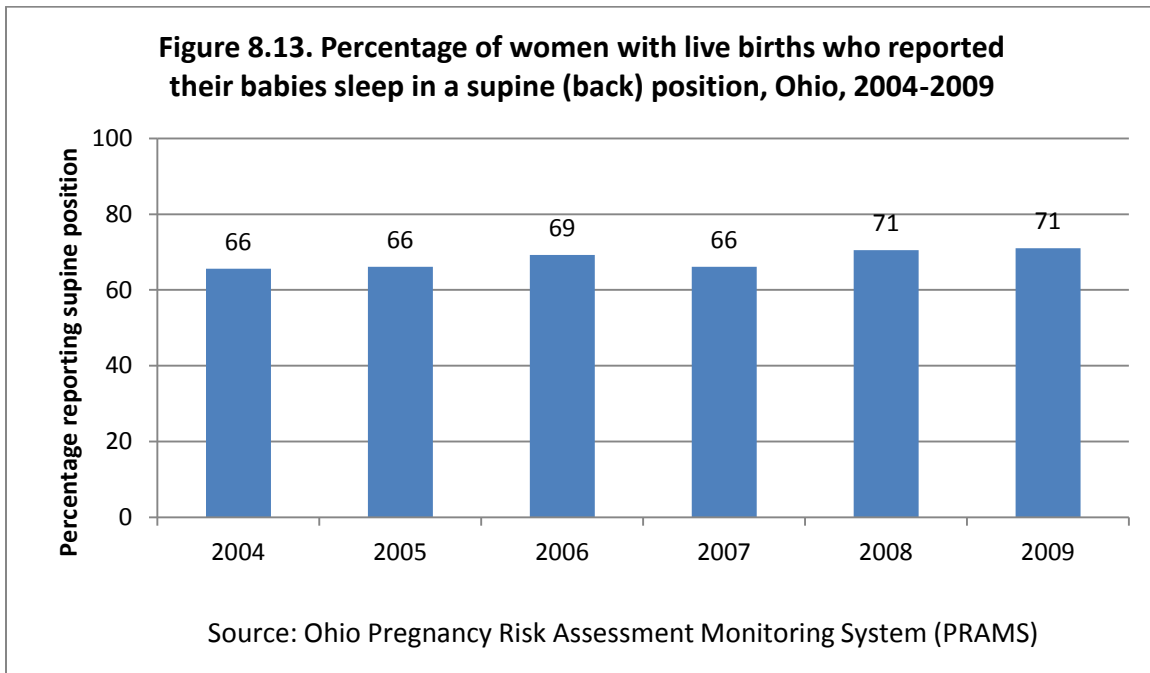
Figure 8.12. Distribution of ED visits resulting from unintentional suffocations by object among infants, Ohio, 2002-2010



EMERGENCY DEPARTMENT VISITS:

Between 2002 and 2010, 484 ED visits resulted from an unintentional suffocation among infants. The percentage of ED visits resulting from infant suffocations was similar among males (47 percent) than females (53 percent). Most ED visits resulting from infant suffocations were caused by a non-food object (58 percent) while 40 percent resulted from a food object and 2 percent resulted from a mechanical suffocation (Figure 8.12). See Table 32 for more detailed information on ED visits resulting from unintentional suffocations among infants.

SECTION 3.6B: SAFE SLEEPING PRACTICES



The American Academy of Pediatrics has developed recommendations for safe infant sleep practices and safe sleep environments. These recommendations include placing babies in a supine (back) sleep position in a crib free from toys, blankets, soft bedding and pillows. The supine position increases pulmonary function and oxygenation compared to the prone (stomach) position. Removing objects in the crib reduces the risk of the infant suffocating on those objects.²

The Ohio Pregnancy Risk Assessment Monitoring System (PRAMS) assesses infant sleep practices among women who have had a live birth. In 2009, 71 percent of women surveyed reported placing their infants in a supine sleep position. The percentage of women who reported putting their infants in a supine sleeping position varied by socio-demographic characteristics. The lowest rates of infant supine sleeping were found among mothers younger than 20 years of age, African Americans, unmarried, and completed less than 12 years of education.³ Infant sleep practices also varied by region in Ohio with highest percentage of supine sleeping found in the Toledo Region (77 percent) and the lowest percentage found in the Columbus Region (62 percent).⁴

Since 2004, the percentage of mothers placing their infants in a supine sleeping position has increased slightly from 66 percent in 2004 to 71 percent in 2009 (see Figure 8.13).⁵ See PRAMS Data Summary, 2004-2009 for more detailed information on safe sleeping practices reported by mothers in Ohio.

² American Academy of Pediatrics, Sudden Infant Death Syndrome Policy Recommendations

³ Ohio Department of Health, Infant Sleeping Position Fact Sheet, 2006-2008

⁴ Ohio Department of Health, Ohio PRAMS Regional Data Summary, 2006-2007

⁵ Ohio Department of Health, Ohio PRAMS Data Summary, 2004-2009

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 27a. Number of deaths resulting from unintentional suffocations, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	223	253	228	262	310	252	295	251	314	313	265
Sex											
Males	130	137	123	141	158	131	156	138	173	163	141
Females	93	116	105	121	152	121	139	113	141	150	124
Age											
< 1 yr	23	26	40	40	45	53	51	58	66	56	42
1-4 yrs	8	<5	<5	9	7	5	<5	10	<5	5	5
5-14 yrs	<5	8	6	<5	5	7	11	<5	<5	<5	<5
15-24 yrs	11	6	8	8	5	7	5	6	6	10	<5
25-34 yrs	6	8	<5	<5	7	7	7	<5	7	7	10
35-44 yrs	18	13	18	14	10	12	13	15	12	11	11
45-54 yrs	9	26	17	13	22	10	25	17	19	32	17
55-64 yrs	14	14	16	14	21	21	28	14	19	26	24
65-74 yrs	24	36	27	25	23	23	28	19	35	36	35
75-84 yrs	49	63	48	73	70	43	51	54	65	56	48
85 or older	58	49	42	62	95	64	72	52	80	72	68
Race and ethnicity											
White‡	188	214	187	229	262	210	241	210	252	266	226
Black‡	33	37	37	29	42	38	48	37	55	43	36
Hispanic	<5	0	<5	<5	<5	<5	5	<5	5	<5	<5
Other‡	0	<5	<5	<5	<5	<5	0	<5	<5	<5	<5

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 27b. Death rates per 100,000 resulting from unintentional suffocations, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	1.9	2.2	2.0	2.2	2.6	2.1	2.4	2.1	2.6	2.5	2.1	<0.1 (NL)
Sex†												
Males	2.7	2.8	2.5	2.8	3.3	2.6	3.1	2.7	3.3	3.1	2.6	<0.1 (NL)
Females	1.3	1.7	1.6	1.7	2.1	1.7	2.0	1.6	2.0	2.1	1.8	<0.1 (NL)
Age												
< 1 yr		19.7		28.6		35.3		41.5		34.1		1.96
1-4 yrs		*		*		*		*		*		*
5-14 yrs		*		*		*		*		*		*
15-24 yrs		0.5		*		*		*		*		*
25-34 yrs		*		*		*		*		*		*
35-44 yrs		0.9		0.7		0.8		0.9		0.7		<-0.1 (NL)
45-54 yrs		1.1		1.0		1.0		1.0		1.4		<0.1 (NL)
55-64 yrs		1.4		1.5		2.0		1.3		1.8		<0.1 (NL)
65-74 yrs		3.7		3.1		3.3		3.4		4.2		<0.1 (NL)
75-84 yrs		9.7		12.8		8.4		10.8		9.6		<-0.1 (NL)
85 or older		27.4		40.9		33.5		30.4		30.6		<-0.1 (NL)
Race and ethnicity†												
White‡	1.8	2.1	1.8	2.2	2.5	2.0	2.3	2.0	2.4	2.5	2.1	<0.1 (NL)
Black‡	2.8	3.0	3.1	2.4	3.7	3.0	3.4	2.7	4.1	3.2	2.5	<0.1 (NL)
Hispanic	*	*	*	*	*	*	*	*	*	*	*	*
Other‡	*	*	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to fewer than 20 deaths.

†Rates are age adjusted to 2000 U.S. standard population

‡Non-Hispanic

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 27c. Number of deaths resulting from unintentional suffocations, by mechanism and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Cause of Suffocation													
Suffocation in bed	17	10	31	33	30	35	43	47	46	46	32	12%	2.7
Other suffocation	14	16	17	12	11	6	18	10	7	7	5	2%	*
Cave-in, falling earth, and other substances	<5	<5	<5	<5	0	<5	<5	0	<5	<5	<5	<1%	*
Inhalation of gastric contents	19	25	11	14	16	9	6	10	14	10	13	5%	*
Ingestion of food	21	32	30	20	43	32	47	35	40	46	57	22%	2.7
Ingestion of other objects	130	139	112	163	179	128	152	125	164	165	129	49%	1.4 (NL)
Low oxygen environment	0	0	<5	0	0	0	0	<5	0	0	0	0%	*
Other specified	6	5	9	5	7	22	9	<5	16	13	6	2%	*
Unspecified	12	24	15	12	24	18	17	19	25	25	22	8%	*

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 28a. Number of hospitalization resulting from unintentional suffocations, by year, Ohio, 2002-2010

	2002-2004	2005-2007	2008-2010
Overall	260	304	325
Sex			
Males	128	169	174
Females	132	135	151
Age			
< 1 yr	28	42	33
1-4 yrs	38	61	71
5-14 yrs	20	20	34
15-24 yrs	9	13	14
25-34 yrs	<5	11	10
35-44 yrs	26	19	8
45-54 yrs	19	24	26
55-64 yrs	23	28	31
65-74 yrs	30	27	34
75-84 yrs	46	41	38
85 or older	17	18	26

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 28b. Hospitalization rates per 100,000 resulting from unintentional suffocations, by year, Ohio, 2002-2010

	2002-2004	2005-2007	2008-2010	Trend (per yr)
Overall†	0.75	0.88	0.92	0.03
Sex†				
Males	0.80	1.04	1.06	0.04
Females	1.16	1.09	1.25	NL
Age				
< 1 yr	6.31	9.41	7.28	0.2 (NL)
1-4 yrs	2.12	3.45	4.02	0.32
5-14 yrs	0.42	0.43	0.71	0.05
15-24 yrs	*	*	*	*
25-34 yrs	*	*	*	*
35-44 yrs	0.51	0.39	*	*
45-54 yrs	0.38	0.46	0.46	0.01
55-64 yrs	0.68	0.74	0.60	-0.01 (NL)
65-74 yrs	1.30	1.17	1.08	0.04
75-84 yrs	2.76	2.49	1.79	-0.16
85 or older	2.90	2.79	3.20	0.05 (NL)

*Rate suppressed due to less than 20 hospitalizations

Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

†Rates are age adjusted to 2000 U.S. standard population

Table 28c. Number of hospitalizations resulting from unintentional suffocations, by cause and year, Ohio, 2002-2010

	2002-2004	2005-2007	2008-2010	% in 2008-10	Trend (per yr)
Suffocation Cause					
Food object	127	146	133	41%	1 (NL)
Non-food object	114	148	177	54%	11
Mechanical suffocation	19	10	15	5%	*

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 29a. Number of ED visits resulting from unintentional suffocations by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	414	379	381	456	677	579	589	521	428
Sex									
Males	224	186	207	241	377	285	302	279	226
Females	190	193	174	215	300	294	287	242	202
Age									
< 1 yr	39	40	34	48	87	85	62	55	34
1-4 yrs	115	84	88	120	214	178	206	183	136
5-14 yrs	37	28	31	47	119	72	91	80	39
15-24 yrs	24	25	16	26	35	28	33	26	23
25-34 yrs	17	18	26	10	17	17	9	15	18
35-44 yrs	23	25	23	30	33	32	29	15	22
45-54 yrs	32	32	35	35	37	32	49	28	39
55-64 yrs	37	26	34	38	33	29	30	22	31
65-74 yrs	42	33	33	39	33	41	30	36	26
75-84 yrs	31	43	43	30	41	43	27	34	31
85 or older	17	25	18	33	28	22	23	27	29

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 29b. ED visit rates per 100,000 resulting from unintentional suffocations by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	3.6	3.3	3.3	4.0	6.1	5.2	5.3	4.6	3.8	0.2 (NL)
Sex†										
Males	4.2	3.5	3.8	4.4	6.9	5.2	5.5	5.1	4.1	0.1 (NL)
Females	3.3	3.2	2.9	3.6	5.3	5.1	5.0	4.2	3.4	0.2 (NL)
Age										
< 1 yr	26.5	27.1	22.8	32.8	58.7	56.1	40.6	37.2	24.5	1.4 (NL)
1-4 yrs	19.1	14.0	14.8	20.2	36.5	30.3	34.8	30.9	23.4	2.0 (NL)
5-14 yrs	2.3	1.8	2.0	3.0	7.8	4.8	6.1	5.4	2.6	0.4 (NL)
15-24 yrs	1.5	1.6	*	1.6	2.2	1.8	2.1	1.7	1.4	*
25-34 yrs	*	*	3.6	*	*	*	*	*	*	*
35-44 yrs	1.3	1.5	1.4	1.8	2.0	2.0	1.9	*	1.5	*
45-54 yrs	1.9	1.9	2.1	2.0	2.1	1.8	2.8	1.6	2.2	<0.1 (NL)
55-64 yrs	3.4	2.3	2.9	3.1	2.6	2.2	2.3	1.6	2.1	-0.2 (NL)
65-74 yrs	5.4	4.3	4.3	5.1	4.3	5.2	3.7	4.3	3.1	-0.2 (NL)
75-84 yrs	5.6	7.7	7.7	5.4	7.5	7.9	5.0	6.3	5.7	-0.1 (NL)
85 or older	9.0	12.8	9.0	15.9	13.0	9.9	10.1	11.9	12.6	0.1 (NL)

*Rates suppressed due to less than 20 ED visits

†Rates are age adjusted to 2000 U.S. standard population.

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 29c. Number of ED visits resulting from unintentional suffocations by object causing suffocation and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Cause of Suffocation											
Food object	180	187	183	209	240	213	198	181	190	44%	1 (NL)
Non-food object	204	168	183	233	388	345	363	328	215	50%	17 (NL)
Mechanical suffocation	30	24	15	14	49	21	28	12	23	5%	*

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 30. Number and percent of infant suffocation deaths by sex, race/ethnicity, and mechanism, Ohio, 2000-2010

	2000-2010 Number	2000-2010 Percent
Overall	490	
Sex		
Males	279	57%
Females	221	45%
Race and ethnicity†		
White‡	313	63.9%
Black‡	174	35.5%
Hispanic	10	2.0%
Other‡	3	0.6%
Mechanism		
Suffocation in bed	329	67.1%
Other suffocation	3	0.6%
Cave-in, falling earth, and other substances	0	0.0%
Inhalation of gastric contents	7	1.4%
Ingestion of food	3	1.0%
Ingestion of other objects	12	2.4%
Other specified	39	8.0%
Unspecified	97	19.8%

Source: Ohio Department of Health, Office of Vital Statistics

Table 31. Number of hospitalizations resulting from unintentional suffocations among infants less than 1 year of age, by cause, Ohio, 2002-2010¹

	2002- 2010 N	2002- 2010 %
Overall	103	
Males	57	55%
Females	46	45%
Food object	30	29%
Non-food object	68	66%
Mechanical suffocation	5	5%

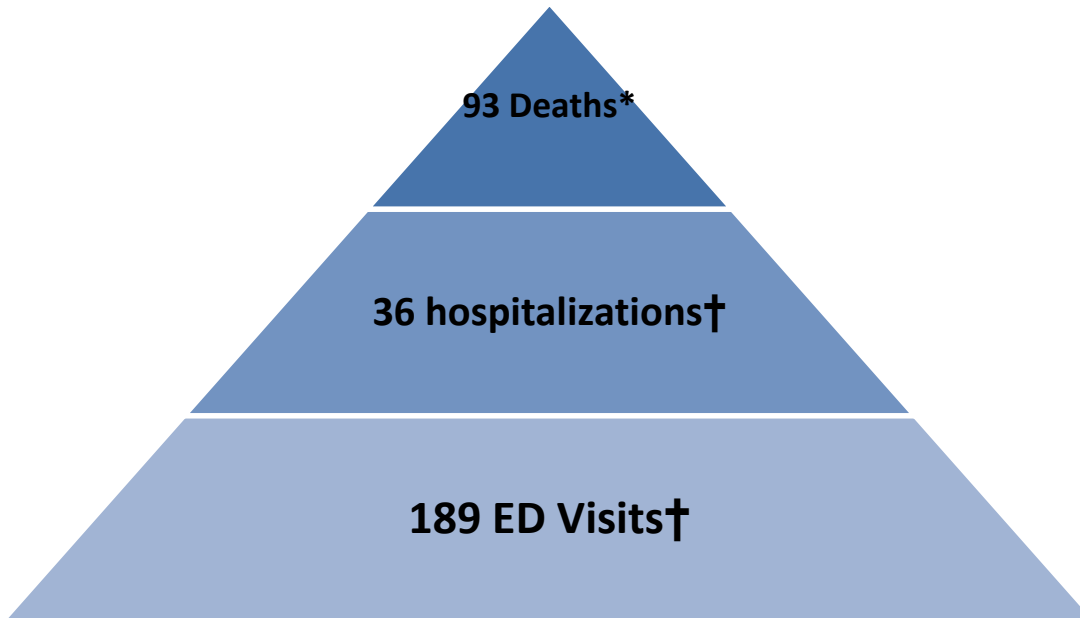
¹Source: Ohio Hospital Association

Table 32. Number and percent of ED visits resulting from unintentional suffocations among infants, Ohio, 2002-2010¹

	2002-2010 Number	2002-2010 Percent
Overall	484	
Males	226	47%
Females	258	53%
Food object	195	40%
Non-food object	281	58%
Mechanical suffocation	8	2%

¹Source: Ohio Hospital Association

SECTION 3.7: DROWNING



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS, 2010

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

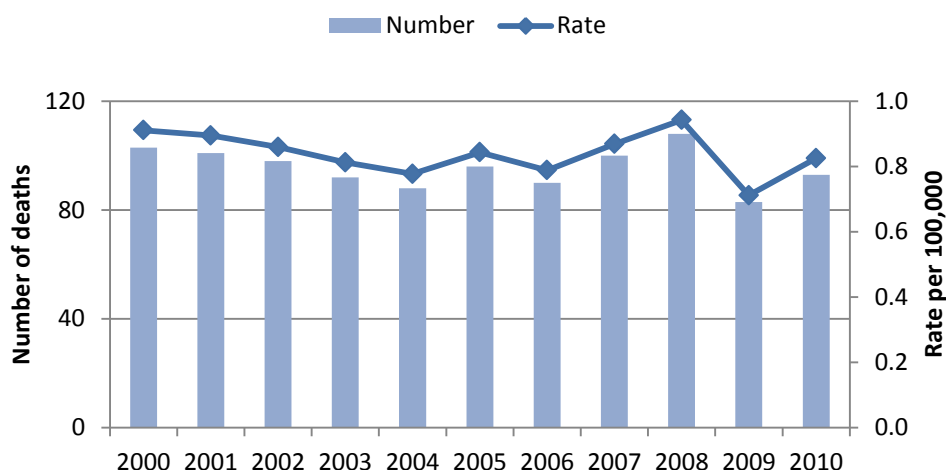
Patterns:

- Highest rates of fatal and non-fatal drowning were found among children less than 5 years of age.
- Rates of fatal or non-fatal drowning were higher among males than females.
- Nearly one-half of fatal drowning occurred in natural bodies of water.
- Unintentional drowning was the most common cause of non-fatal drowning.

Trends:

- Fatal and non-fatal drowning rates have not followed a consistent linear trend.
- Highest rates of fatal and non-fatal drowning were consistently found among children less than 5 years of age.
- Natural bodies of water were the most common location for fatal drowning since 2000.
- Unintentional drowning was most common cause of non-fatal drowning throughout the study period.

Figure 9.1. Number and age adjusted rate for unintentional drowning deaths by year, Ohio, 2002-2010



Source: Ohio Hospital Association

DEATHS:

In 2010, 93 people died from an unintentional drowning in Ohio. The drowning fatality rate was 0.83 per 100,000 (Figure 9.1). The fatality rate was 3 times higher among males (1.25 per 100,000) compared to females (0.42 per 100,000). The highest fatality rate was found among children ages 1-4 years at 2.2 per 100,000 which were 3 times higher than other age groups (Figure 9.2). Fatality rates were 50 percent higher among blacks (1.2 per 100,000) than whites (0.8 per 100,000). See Table 9.1 for an unintentional drowning death risk profile.

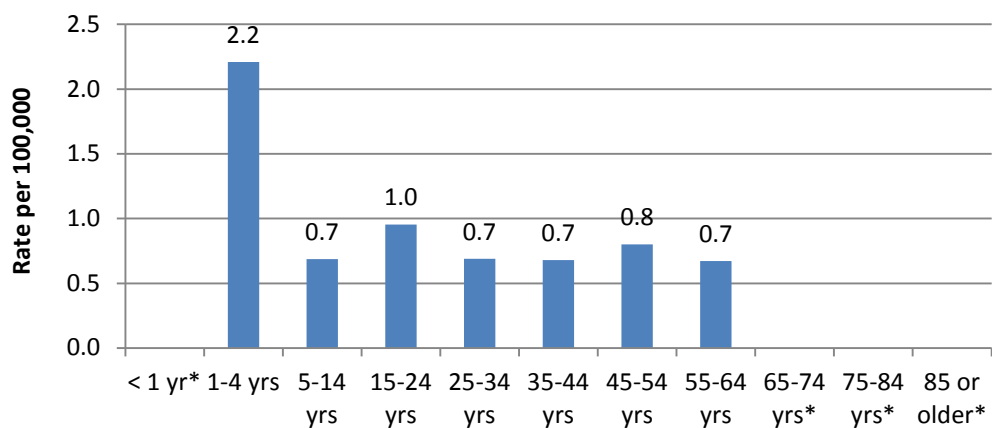
The most common place of occurrence for drowning was in a natural body of water (47 percent) followed by swimming pools (17 percent) (see Figure 9.3). Of note, 27 percent of drowning occurred in an unspecified location.

Table 9.1 Unintentional Drowning Death Risk Profile		
	2010 At Risk Groups	Annual trend since 2000
Overall		Inconsistent trends
Sex	Males	Inconsistent trends
Age	1-4 yrs	Inconsistent trends
Race and ethnicity	Blacks	Inconsistent trends

TRENDS:

Between 2000 and 2010, unintentional drowning fatality rates did not follow a consistent linear trend. Inconsistent trends were found by gender, age, and race or ethnicity. The number of fatal drowning in natural bodies of water increased on average by 2 drownings per year while the number of unspecified drowning decreased on average by 2 drownings per year. See Tables 34a-c located at the end of this section for more detailed information on the number and rates of unintentional drowning in Ohio.

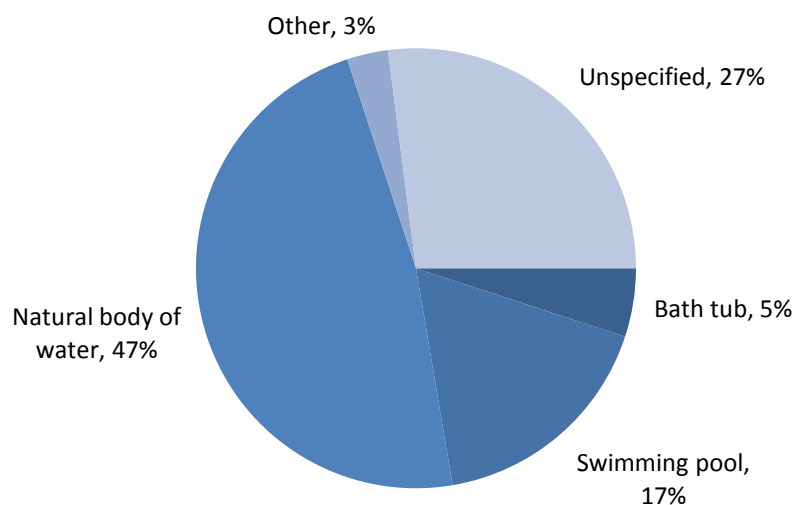
Figure 9.2. Rate of unintentional drowning death rate by age group, Ohio, 2008-2010



Source: Ohio Department of Health, Vital Statistics

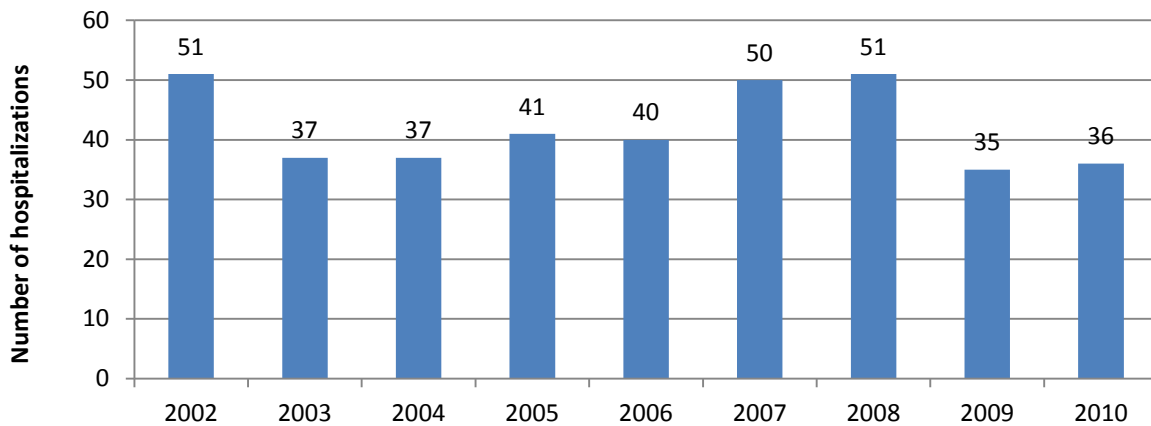
*Rates suppressed due to small cell sizes

Figure 9.3. Distribution of deaths resulting from unintentional drowning by location, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

Figure 9.4. Number of unintentional drowning hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

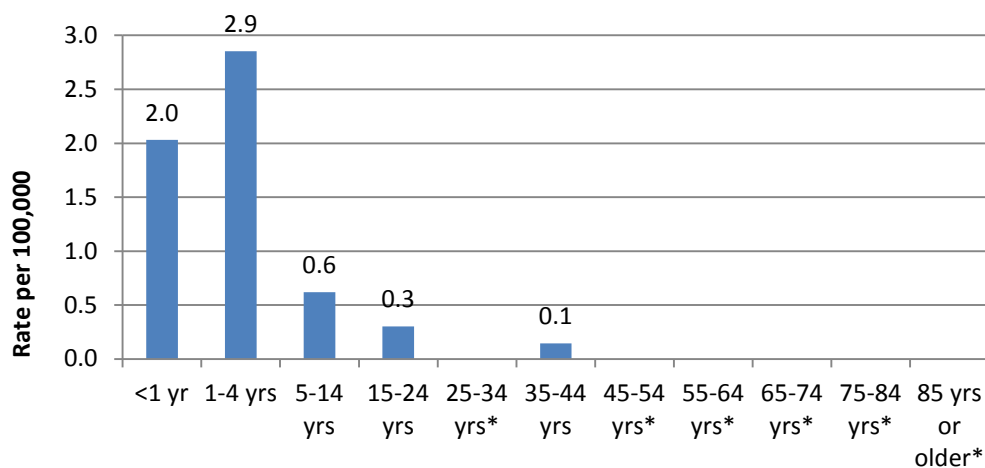
HOSPITALIZATIONS:

Between 2002 and 2010, 378 hospitalizations resulted from unintentional drowning (Figure 9.4). The drowning hospitalization rate was 0.39 per 100,000. The hospitalization rate was two times higher for males (0.54 per 100,000) than females (0.23 per 100,000). The highest rates were found among infants less than 1 year of age (2.0 per 100,000) and children 1-4 years (2.9 per 100,000) (see Figure 9.5). The majority of drowning (95 percent) were caused by unintentional drowning (Figure 9.6). See Tables 35a-c located at the end of this section for more detailed information on the number and rate of unintentional drowning hospitalizations.

Table 9.2 Unintentional Drowning Hospitalization Risk Profile

	At Risk Groups in 2002-2010
Overall	
Sex	Males
Age	<5 years

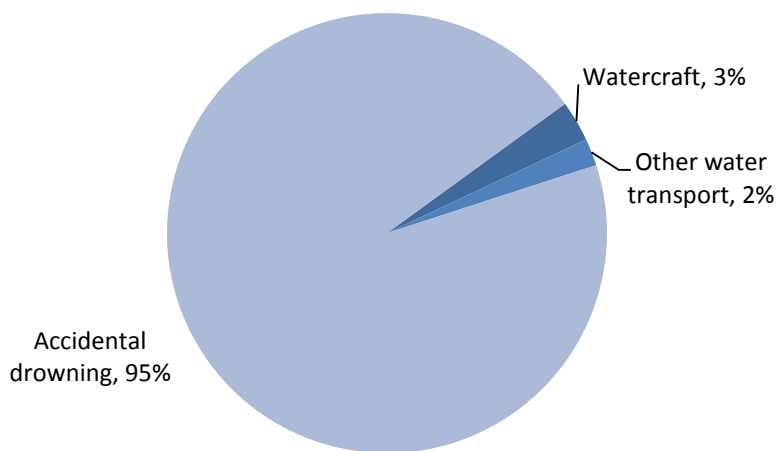
Figure 9.5. Unintentional drowning hospitalization rates per 100,000 by age, Ohio, 2002-2010



Source: Ohio Hospital Association

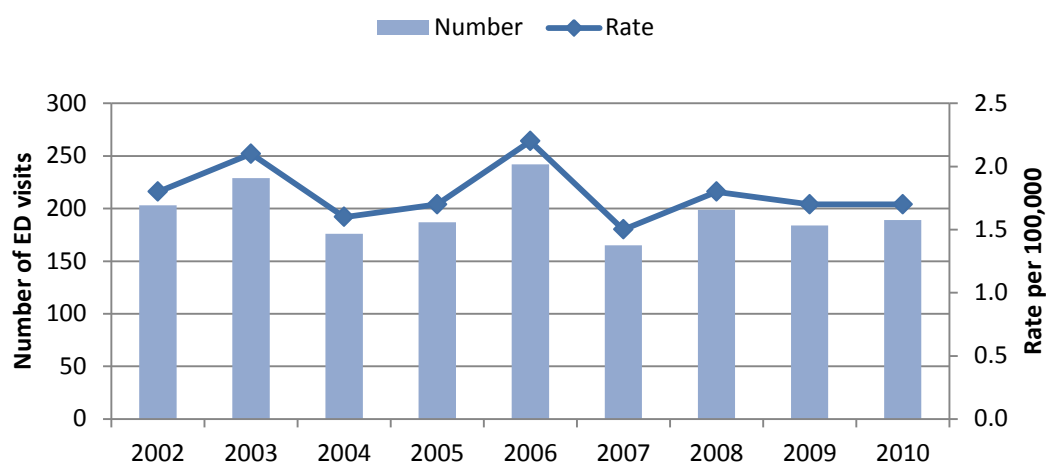
*Rate suppressed due to < 20 hospitalizations

Figure 9.6. Distribution of hospitalizations resulting from unintentional drowning by cause, Ohio, 2002-2010



Source: Ohio Hospital Association

Figure 9.7. Number and age adjusted rate for unintentional drowning ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

One hundred eighty nine ED visits were associated with unintentional drowning in 2010. The ED visit rate was 1.7 per 100,000 (Figure 9.7). Males were more likely than females to visit an ED for a drowning. ED visits increased from birth through age 4 and then steadily decreased after age 5 (Figure 9.8). See Table 9.3 for an unintentional drowning ED visit risk profile. Unintentional drowning caused 92 percent of visits and water transport was associated with 8 percent of visits (Figure 9.9).

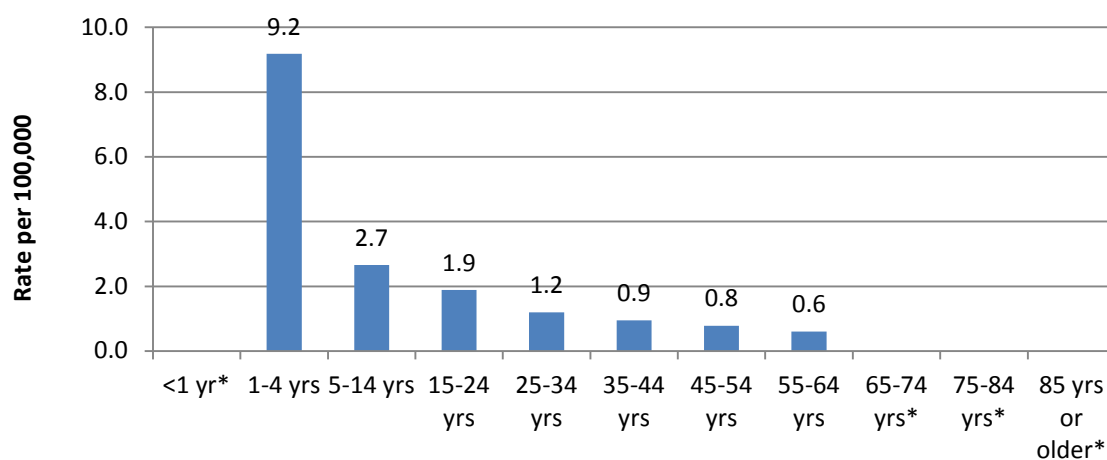
Table 9.3 Unintentional Drowning ED Visit Risk Profile

	2010 At Risk Groups	Trend since 2002
Overall		Did not change
Sex	Males	Males (-12%)
Age	1-4 years	1-4 years (+37%)

TRENDS:

ED visits resulting from unintentional drowning fluctuated throughout the study period with a high of 2.2 per 100,000 in 2006 and a low of 1.5 per 100,000 in 2007. Males and children ages 1-4 years were highest risk groups throughout the study period. The distribution in the causes of drowning related ED visits did not change over time. See Tables 36a-c located at the end of this section for more detailed information on the number and rate of unintentional drowning ED visits.

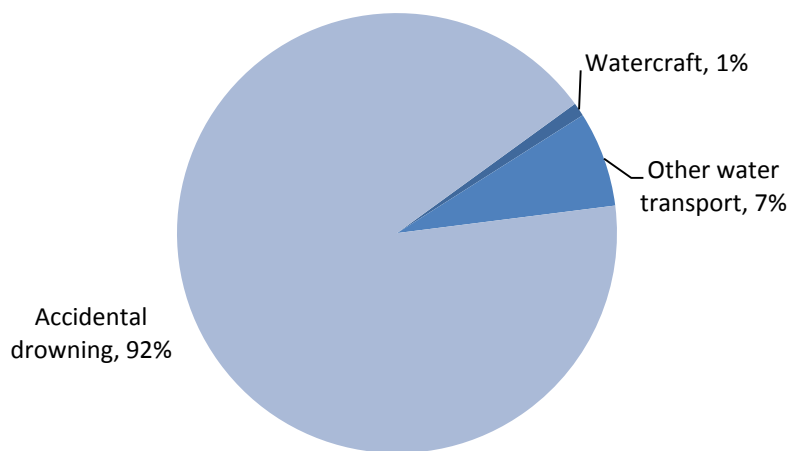
Figure 9.8. Unintentional drowning ED visit rates per 100,000 by age, Ohio, 2002-2010



Source: Ohio Hospital Association

*Rate suppressed due to < 20 hospitalizations

Figure 9.9. Distribution of ED visits resulting from unintentional drowning by cause, Ohio, 2010



Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 34a. Number of deaths resulting from unintentional drowning, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	103	101	98	92	88	96	90	100	108	83	93
Sex											
Males	80	72	84	69	68	72	68	77	81	68	69
Females	23	29	14	23	20	24	22	23	27	15	24
Age											
< 1 yr	6			7			7			<5	
1-4 yrs	24			42			38			39	
5-14 yrs	34			33			21			31	
15-24 yrs	38			59			63			45	
25-34 yrs	23			33			27			30	
35-44 yrs	28			26			33			31	
45-54 yrs	24			30			43			42	
55-64 yrs	8			23			17			28	
65-74 yrs	5			16			14			13	
75-84 yrs	9			<5			14			17	
85 or older	5			6			9			5	
Race and ethnicity											
White‡	153			216			230			214	
Black‡	47			46			45			56	
Hispanic	<5			8			8			9	
Other‡	0			6			<5			5	

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 34b. Death rates per 100,000 resulting from unintentional drowning, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	0.91	0.90	0.86	0.81	0.78	0.84	0.79	0.87	0.94	0.71	0.83	<-0.1 (NL)
Sex†												
Males	1.43	1.31	1.51	1.24	1.20	1.31	1.21	1.36	1.45	1.18	1.25	<-0.1 (NL)
Females	0.40	0.50	*	0.40	0.34	0.41	0.38	0.39	0.47	*	0.42	<0.1 (NL)
Age												
< 1 yr	*			*			*			*		*
1-4 yrs	1.99			2.33			2.14			2.21		<0.1 (NL)
5-14 yrs	1.04			0.69			0.45			0.69		<-0.1 (NL)
15-24 yrs	1.22			1.24			1.33			0.95		<-0.1 (NL)
25-34 yrs	0.77			0.74			0.61			0.69		<-0.1 (NL)
35-44 yrs	0.78			0.51			0.68			0.68		<-0.1 (NL)
45-54 yrs	0.75			0.60			0.83			0.80		<0.1 (NL)
55-64 yrs	0.39			0.68			0.45			0.67		<0.1 (NL)
65-74 yrs	*			*			*			*		*
75-84 yrs	*			*			*			*		*
85 or older	*			*			*			*		*
Race and ethnicity†												
White‡	0.81			0.76			0.80			0.75		<-0.1 (NL)
Black‡	1.58			1.06			0.99			1.23		<-0.1 (NL)
Hispanic	*			*			*			*		*
Other‡	*			*			*			*		*

*Rates suppressed due to fewer than 20 deaths.

‡Non-Hispanic

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 34c. Number of deaths resulting from unintentional drowning, by location and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Bath tub	13	14	7	11	9	7	17	15	18	11	5	*	*
Swimming pool	19	14	14	8	10	22	11	9	17	15	16	17%	*
Natural body of water	24	28	30	31	26	39	39	44	47	39	44	47%	2.1
Other	7	10	10	11	8	<5	<5	11	<5	<5	<5	*	*
Unspecified	40	35	37	31	35	27	22	21	24	16	25	27%	-2.0

*Suppressed due to fewer than 20 deaths.

Source: Ohio Department of Health, Office of Vital Statistics

Table 35a. Number of hospitalizations resulting from unintentional drowning by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	53	37	37	41	40	50	51	35	36
Sex									
Males	40	27	23	29	30	33	36	24	26
Females	13	10	14	12	10	17	15	11	10
Age									
< 1 yr					27				
1-4 yrs					152				
5-14 yrs					86				
15-24 yrs					43				
25-34 yrs					13				
35-44 yrs					21				
45-54 yrs					15				
55-64 yrs					8				
65-74 yrs					<5				
75-84 yrs					5				
85 or older					6				

Source: Ohio Hospital Association

Table 35b. Hospitalization rates per 100,000 resulting from unintentional drowning, Ohio, 2002-2010

	2002-2010
Overall†	0.39
Sex†	
Males	0.54
Females	0.23
Age	
< 1 yr	2.03
1-4 yrs	2.85
5-14 yrs	0.62
15-24 yrs	0.30
25-34 yrs	*
35-44 yrs	0.14
45-54 yrs	*
55-64 yrs	*
65-74 yrs	*
75-84 yrs	*
85 or older	*

*Rates suppressed due to less than 20 hospitalizations

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 35c. Number and percentage of hospitalizations resulting from unintentional drowning by type, Ohio, 2002-2010

	2002-2010	2002-2010
	Number	Percent
Caused by watercraft	10	3%
Other water transport	8	2%
Unintentional drowning	362	95%

Source: Ohio Hospital Association

Table 36a. Number of ED visits resulting from unintentional drowning by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	203	229	176	187	241	165	199	184	189
Sex									
Males	134	156	105	123	176	101	121	119	0
Females	69	73	71	64	65	64	78	65	0
Age									
< 1 yr	9	7	5	7	5	6	<5	5	11
1-4 yrs	30	41	53	55	47	44	59	52	51
5-14 yrs	52	51	49	32	76	36	44	40	36
15-24 yrs	47	58	24	32	68	38	29	29	31
25-34 yrs	20	26	12	15	13	14	16	19	17
35-44 yrs	24	27	14	16	10	9	13	16	14
45-54 yrs	14	7	7	16	8	11	17	8	16
55-64 yrs	<5	<5	<5	7	9	<5	9	12	<5
65-74 yrs	0	<5	7	<5	<5	<5	5	<5	<5
75-84 yrs	<5	<5	<5	<5	0	<5	<5	0	<5
85 or older	<5	<5	0	<5	<5	<5	<5	0	<5

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 36b. ED visit rates per 100,000 resulting from unintentional drowning by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	1.8	2.1	1.6	1.7	2.2	1.5	1.8	1.7	1.7	<-0.1 (NL)
Sex†										
Males	2.5	2.8	1.9	2.2	3.2	1.8	2.2	2.2	2.1	-0.1 (NL)
Females	1.2	1.3	1.3	1.2	1.2	1.2	1.4	1.2	1.4	<0.1 (NL)
Age										
< 1 yr		4.7			*			*		*
1-4 yrs		6.9			8.3			9.2		0.4
5-14 yrs		3.2			3.1			2.7		-0.1
15-24 yrs		2.7			2.9			1.9		-0.1
25-34 yrs		1.3			1.0			1.2		<-0.1 (NL)
35-44 yrs		1.3			0.7			0.9		-0.1 (NL)
45-54 yrs		0.6			0.7			0.8		<0.1 (NL)
55-64 yrs		*			*			0.6		*
65-74 yrs		*			*			*		*
75-84 yrs		*			*			*		*
85 or older		*			*			*		*

*Rates are suppressed due to less than 20 ED visits †Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 36c. Number of ED visit rates resulting from unintentional drownings by type and year, Ohio, 2002-2010

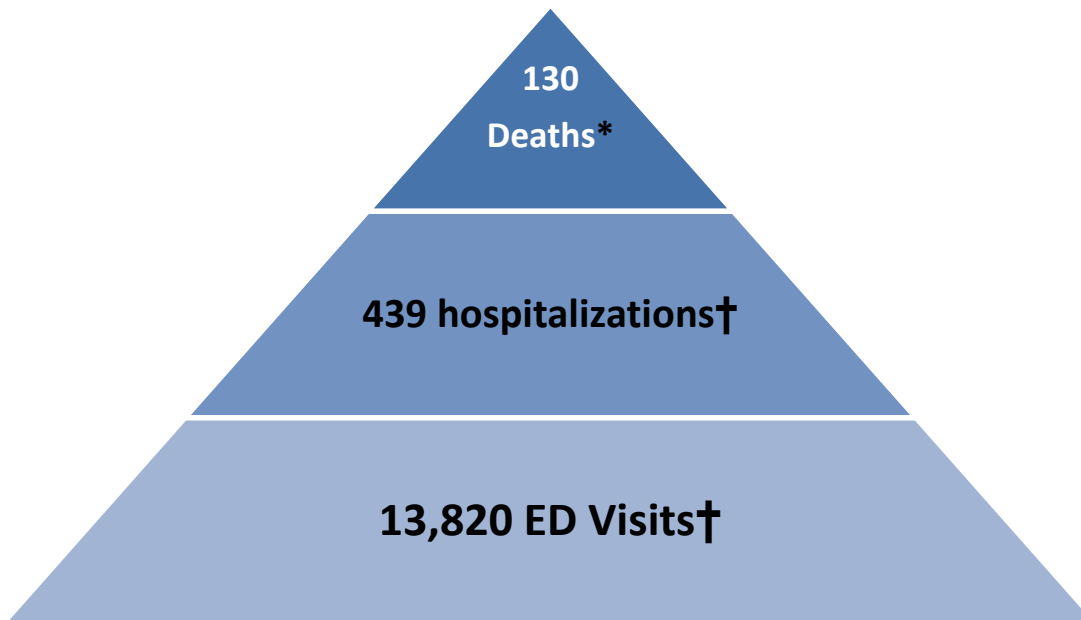
	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Caused by watercraft	7	7	<5	<5	0	<5	<5	5	<5	1%	*
Other water transport	21	18	17	12	8	11	12	13	13	7%	*
Unintentional drowning	175	204	156	172	233	151	184	166	174	92%	-1 (NL)

*Rates are suppressed due to less than 20 ED visits

Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

SECTION 3.8: BURNS



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS, 2010

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

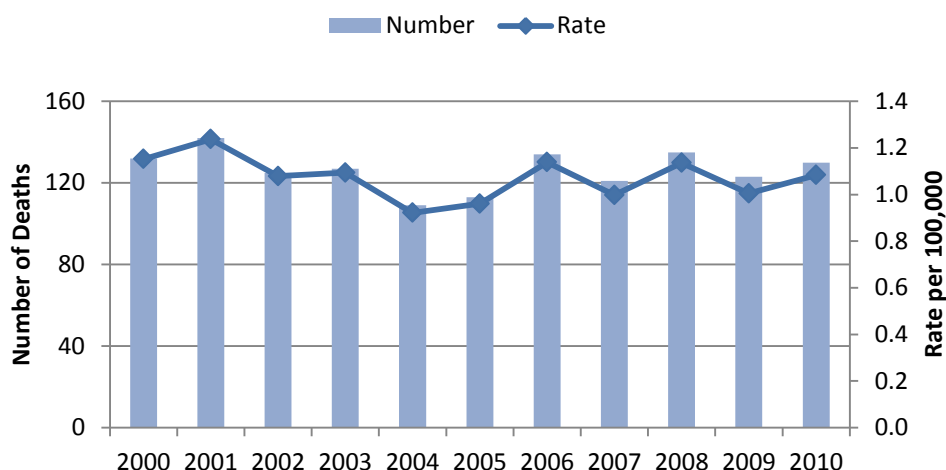
Patterns:

- Highest rates of fatal burns were found among ages 85 or older while the highest rates of non-fatal burns were found among children less than 5 years of age.
- Fatal and non-fatal burn rates were higher among males than females.
- Most fatal burns were caused by an uncontrolled fire while touching hot objects was the most common cause of non-fatal burns.

Trends:

- Death rates did not follow a consistent linear pattern in 2000-2010.
- Hospitalization rates have decreased 43 percent while ED visit rates increased 17 percent since 2002.
- Largest increase in fatal burns was found among adults ages 75-84 and largest increase in ED visits was found among children less than 5 years of age.
- Most fatal burns were caused by an uncontrolled fire and touching hot objects were most common cause of non-fatal burns throughout the study period.

Figure 10.1. Number and age adjusted rate for unintentional burn deaths by year, Ohio, 2002-2010



Source: Ohio Department of Health, Office of Vital Statistics

DEATHS:

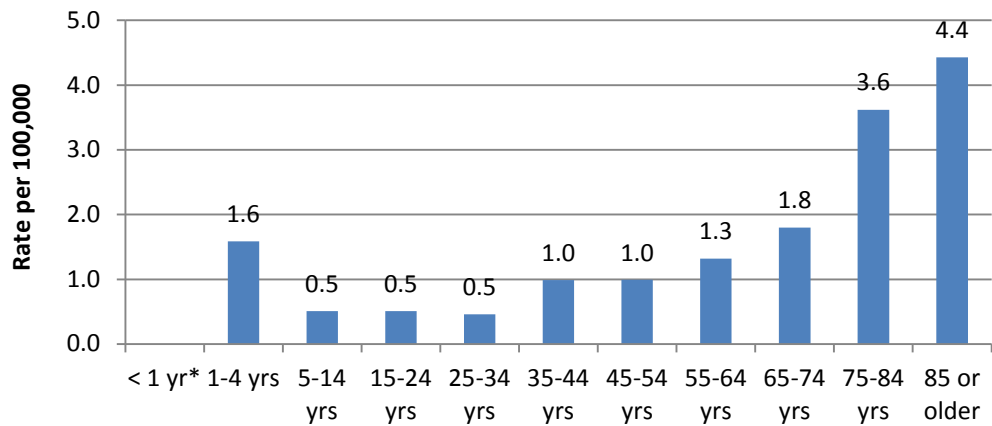
In 2010, 130 deaths resulted from unintentional burns. The burn fatality rate was 1.1 per 100,000 (Figure 10.1). Burn fatality rates were higher among males (1.3 per 100,000) than females (0.9 per 100,000). Rates decreased with age among ages 0-24 and increased with age among ages 25 or older. The highest death rates were found among ages 85 or older (Figure 10.2). The burn death rate was 1.2 per 100,000 for whites while rates were suppressed for other race and ethnic groups due to less than 20 deaths. Death rates were generally higher among blacks than whites in previous years when the number of deaths exceeded 20 for blacks. Nearly 84 percent of fatal burns were caused by an uncontrolled fire (Figure 10.3). See Table 10.1 for an unintentional burn death risk profile.

Table 10.1 Unintentional Burn Death Risk Profile		
	2010 At Risk Groups	Annual trend since 2000
Overall		Inconsistent trend
Sex	Males	Inconsistent trends
Age	85 or older	75-84 (largest increase)
Race and ethnicity	Blacks	Inconsistent trends

TRENDS:

From 2000 to 2010, the unintentional burn death rate did not follow a consistent linear trend. Rates varied from a high of 1.24 per 100,000 in 2001 to a low of 0.92 per 100,000 in 2004. Slight increases were found among ages 75-84 (+0.1 per 100,000 per year) and ages 55-64 (+0.03 per 100,000 per year) while a slight decrease was found among children ages 1-4 years (-0.2 per 100,000 per year). Rates did not follow a consistent linear trend among males or females nor by race or ethnic group. See Tables 37a-c located at the end of this section for more detailed information on the number and rate of unintentional burn deaths in Ohio.

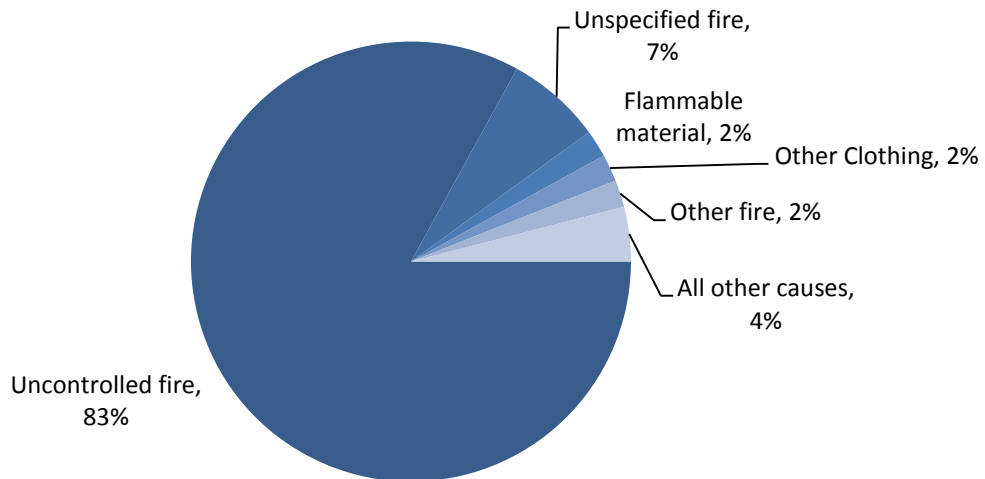
Figure 10.2. Rate of unintentional burn death rate by age group, Ohio, 2008-2010



Source: Ohio Department of Health, Vital Statistics

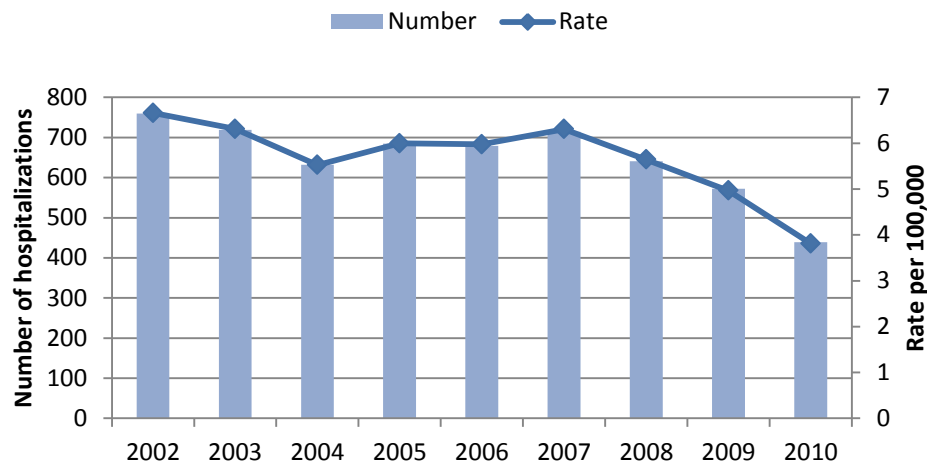
*Rates suppressed due to small cell sizes

Figure 10.3. Distribution of deaths resulting from unintentional burns by cause, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

Figure 10.4. Number and age adjusted rate for unintentional burn hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

In 2010, 439 hospitalizations resulted from unintentional burns. The burn hospitalization rate was 3.8 per 100,000 (Figure 10.4). The hospitalization rate was higher for males. The highest rates were found among children 1-4 years (see Figure 10.5). The majority of burns were caused by touching hot objects (54 percent) followed by ignition of materials (18 percent) and conflagration (16 percent) (Figure 10.6). See Table 10.2 for an unintentional burn hospitalization risk profile.

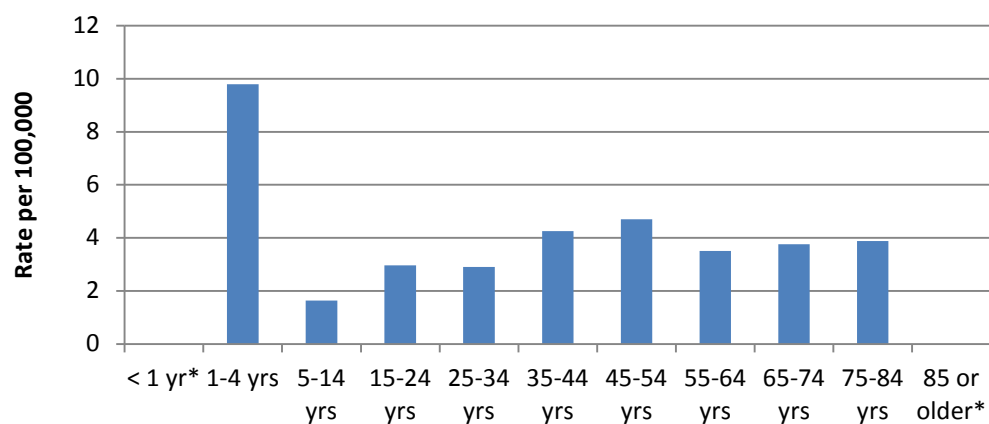
Table 10.2 Unintentional Burn Hospitalization Risk Profile

	2010 At Risk Groups	Annual Trend since 2002
Overall		-43%
Sex	Males	Females (Inconsistent)
Age	1-4	1-14 (Inconsistent)

TRENDS:

Hospitalizations resulting from unintentional burns decreased 43 percent from 6.7 per 100,000 in 2002 to 3.8 per 100,000 in 2010. Rates decreased by an average of -0.2 per 100,000 per year. Rates among males decreased on average by -0.4 per 100,000 per year while rates among females did not follow a consistent trend. Hospitalization rates decreased among ages 15-84 with the largest average annual decrease found among adults ages 75-84 (-0.6 per 100,000). Rates among children ages 1-14 did not follow a consistent trend and cell sizes were too small to complete a trend analysis of infants and adults ages 85 or older. Burns caused by ignition of materials decreased by an average of 10 hospitalizations per year while the number of hospitalizations resulting from the other leading causes of burns did not follow a consistent trend. See Tables 38a-c located at the end of this section for more detailed information on the number and rate of unintentional burn hospitalizations.

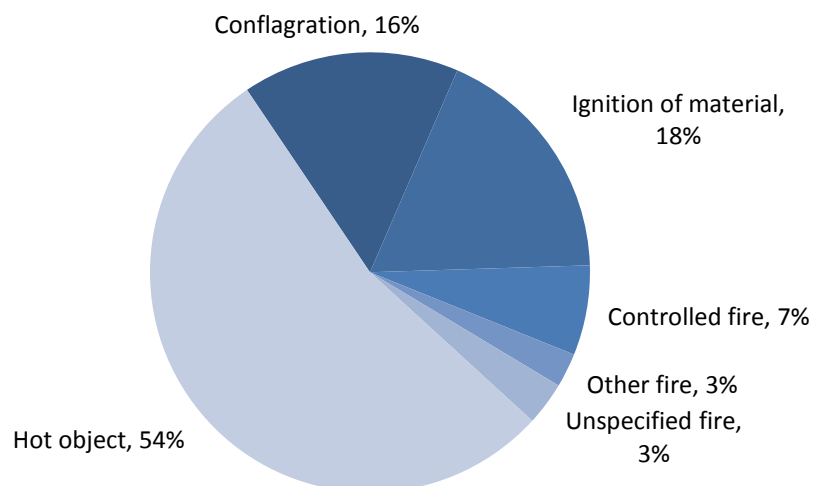
Figure 10.5. Hospitalization rates for unintentional burns by age, Ohio, 2010



Source: Ohio Hospital Association

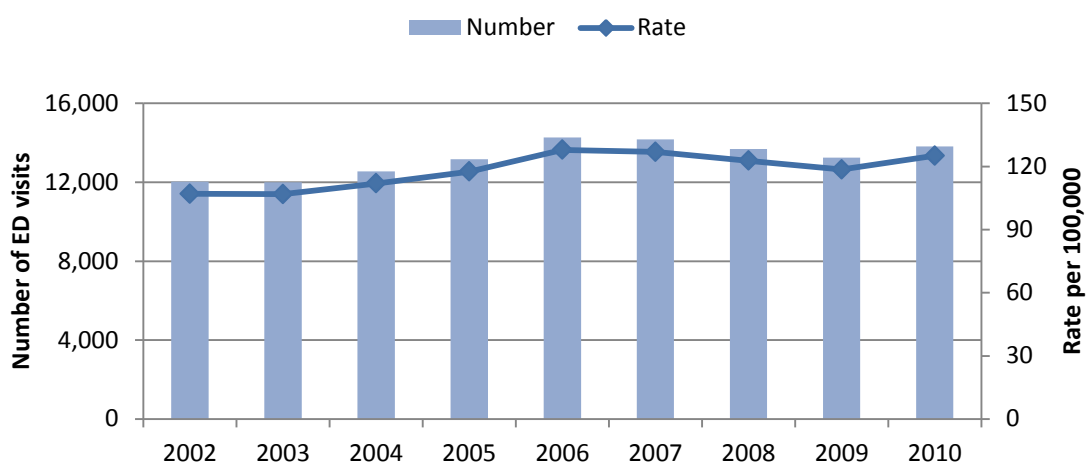
*Rate suppressed due to < 20 hospitalizations

Figure 10.6. Distribution of hospitalizations resulting from unintentional burns by cause, Ohio, 2010



Source: Ohio Hospital Association

Figure 10.7. Number and age adjusted rate for unintentional burn ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

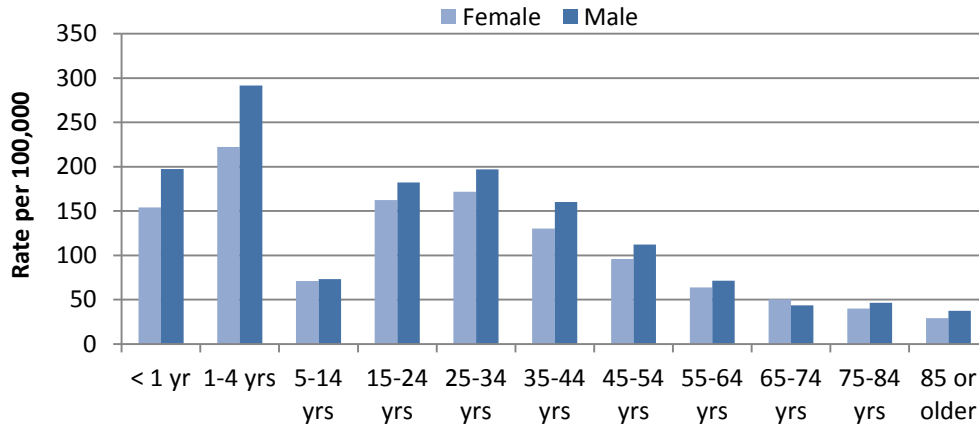
Nearly 14,000 ED visits were associated with unintentional burns in 2010. The ED visit rate was 125 per 100,000 (Figure 10.7). Males were more likely than females to visit the ED for a burn which was consistent throughout the lifespan. For both males and females, the highest rates of ED visits were found among birth through age 4 and ages 15-34 (Figure 10.8). Touching hot objects caused 78 percent of ED visits resulting from burns (Figure 10.9). See Table 10.3 for an unintentional burn ED visit risk profile.

Table 10.3 Unintentional Burn ED Visit Risk Profile		
	2010 At Risk Groups	Annual Trend since 2002
Overall		+17%
Sex	Males	Females (largest increase)
Age	1-4 yrs	1-4 yrs (largest increase)

TRENDS:

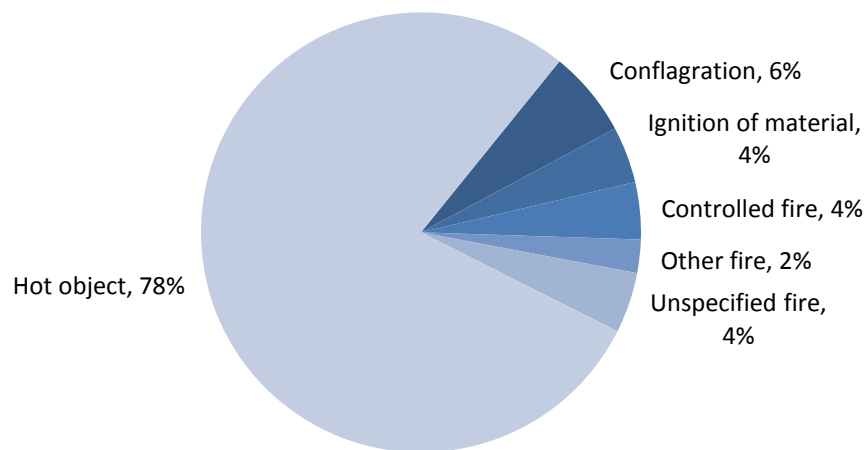
Between 2002 and 2010, ED visit rates resulting from unintentional burns increased 17 percent from 107 per 100,000 in 2002 to 125 per 100,000 in 2010. Rates increased by an average of 2.3 per 100,000 per year. An increase was found among females (+2.6 per 100,000 per year) while rates among males did not follow a consistent trend. An increase was found among most age groups with largest average annual increases occurring among children ages 1-4 (+6.4 per 100,000 per year) and infants less than 1 year (5.7 per 100,000 per year). ED visits resulting from burns caused by touching hot objects increased by an average of 180 ED visits per year and burns caused by controlled fires increased by an average of 24 per year. ED visits resulting from other types of fires decreased by an average of 13 visits per year. Other leading causes of burns did not follow a consistent trend. See Tables 39a-c located at the end of this section for more detailed information about unintentional burn ED visits.

Figure 10.8. ED visit rates for unintentional burns by age and sex, Ohio, 2010



Source: Ohio Hospital Association

Figure 10.9. Distribution of ED visits resulting from unintentional burns by cause, Ohio, 2010



Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 37a. Number of deaths resulting from unintentional fire or burns, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	132	142	125	127	109	113	134	121	135	123	130
Sex											
Males	79	77	75	72	66	62	72	68	75	74	71
Females	53	65	50	55	43	51	62	53	60	49	59
Age											
< 1 yr	<5			6			<5			7	
1-4 yrs	35			38			21			28	
5-14 yrs	24			31			37			23	
15-24 yrs	16			29			26			24	
25-34 yrs	22			34			18			20	
35-44 yrs	34			26			40			45	
45-54 yrs	39			49			48			52	
55-64 yrs	21			43			46			55	
65-74 yrs	31			34			43			45	
75-84 yrs	34			48			58			59	
85 or older	15			23			28			30	
Race and ethnicity											
White‡	107	122	100	101	86	83	111	91	109	90	119
Black‡	23	19	22	26	21	29	21	26	19	32	10
Hispanic	0	<5	<5	0	<5	<5	<5	<5	7	<5	<5
Other‡	<5	0	<5	0	0	0	0	0	0	0	0

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 37b. Death rates per 100,000 resulting from unintentional fire or burns, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	1.15	1.24	1.08	1.09	0.92	0.96	1.14	1.00	1.14	1.00	1.08	<-0.1 (NL)
Sex†												
Males	1.49	1.44	1.43	1.36	1.21	1.14	1.33	1.22	1.34	1.35	1.28	<-0.1 (NL)
Females	0.89	1.06	0.82	0.89	0.71	0.82	0.99	0.81	0.95	0.75	0.91	<-0.1 (NL)
Age												
< 1 yr	*			*			*			*		*
1-4 yrs	2.91			2.11			1.18			1.59		-0.17
5-14 yrs	0.73			0.65			0.80			0.51		<-0.1 (NL)
15-24 yrs	*			0.61			0.55			0.51		*
25-34 yrs	0.73			0.77			*			0.46		*
35-44 yrs	0.95			0.51			0.82			0.99		<0.1 (NL)
45-54 yrs	1.22			0.98			0.92			0.99		<-0.1 (NL)
55-64 yrs	1.03			1.27			1.22			1.32		0.03
65-74 yrs	1.98			1.47			1.84			1.80		<-0.1 (NL)
75-84 yrs	3.12			2.87			3.47			3.62		0.08
85 or older	*			4.05			4.51			4.43		*
Race and ethnicity†												
White‡	1.10	1.24	1.01	1.02	0.84	0.81	1.11	0.87	1.07	0.85	1.20	NL
Black‡	2.02	*	1.70	1.90	1.49	2.15	1.57	1.95	*	2.38	*	*
Hispanic	*	*	*	*	*	*	*	*	*	*	*	*
Other‡	*	*	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to fewer than 20 deaths.

‡Non-Hispanic

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 37c. Number of death resulting from unintentional fire or burns, by cause and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 00-10	Trend (per yr)
Uncontrolled fire	115	124	100	110	90	97	116	97	114	99	105	83.9%	-1 (NL)
Controlled fire	<5	0	0	0	<5	0	<5	<5	5	<5	<5	1.4%	*
Flammable material	<5	0	<5	<5	0	<5	5	<5	<5	<5	5	1.7%	*
Nightwear	0	0	0	0	0	0	0	0	0	0	<5	0.1%	*
Other clothing	0	<5	<5	<5	0	<5	0	<5	<5	0	<5	1.5%	*
Other fire	0	<5	0	<5	<5	<5	<5	<5	<5	<5	<5	1.5%	*
Unspecified fire	2	10	15	8	10	7	8	12	9	11	9	7.3%	*
Hot water	0	<5	<5	<5	0	<5	0	<5	<5	<5	0	0.6%	*
Other hot fluids	0	<5	0	<5	0	0	0	0	<5	<5	0	0.3%	*
Steam or hot vapors	0	0	0	0	0	0	0	0	0	<5	0	0.1%	*
Hot air or gases	0	0	0	0	0	0	0	0	0	0	<5	0.1%	*
Household appliances	0	0	0	0	0	0	<5	0	0	0	0	0.1%	*
Hot heating appliances	0	0	0	0	<5	<5	0	0	<5	<5	0	0.4%	*
Other hot metals	0	<5	0	0	0	0	<5	0	0	0	0	0.1%	*
Unspecified substance	<5	0	<5	0	0	0	0	0	0	0	0	0.1%	*

*Analysis suppressed due to less than 20 deaths

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 38a. Number of hospitalizations resulting from unintentional burns by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	760	719	632	685	679	714	641	572	439
Sex									
Males	514	461	451	452	451	485	418	349	276
Females	246	258	181	233	228	229	223	223	163
Age									
< 1 yr	9	15	15	23	31	27	31	29	11
1-4 yrs	86	84	65	75	112	110	129	101	57
5-14 yrs	53	47	43	44	62	71	72	52	25
15-24 yrs	99	87	83	87	82	88	63	60	47
25-34 yrs	105	88	73	85	87	79	73	60	41
35-44 yrs	113	126	103	109	68	101	53	49	63
45-54 yrs	109	123	95	101	90	96	85	85	82
55-64 yrs	67	47	57	66	52	65	48	47	51
65-74 yrs	54	36	42	39	39	37	44	34	32
75-84 yrs	47	49	42	40	38	29	31	31	21
85 or older	18	17	14	16	18	11	12	24	9

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 38b. Hospitalization rates per 100,000 resulting from unintentional burns by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	6.7	6.3	5.5	6.0	6.0	6.3	5.6	5.0	3.8	-0.2
Sex†										
Males	9.3	8.3	8.2	8.1	8.1	8.7	7.5	6.2	4.9	-0.4
Females	4.1	4.3	3.0	3.9	3.9	3.9	3.9	3.8	2.7	-0.1 (NL)
Age										
< 1 yr	*	*	*	15.7	20.9	17.8	20.3	19.6	*	*
1-4 yrs	14.3	14.0	10.9	12.6	19.1	18.7	21.8	17.1	9.8	0.3 (NL)
5-14 yrs	3.3	2.9	2.7	2.8	4.0	4.7	4.8	3.5	1.6	<0.1 (NL)
15-24 yrs	6.3	5.5	5.2	5.5	5.2	5.6	4.0	3.8	3.0	-0.3
25-34 yrs	7.1	6.0	5.0	5.8	6.0	5.4	5.0	4.1	2.9	-0.4
35-44 yrs	6.5	7.4	6.1	6.6	4.2	6.3	3.4	3.2	4.3	-0.5
45-54 yrs	6.6	7.4	5.6	5.9	5.2	5.5	4.9	4.8	4.7	-0.3
55-64 yrs	6.2	4.2	4.9	5.4	4.1	5.0	3.6	3.4	3.5	-0.3
65-74 yrs	7.0	4.7	5.5	5.1	5.1	4.7	5.5	4.1	3.8	-0.3
75-84 yrs	8.5	8.8	7.6	7.2	6.9	5.3	5.8	5.7	3.9	-0.6
85 or older	*	*	*	*	*	*	*	10.6	*	*

*Rates suppressed due to less than 20 hospitalizations.

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 38c. Number of hospitalizations resulting from unintentional burns by cause and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Conflagration	112	120	83	105	107	116	74	96	70	15.9%	-4 (NL)
Ignition of material	156	166	180	163	128	140	134	100	79	18.0%	-10.35
Controlled fire	60	43	28	36	34	58	43	31	29	6.6%	-2 (NL)
Other fire	26	25	17	20	20	21	20	14	11	*	*
Unspecified fire	28	20	22	18	12	24	31	19	14	*	*
Hot substance or object	378	345	302	323	378	356	339	312	236	53.8%	-9 (NL)

*Rates suppressed due to less than 20 hospitalizations.

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 39a. Number of ED visits resulting from unintentional burns by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	12,029	12,008	12,553	13,171	14,268	14,175	13,690	13,248	13,820
Sex									
Males	6,530	6,560	6,997	7,102	7,841	7,767	7,415	6,966	7,363
Females	5,499	5,448	5,556	6,069	6,427	6,408	6,275	6,282	6,456
Age									
< 1 yr	217	200	206	260	257	275	294	257	245
1-4 yrs	1,333	1,266	1,281	1,315	1,554	1,513	1,499	1,507	1,499
5-14 yrs	952	996	1,026	1,068	1,183	1,249	1,233	1,162	1,099
15-24 yrs	2,679	2,607	2,755	2,867	3,073	2,995	2,721	2,673	2,738
25-34 yrs	2,329	2,219	2,379	2,398	2,664	2,557	2,578	2,460	2,597
35-44 yrs	2,016	2,084	2,159	2,251	2,339	2,221	2,027	1,896	2,146
45-54 yrs	1,347	1,445	1,484	1,643	1,771	1,877	1,808	1,754	1,809
55-64 yrs	630	657	687	759	807	846	865	865	980
65-74 yrs	262	269	322	315	347	358	385	386	403
75-84 yrs	202	204	203	224	206	209	209	199	231
85 or older	62	61	51	71	67	75	71	89	73

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 39b. ED visit rates per 100,000 resulting from unintentional burns by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	107	107	112	118	128	127	123	119	125	2.3
Sex†										
Males	117	98	126	128	141	140	134	125	134	3.0 (NL)
Females	97	96	98	107	114	114	112	112	116	2.6
Age										
< 1 yr	147	136	138	177	173	181	193	174	176	5.7
1-4 yrs	222	212	215	221	265	257	254	255	258	6.4
5-14 yrs	59	62	65	69	77	82	82	78	72	2.5
15-24 yrs	169	163	173	180	194	190	173	171	173	0.8 (NL)
25-34 yrs	158	151	163	165	183	175	176	166	184	3.1
35-44 yrs	115	122	129	137	144	139	130	125	145	2.2 (NL)
45-54 yrs	82	86	87	96	102	107	103	100	104	2.9
55-64 yrs	58	58	59	63	64	65	65	62	67	1.1
65-74 yrs	34	35	42	41	45	46	48	46	47	1.7
75-84 yrs	37	37	37	40	37	38	39	37	43	0.5 (NL)
85 or older	33	31	25	34	31	34	31	39	32	0.5 (NL)

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

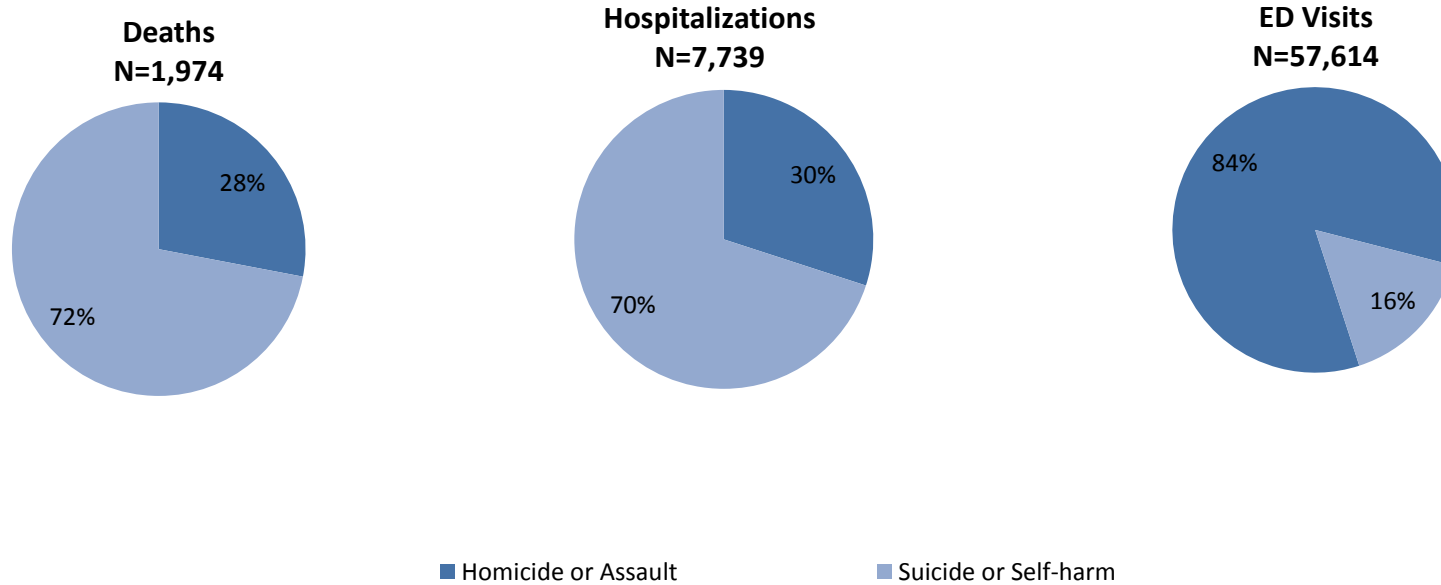
Table 39c. Number of ED visit rates resulting from unintentional burns by type and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Conflagration	811	799	952	932	872	965	907	876	876	6.3%	7 (NL)
Ignition of material	426	506	540	520	522	545	581	485	573	4.1%	11 (NL)
Controlled fire	395	449	460	517	536	578	522	615	579	4.2%	24
Other fire	443	355	415	391	358	396	348	279	338	2.4%	-13
Unspecified fire	473	533	539	609	645	651	548	529	615	4.5%	10 (NL)
Hot substance or object	9,581	9,367	9,647	10,204	11,336	11,040	10,478	10,466	10,826	78.3%	180

Source: Ohio Hospital Association

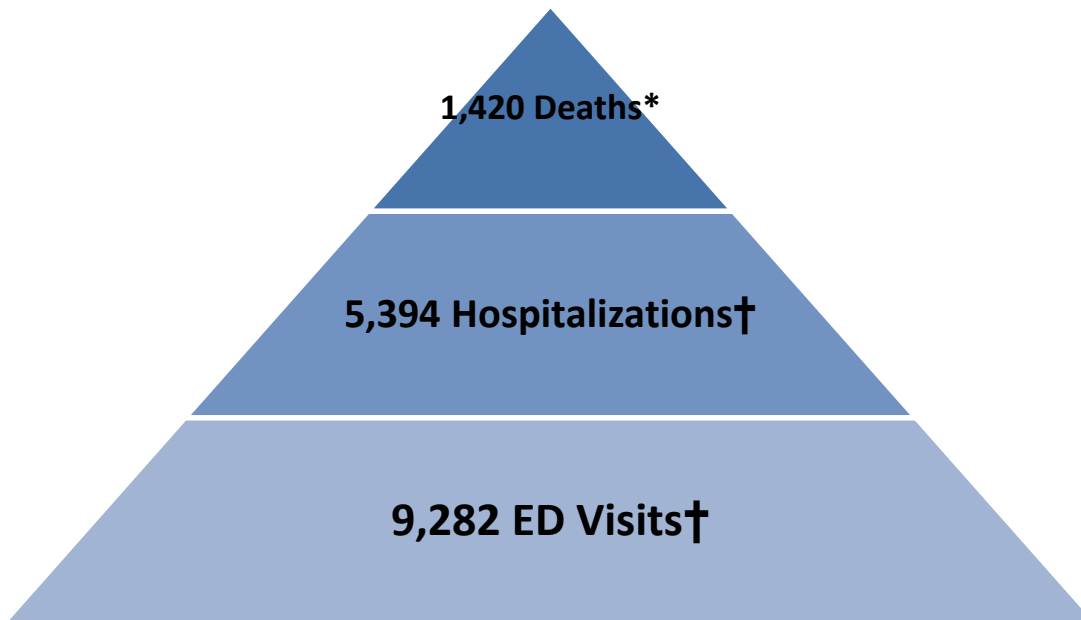
NL: Interpret with caution because trend does not follow linear pattern

SECTION 4: INTENTIONAL INJURIES



Intentional injuries were responsible for nearly 2,000 deaths, 7,700 hospitalizations, and 58,000 ED visits in 2010. The distribution of intentional injuries varies by severity. Approximately 3 out of every 4 intentional injury deaths and hospitalizations were associated with suicide or self-harm behaviors while 8 in 10 intentional injury ED visits were associated with assaults.

SECTION 4.1: SUICIDES AND SELF-HARM



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS, 2010

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

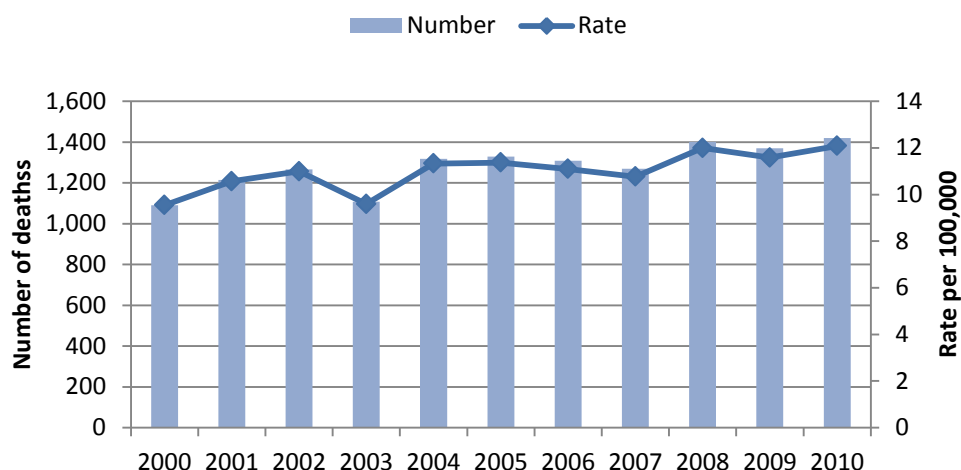
Patterns:

- Suicide rates were 4 times higher among males while females were more likely to experience a non-fatal self-harm injury than males.
- Highest rates of suicide were found among adults ages 45-54.
- Highest rates of non-fatal self-harm related injuries were among ages 15-44.
- Most suicides involved the use of a firearm and self-harm related injuries were caused by poisoning.

Trends:

- Suicide rates have increased 27 percent since 2000.
- Hospitalization and ED visit rates increased in 2002-2007 and then leveled off in 2007-2010.
- Most suicides involved the use of a firearm while poisoning was associated with most self-harm hospitalizations and ED visits throughout the study period.

Figure 11.1. Number and age adjusted rate for suicides by year, Ohio, 2002-2010



Source: Ohio Department of Health

DEATHS:

In 2010, 1,420 deaths resulted from a suicide in Ohio. The suicide rate was 12.1 per 100,000 (see Figure 11.1). Suicide rates were 4 times higher among males (20 per 100,000) compared to females (5 per 100,000). Rates among males increased among ages 15-34, leveled off between ages 35-84 and then increased among ages 85 or older. Among females, the highest rates were found among ages 45-54 (see Figure 11.2). See Table 11.1 for a suicide risk profile.

Approximately one-half of suicides resulted from firearms. Other leading mechanisms included hanging (26 percent) and poisoning (17 percent).

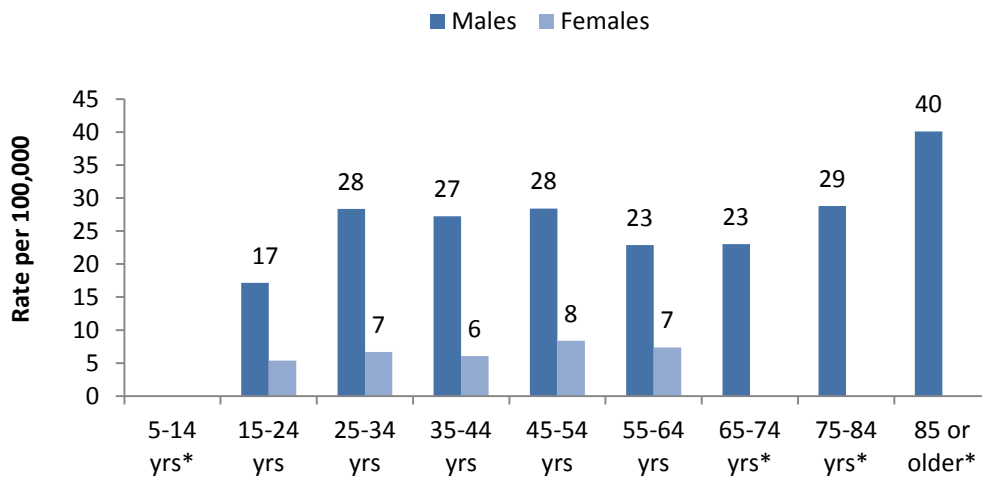
Table 11.1 Suicide Risk Profile

	2010 At Risk Groups	Annual trend since 2000
Overall		+27%
Sex	Males	Females (largest increase)
Age	45-54	45-54 (largest increase)
Race and ethnicity	Whites	Whites (largest increase)

TRENDS:

The suicide rate increased 27 percent from 9.5 per 100,000 in 2000 to 12.1 per 100,000 in 2010 (Figure 11.1). The average annual increase was 0.2 per 100,000 per year. Suicide rates increased among females (0.2 per 100,000 per year) while rates among males did not follow a consistent trend. Rates increased among adults ages 45-64 while rates decreased among adults 75-84. Rates did not follow a consistent trend among other age groups. Suicide rates increased among whites (0.3 per 100,000 per year) while rates did not follow a consistent trend among blacks. The number of suicides resulting from hanging increased by an average of 14 deaths per year while the number of suicides resulting from other mechanisms did not follow a consistent trend (Figure 11.3). See Tables 40a-c located at the end of this section for more detailed information on the number and rate of suicides in Ohio.

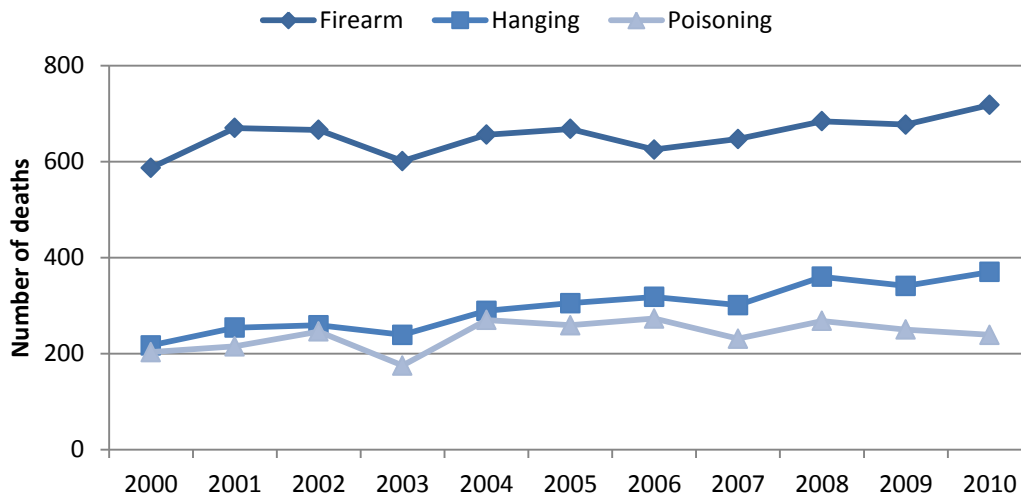
Figure 11.2. Suicide rates by sex and age group, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

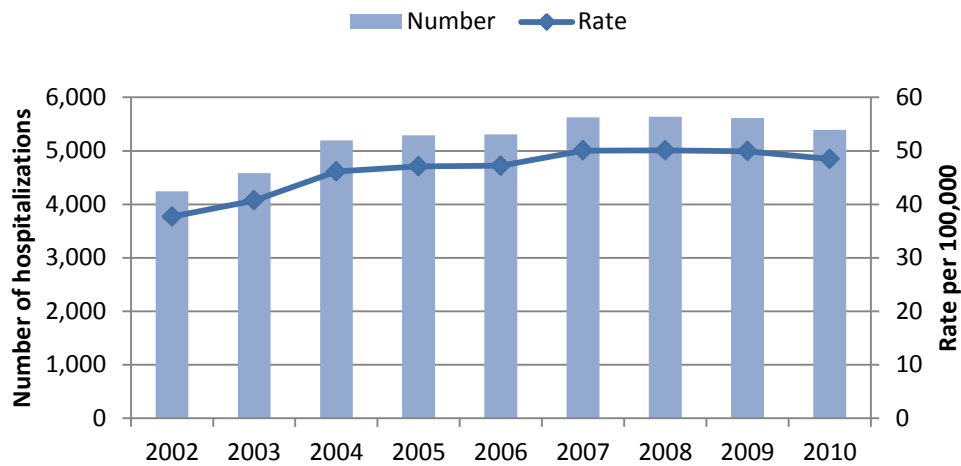
*Rates suppressed due to small cell sizes

Figure 11.3. Number of suicides by mechanism, Ohio, 2010



Source: Ohio Department of Health, Vital Statistics

Figure 11.4. Number and age adjusted rate for self-harm hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

In 2010, nearly 5,400 hospitalizations resulted from self-harm. The self-harm hospitalization rate was 48.5 per 100,000 (Figure 11.4). The rate was higher among females (57 per 100,000) than males (40 per 100,000). For both males and females, hospitalization rates were highest among ages 15-54 then decreased among ages 55 and older (Figure 11.5). See Table 11.2 for a self-harm hospitalization risk profile.

Roughly 92 percent of hospitalizations were associated with poisoning (Figure 11.6).

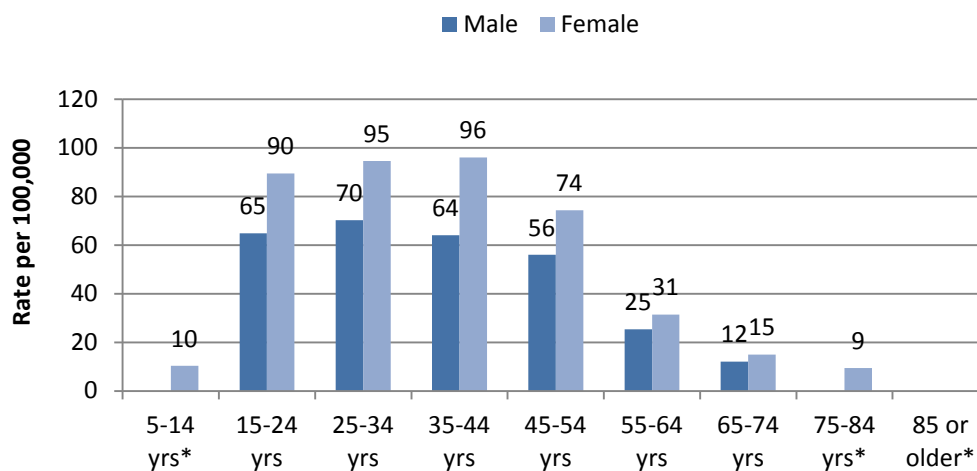
Table 11.2 Self-Harm Hospitalization Risk Profile

	2010 At Risk Groups	Annual trend Since 2002
Overall		+29%
Sex	Females	Similar for males and females
Age	15-44 yrs	45-54 (largest increase)

TRENDS:

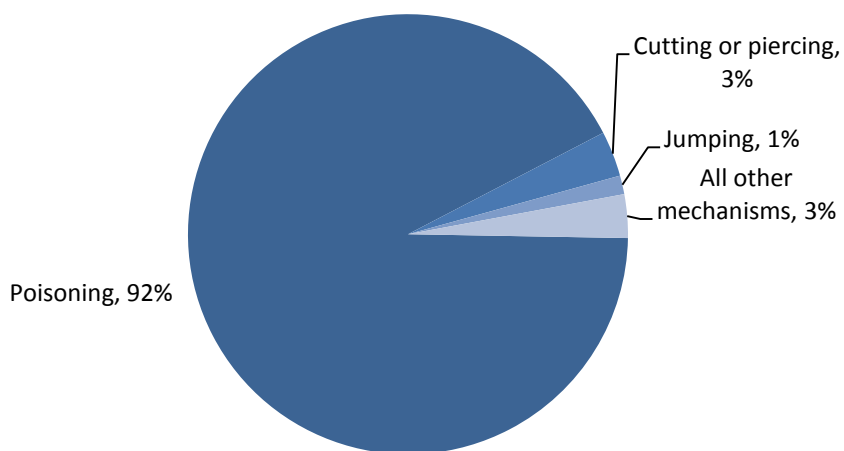
Hospitalization rates increased 29 percent from 37.7 per 100,000 in 2002 to 48.5 per 100,000 in 2010 (Figure 11.4). The average annual increase was 1.4 per 100,000 per year. The increase in rates was similar among males and females. Rates increased among ages 15-64 with the largest average increase found among adults ages 45-54 (3 per 100,000 per year). Rates among children ages 5-14 and adults ages 65-84 did not follow consistent trend. The number of self-harm hospitalizations resulting from poisoning increased by an average of 170 per year. Trends in other mechanisms did not following a consistent pattern over time. See Tables 41a-c located at the end of this section for more detailed information on the number and rates of self-harm related hospitalizations in Ohio.

Figure 11.5. Hospitalization rates for self-harm by age and sex, Ohio, 2010



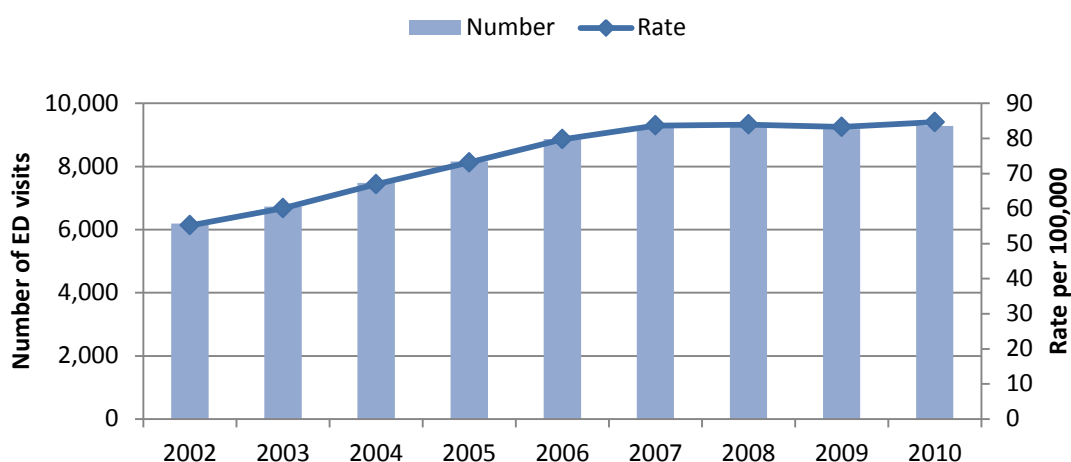
Source: Ohio Hospital Association

Figure 11.6. Distribution of hospitalizations resulting from self-harm, by mechanism, Ohio, 2010



Source: Ohio Hospital Association

Figure 11.7. Number and age adjusted rate for self-harm related ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

Over 9,000 ED visits were associated with self-harm in 2010. The ED visit rate was 85 per 100,000 (Figure 11.7). Females were more likely than males to visit the ED. The highest rates of ED visits were among ages 15-24 and a steadily decrease in rates were found after age 25 (Figure 11.8). See Table 11.3 for a self-harm ED visit risk profile.

Most self-harm related ED visits were associated with poisonings (51 percent) and cutting or piercing (30 percent). Approximately 14 percent of self-harm related ED visits did not have a specified mechanism.

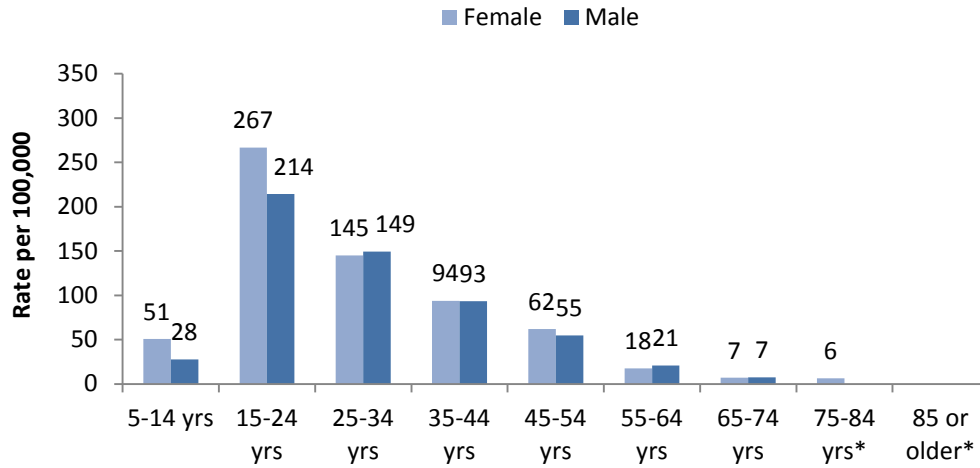
Table 11.3 Self-Harm ED Visit Risk Profile

	2010 At Risk Groups	Trend since 2002
Overall		+53%
Sex	Females	Similar for males and females
Age	15-24	15-24 (largest increase)

TRENDS:

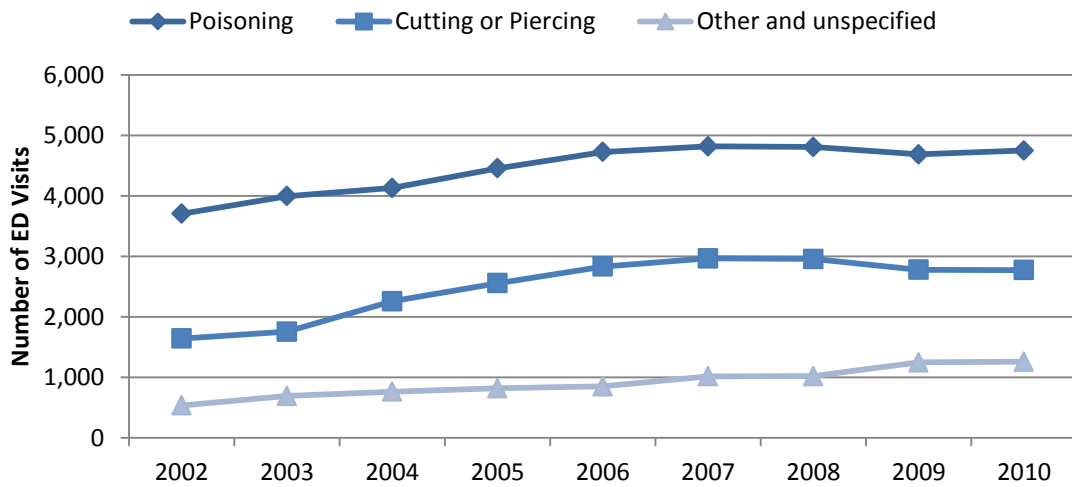
Between 2002 and 2010, the rate of ED visits resulting from self-harm increased 53 percent from 55 per 100,000 to 85 per 100,000 in 2010. Rates increased by an average of 4 per 100,000 per year. The increase was similar among males and females. ED visit rates increased among all age groups with the largest increases found among ages 15-24 (12 per 100,000 per year). The number of self-harm related ED visits resulting from cutting or piercing, poisoning, and other or unspecified mechanisms increased. The number of ED visits resulting from cutting or piercing increased by an average of 157 per year. An annual increase of 137 was found for poisoning while other and unspecified increased by an average of 88 ED visits per year (Figure 11.9). See Tables 42a-c located at the end of this section for more detailed information on self-harm related ED visits.

Figure 11.8. ED visit rates for self-harm by age and sex, Ohio, 2010



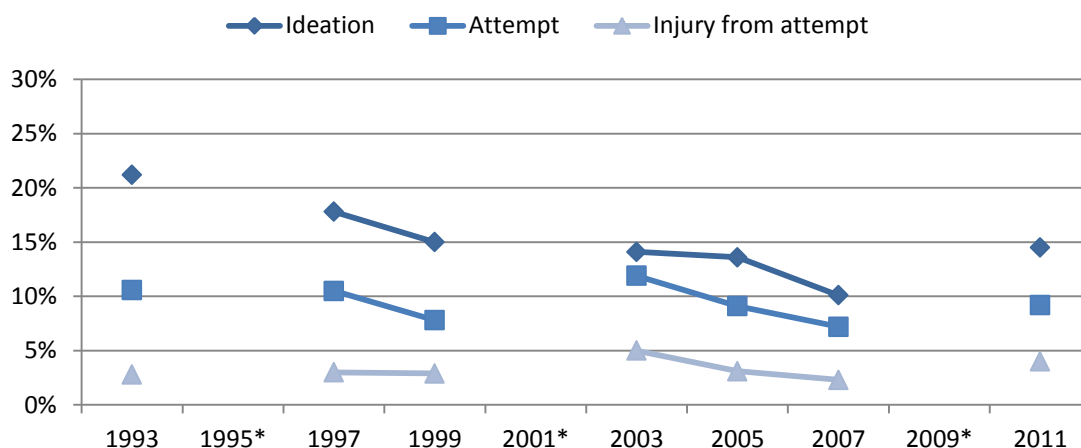
Source: Ohio Hospital Association

Figure 11.9. Number of ED visits resulting from self-harm, by mechanism and year, Ohio, 2002-2010



Source: Ohio Hospital Association

Figure 11.10. Percentage of high school students who reported self-harm behaviors by behavior and year, Ohio, 1993-2011



Source: Ohio Youth Risk Behavior Survey

*Rates suppressed due to poor response rates

SELF-HARM BEHAVIORS AMONG YOUTH:

In 2011, approximately 1 in 7 or 14 percent of high school students reported to have seriously considered suicide in the past 12 months (Figure 11.10). Female (18%) were more likely to report suicide ideation than males (11%). Suicide ideation was reported more frequently by 9th graders and Hispanics compared students in other grades and race or ethnic group.

Approximately 1 in 10 or 9 percent of high school students reported to have attempted suicide in the past 12 months (Figure 11.10). The percentage of students who reported at least one suicide attempt was similar by sex and race or ethnic groups. Ninth grade students were nearly 3 times more likely to report a suicide attempt than students in the 12th grade.

In 2011, 1 in 25 or 4 percent of high school students reported an injury resulting from a suicide attempt in the last 12 months (Figure 11.10). The percentage of students who reported at least one suicide attempt related injury was similar by sex and race or ethnic groups. Ninth grade students were 2 times more likely to report a suicide attempt related injury than students in grades 10, 11 or 12.

TRENDS:

The percentage of students who reported suicide ideation decreased from 1993 to 2007 and then increased between 2007 and 2011. The percentage of students who reported suicide attempts and injuries resulting from suicide attempts did not change significantly since 1993. See Tables 43a-c located at the end of this section for more detailed information about self-harm behaviors among high school students in Ohio.

Table 11.4 Youth Self-Harm Trends

	2011	1993
Ideation	14%	28%
Attempts	9%	11%
Attempt Injuries	4%	3%

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 40a. Number of deaths resulting from suicides, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	1,091	1,214	1,267	1,108	1,318	1,330	1,309	1,269	1,402	1,370	1,420
Sex											
Males	899	1,000	1,015	920	1,035	1,095	1,029	1,041	1,117	1,082	1,129
Females	192	214	252	188	283	235	280	228	285	288	291
Age											
< 1 yr	0	0	0	0	0	0	0	0	0	0	0
1-4 yrs	0	0	0	0	0	0	0	0	0	0	0
5-14 yrs	10	6	16	12	19	10	12	8	15	15	6
15-24 yrs	140	157	148	137	182	179	174	166	186	167	180
25-34 yrs	162	192	204	207	211	195	215	193	223	198	246
35-44 yrs	259	270	271	226	252	270	226	252	293	262	245
45-54 yrs	207	242	247	226	290	282	306	284	308	330	317
55-64 yrs	97	128	135	125	166	182	187	190	188	206	216
65-74 yrs	88	90	108	79	98	80	77	80	103	100	108
75-84 yrs	96	97	100	71	75	96	82	71	60	61	72
85 or older	32	32	38	25	25	36	30	25	26	31	30
Race and ethnicity											
White‡	997	1,096	1,148	1,008	1,179	1,232	1,191	1,158	1,256	1,252	1,308
Black‡	83	96	83	83	100	80	93	92	111	92	79
Hispanic	6	11	18	8	25	9	17	11	21	17	21
Other‡	<5	9	7	6	11	<5	5	7	14	9	11

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 40b. Death rates per 100,000 resulting from suicides, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	9.5	10.6	11.0	9.6	11.3	11.4	11.1	10.8	12.0	11.6	12.1	0.20
Sex†												
Males	16.9	18.6	18.8	16.8	18.7	19.6	18.2	18.4	19.8	19.0	20.0	0.21 (NL)
Females	3.3	3.6	4.2	3.2	4.7	3.9	4.6	3.7	4.8	4.8	4.8	0.15
Age												
< 1 yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*
1-4 yrs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*
5-14 yrs	*	*	*	*	*	*	*	*	*	*	*	*
15-24 yrs	9.0	10.0	9.4	8.6	11.5	11.3	11.0	10.5	11.8	10.7	11.3	0.23 (NL)
25-34 yrs	10.7	12.9	13.8	14.0	14.3	13.3	14.7	13.2	15.2	13.4	17.5	0.35 (NL)
35-44 yrs	14.4	15.2	15.5	13.2	15.0	16.4	13.9	15.8	18.8	17.2	16.6	0.30 (NL)
45-54 yrs	13.1	14.8	15.0	13.5	17.1	16.4	17.6	16.2	17.5	18.8	18.2	0.50
55-64 yrs	9.6	12.5	12.5	11.1	14.2	15.0	14.8	14.6	14.1	14.9	14.9	0.44
65-74 yrs	11.2	11.5	14.0	10.3	12.7	10.4	9.9	10.1	12.6	12.0	12.7	0.02 (NL)
75-84 yrs	17.7	17.7	18.0	12.7	13.4	17.2	14.7	12.8	11.0	11.3	13.3	-0.61
85 or older	18.0	17.7	20.6	13.2	12.9	18.1	14.5	11.7	11.8	13.7	13.0	-0.62 (NL)
Race and Ethnicity†												
White‡	10.1	11.1	11.6	10.2	11.9	12.4	11.9	11.6	12.7	12.6	13.4	0.26
Black‡	6.5	7.6	5.9	6.4	7.3	5.9	6.9	6.6	8.0	6.7	5.5	-0.02 (NL)
Hispanic	*	*	*	*	9.7	*	*	*	6.9	*	6.3	*
Other‡	*	*	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to less than 20 deaths.

†Rates are age adjusted to 2000 U.S. standard population

‡Non-Hispanic

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 40c. Number of deaths resulting from suicides, by mechanism and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Poisoning	203	215	246	175	270	259	273	231	268	250	239	17%	4.5 (NL)
Hanging	217	254	259	239	289	305	318	301	360	341	370	26%	14.3
Drowning	9	5	16	8	14	12	9	10	12	11	7	0%	*
Firearm	587	670	666	601	656	668	625	647	684	677	718	51%	7.3 (NL)
Explosive material	0	0	<5	0	<5	0	0	<5	0	0	0	0%	*
Smoke, fire, or flames	10	5	9	11	7	6	8	7	8	8	<5	*	*
Steam or hot vapors	0	0	0	0	0	0	0	0	<5	0	0	0%	*
Sharp object	18	20	23	16	21	21	16	14	17	30	22	2%	*
Jumping	28	27	29	45	46	39	42	22	33	30	35	2%	0.08 (NL)
Motor vehicle crash	6	<5	7	<5	<5	5	<5	8	5	<5	8	1%	*
Other means	7	<5	<5	6	5	<5	9	<5	8	6	10	1%	*
Unspecified means	5	11	7	<5	5	12	<5	24	<5	9	<5	*	*
Sequelae of suicide	<5	<5	<5	<5	<5	<5	6	<5	<5	<5	<5	*	*

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 41a. Number of hospitalization resulting from self-harm, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	4,245	4,587	5,196	5,289	5,308	5,624	5,636	5,613	5,394
Sex									
Males	1,713	1,899	2,118	2,178	2,155	2,405	2,414	2,409	2,231
Females	2,532	2,688	3,078	3,111	3,153	3,219	3,222	3,204	3,163
Age									
5-14 yrs	131	119	116	148	130	128	100	80	95
15-24 yrs	1,014	1,107	1,204	1,230	1,277	1,268	1,320	1,269	1,223
25-34 yrs	916	1,023	1,188	1,101	1,170	1,199	1,194	1,180	1,163
35-44 yrs	1,180	1,194	1,306	1,390	1,265	1,381	1,284	1,301	1,187
45-54 yrs	639	778	935	977	968	1,115	1,140	1,189	1,139
55-64 yrs	188	227	291	295	325	354	409	425	414
65-74 yrs	86	65	76	82	107	99	111	89	116
75-84 yrs	67	56	58	46	58	58	54	65	43
85 or older	24	18	22	20	8	22	24	15	14

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 41b. Hospitalization rates per 100,000 resulting from self-harm, by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	40.5	43.7	49.5	50.6	50.7	53.8	53.8	53.6	52.1	1.5
Sex†										
Males	33.3	36.6	40.9	42.1	41.6	46.3	46.4	46.5	43.3	1.4
Females	47.8	50.9	58.2	59.1	59.8	61.3	61.2	60.8	60.8	1.5
Age										
5-14 yrs	8.1	7.4	7.3	9.5	8.5	8.4	6.7	5.4	6.2	-0.27 (NL)
15-24 yrs	64.1	69.4	75.5	77.2	80.7	80.5	84.0	81.1	77.1	1.79
25-34 yrs	62.1	69.8	81.3	75.5	80.3	82.1	81.6	79.8	82.5	1.98
35-44 yrs	67.6	70.0	77.9	84.4	78.0	86.7	82.5	85.6	80.2	1.80
45-54 yrs	38.8	46.5	55.1	56.9	55.7	63.8	65.1	67.8	65.4	3.28
55-64 yrs	17.4	20.2	24.9	24.3	25.9	27.3	30.7	30.7	28.5	1.51
65-74 yrs	11.1	8.5	9.9	10.7	13.9	12.7	13.8	10.6	13.6	0.44 (NL)
75-84 yrs	12.1	10.1	10.4	8.3	10.6	10.7	10.1	12.0	7.9	-0.16 (NL)
85 or older	12.7	*	11.0	9.7	*	9.9	10.5	*	*	*

*Rates suppressed due to less than 20 hospitalizations.

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

Table 41c. Number of hospitalizations resulting from self-harm by mechanism and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Poisoning	3,730	4,026	4,695	4,869	4,919	5,269	5,297	5,238	4970	92.1%	170
Hanging	126	166	127	44	53	41	44	37	<5	*	*
Drowning	52	69	40	41	<5	<5	<5	86	31	0.6%	*
Firearms	106	89	89	68	83	80	73	164	43	0.8%	-1 (NL)
Cutting or piercing	132	144	141	166	169	139	140	26	74	1.4%	-10 (NL)
Jumping	38	25	32	24	27	33	21	60	180	3.3%	11 (NL)
Other and unspecified	57	61	62	69	54	61	56	<5	27	0.5%	*
Late effects	5	7	10	10	<5	0	<5	0	66	1.2%	*

*Suppressed due to less than 20 hospitalizations.

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 42a. Number of ED visits resulting from self-harm by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	6,180	6,716	7,473	8,158	8,864	9,252	9,264	9,170	9,276
Sex									
Males	2,689	2,860	3,241	3,554	4,037	4,186	4,300	4,155	4,350
Females	3,491	3,856	4,232	4,604	4,827	5,066	4,964	5,015	4,926
Age									
5-14 yrs	387	476	586	508	587	618	575	594	593
15-24 yrs	2,419	2,684	3,075	3,311	3,551	3,771	3,742	3,821	3,810
25-34 yrs	1,462	1,570	1,632	1,774	1,996	2,042	2,105	2,001	2,076
35-44 yrs	1,195	1,225	1,297	1,463	1,505	1,588	1,494	1,424	1,385
45-54 yrs	547	593	655	849	883	896	1,005	1,022	1,019
55-64 yrs	104	118	154	172	238	252	246	226	280
65-74 yrs	35	29	42	47	53	46	59	47	61
75-84 yrs	23	15	19	28	35	27	27	28	39
85 or older	8	6	13	6	16	12	11	7	13

Source: Ohio Hospital Association

Table 42b. ED visit rates per 100,000 resulting from self-harm by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	55.1	60.0	66.8	73.1	79.7	83.6	83.9	83.2	84.6	3.9
Sex†										
Males	48.8	51.2	58.0	63.7	72.6	75.4	77.7	75.0	79.5	4.1
Females	62.2	68.9	75.9	82.7	87.3	92.1	90.3	91.6	90.0	3.6
Age										
5-14 yrs	24.0	29.8	37.1	32.7	38.2	40.8	38.4	39.7	38.9	1.7
15-24 yrs	152.9	168.3	192.7	207.9	224.5	239.5	238.1	244.2	240.1	11.7
25-34 yrs	99.1	107.1	111.7	121.7	137.1	139.7	143.8	135.4	147.2	6.0
35-44 yrs	68.5	71.8	77.4	88.8	92.8	99.7	96.0	93.7	93.6	3.6
45-54 yrs	33.2	35.5	38.6	49.4	50.8	51.3	57.4	58.3	58.5	3.5
55-64 yrs	9.6	10.5	13.2	14.2	18.9	19.4	18.5	16.3	19.3	1.2
65-74 yrs	4.5	3.8	5.5	6.1	6.9	5.9	7.3	5.6	7.2	0.3
75-84 yrs	4.2	*	*	5.1	6.4	5.0	5.0	5.2	7.2	*
85 or older	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to less than 20 ED visits

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 42c. Number of ED visit resulting from self-harm by method and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Poisoning	3,706	3,998	4,131	4,457	4,729	4,820	4,809	4,687	4,751	51%	138
Hanging	153	159	195	197	268	281	312	303	301	3%	22
Drowning	16	13	6	5	8	5	11	10	11	*	*
Firearms	87	72	52	85	98	102	75	89	90	1%	2 (NL)
Cutting or piercing	1,643	1,757	2,259	2,558	2,832	2,968	2,958	2,780	2,774	30%	157
Jumping	33	26	32	26	55	47	53	44	40	0%	2 (NL)
Other and unspecified	535	692	763	818	851	1,017	1,021	1,247	1,258	14%	88
Late effects	16	11	15	17	29	22	35	21	23	*	*

NL: Interpret with caution because trend does not follow linear pattern.

Source: Ohio Hospital Association

Table 43a. Percentage of high school students who reported suicide ideation, by sex, grade level, and race/ethnicity, Ohio, 1993-2011

	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
Overall	28.1%	UW	23.0%	20.3%	**	18.2%	17.9%	13.4%	UW	14.3%
Sex										
Males	20.9%		15.2%	15.7%		15.2%	14.6%	10.6%		10.7%
Females	35.6%		30.8%	24.9%		21.3%	21.5%	16.0%		18.1%
Grade										
9th	24.8%		24.8%	18.5%		18.3%	16.0%	14.3%		18.1%
10th	24.9%		24.9%	24.5%		19.6%	21.8%	13.0%		13.8%
11th	22.3%		22.3%	18.1%		17.1%	15.8%	13.2%		14.7%
12th	18.8%		18.8%	19.7%		17.3%	18.7%	12.7%		10.3%
Race and Ethnicity										
White, non-Hispanic	NA		23.0%	20.2%		16.6%	18.9%	12.5%		14.4%
Black, non-Hispanic			*	*		*	11.9%	14.5%		10.9%
Hispanic			*	*		*	*	19.9%		21.9%

*Percentages suppressed to due to fewer than 100 respondents.

**Survey was not conducted.

NA: Not available

Source: Ohio Youth Risk Behavior Survey

UW: Ohio did not achieve sufficient response rate for weighted data.

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 43b. Percentage of high school students who reported making a suicide attempt, by sex, grade level, and race/ethnicity, Ohio, 1993-2011

	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
Overall	10.6%	UW	10.5%	7.8%	**	11.9%	9.1%	7.2%	UW	9.1%
Sex										
Males	6.3%		6.0%	5.0%		10.8%	6.9%	4.9%		8.0%
Females	15.0%		15.0%	10.6%		12.8%	11.3%	9.4%		9.9%
Grade										
9th	12.5%		11.0%	9.0%		13.6%	10.8%	7.3%		13.3%
10th	9.3%		13.3%	9.1%		9.2%	12.9%	7.2%		8.6%
11th	9.8%		11.3%	6.0%		13.6%	6.2%	6.0%		8.7%
12th	10.0%		5.7%	6.4%		11.0%	6.3%	7.4%		5.3%
Race and Ethnicity										
White, non-Hispanic	NA		9.7%	7.1%		11.2%	8.7%	6.4%		8.3%
Black, non-Hispanic			10.0%	4.5%		*	12.6%	8.6%		8.7%
Hispanic			*	*		*	*	12.5%		*

*Percentages suppressed to due to fewer than 100 respondents.

**Survey was not conducted.

NA: Not available

Source: Ohio Youth Risk Behavior Survey

UW: Ohio did not achieve sufficient response rate for weighted data.

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 43c. Percentage of high school students who reported an injury after making a suicide attempt, by sex, and grade level, Ohio, 1993-2011

	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
Overall	2.8%	UW	3.0%	2.9%	**	5.0%	3.1%	2.3%	UW	4.0%
Sex										
Males	1.3%		2.2%	2.5%		4.2%	2.0%	1.5%		4.1%
Females	4.2%		3.7%	3.3%		5.7%	4.1%	3.1%		3.9%
Grade										
9th	4.0%		3.1%	4.3%		5.9%	3.2%	1.8%		6.8%
10th	2.7%		4.0%	2.2%		2.8%	5.1%	3.1%		3.0%
11th	1.3%		2.7%	2.0%		6.9%	2.8%	2.0%		3.2%
12th	2.3%		1.6%	2.2%		4.3%	1.1%	1.6%		2.9%
Race and Ethnicity										
White, non-Hispanic	NA		2.4%	2.7%		4.0%	2.8%	1.7%		3.7%
Black, non-Hispanic			3.2%	0.7%		*	5.0%	2.6%		3.8%
Hispanic			*	*		*	*	6.3%		*

*Percentages suppressed to due to fewer than 100 respondents.

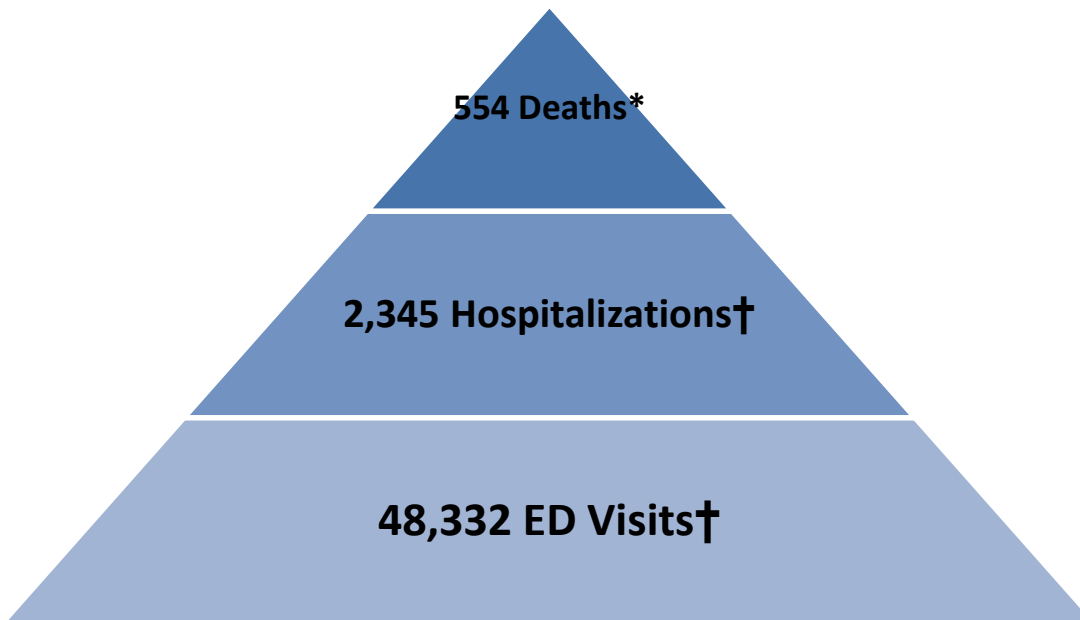
**Survey was not conducted.

NA: Not available

Source: Ohio Youth Risk Behavior Survey

UW: Ohio did not achieve sufficient response rate for weighted data.

SECTION 4.2: HOMICIDES AND ASSAULTS



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS, 2010

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

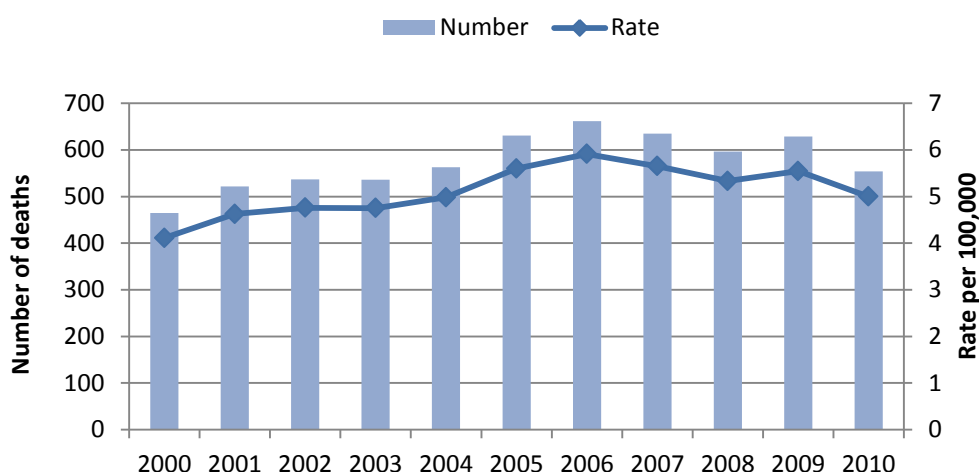
Patterns:

- Significant disparities were found in homicide rates by race and sex. Blacks were 10 times more likely to die from homicides than whites. Males were 4 times more likely to die from homicides than females.
- Highest rates of homicides and assaults were found among males ages 15-34.
- Firearms were the most common cause of homicide and assault related hospitalizations while fighting was the most common cause of assault related ED visits.
- 1 in 3 high school students reported being in a physical fight during the last 12 months.

Trends:

- Disparities in homicide rates by race and sex have increased since 2000.
- Hospitalization rates increased slightly while ED visits increased 50 percent.
- The largest increases in homicides and assault related ED visits were found among males ages 25-34
- Firearms were the most common cause of homicide and assault related hospitalizations while fighting was the most common cause of assault related ED visits throughout the study period.
- Percentage of high school students who reported being in a physical fight decreased since 1997.

Figure 12.1 Number and age adjusted rate for homicides by year, Ohio, 2000-2010



Source: Ohio Department of Health, Office of Vital Statistics

DEATHS:

In 2010, 554 homicides occurred in Ohio. The homicide rate was 5.0 per 100,000 (Figure 12.1). Rates varied significantly by sex, age, and race. Homicide rates were 4 times higher among males (8.0 per 100,000) compared to females (2.1 per 100,000). The highest rates were found among ages 25-34 (11.3 per 100,000) followed by ages 15-24 (9.1 per 100,000). A significant disparity in rates was found by race. Blacks were 10 times more likely to die from a homicide than whites (22.7 per 100,000 compared to 2.2 per 100,000). See Table 12.1 for homicide risk profile.

The most common mechanisms associated with homicides were firearms (70 percent) followed by sharp objects (10 percent) and hanging (4 percent). Approximately 9 percent of homicides had an unspecified mechanism.

Table 12.1 Homicide Risk Profile		
	2010 At Risk Groups	Annual Trend since 2000
Overall		Inconsistent
Sex	Males	Males (largest increase)
Age	25-34	25-34 (largest increase)
Race and ethnicity	Blacks	Blacks (largest increase)

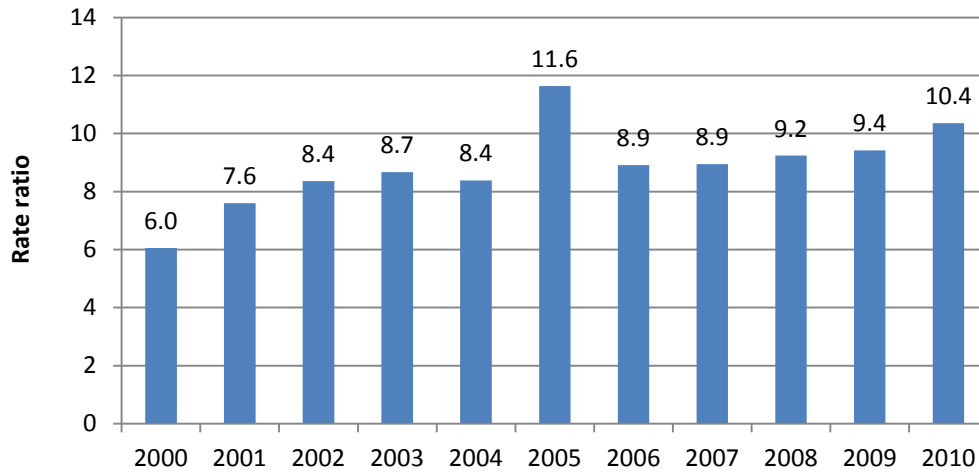
TRENDS:

Homicide rates increased from 4.0 per 100,000 in 2000 to 5.0 per 100,000 in 2010. While an increase in rates was observed, results from the trend analysis indicate that rates did not follow a consistent linear pattern throughout the period. Disparities in homicide rates increased by sex and race. Males were 2 times more likely than females to die from a homicide in 2000 and were 4 times more likely to die from a homicide than females in 2010 (data not shown). Blacks were 6 times more likely than whites to die from a homicide in 2000 and were 10 times more likely than whites to die from a homicide in 2010 (Figure 12.2). Firearms were the most common mechanism associated with homicides throughout the study period. The number of homicides associated with firearms increased by an average of 17 per year while homicides resulting from sharp objects,

Ohio Violence and Injury Prevention Program, Ohio Department of Health

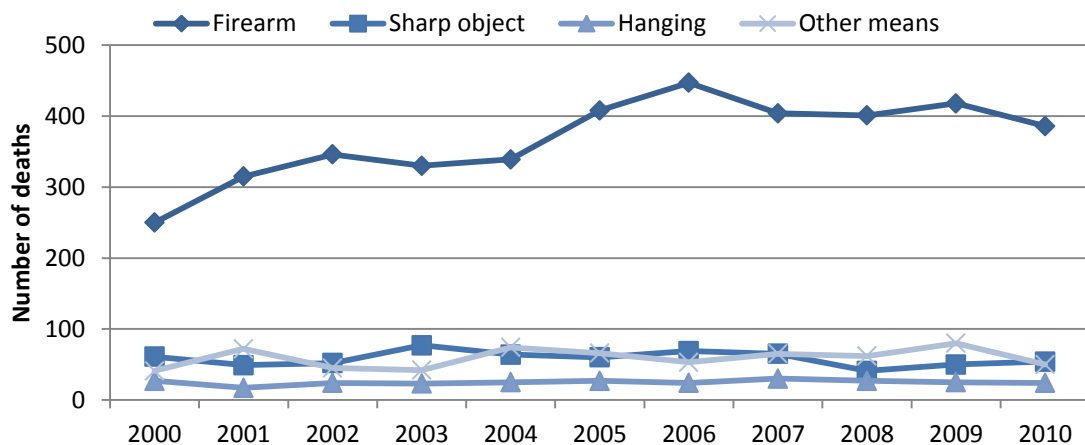
hanging, and other means did not follow a consistent trend (Figure 12.3). See Tables 44a-c located at the end of the section for more detailed information on homicides.

Figure 12.2. Black to white homicide rate ratio by year, Ohio, 2000- 2010

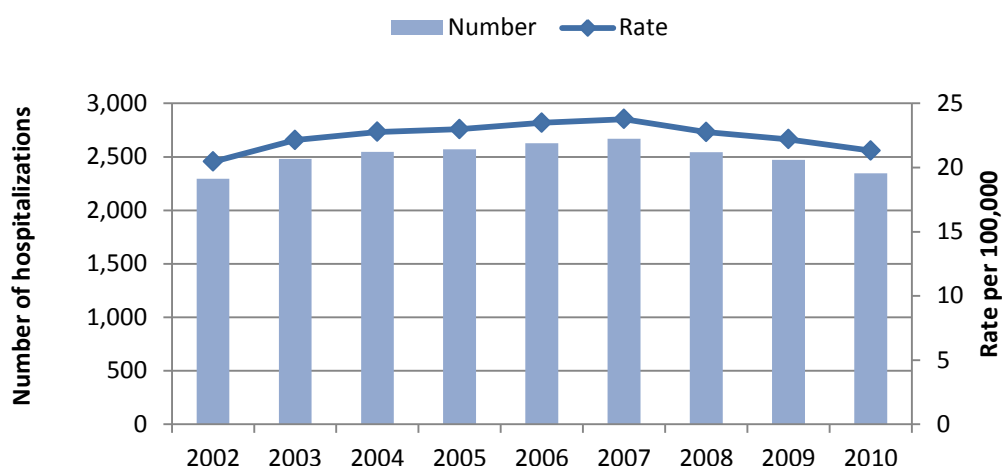


Source: Ohio Department of Health, Office of Vital Statistics

Figure 12.3. Number of homicides by mechanism and year, Ohio, 2000-2010



Source: Ohio Department of Health, Office of Vital Statistics

Figure 12.4. Number and age adjusted rate for assault related hospitalizations by year, Ohio, 2002-2010

Source: Ohio Hospital Association

HOSPITALIZATIONS:

In 2010, approximately 2,300 hospitalizations resulted from assaults. The assault hospitalization rate was 21.3 per 100,000 (see Figure 12.4). The rate was 6 times higher among males (37 per 100,000) than females (6 per 100,000). Among males, the highest hospitalization rates were found among ages 15-34. Among females, the highest rates were found among infants less than 1 year of age (Figure 12.5). See Table 12.2 for an assault hospitalization risk profile.

The leading mechanisms associated with assault related hospitalizations were firearms or explosives (27 percent), fights or brawls (24 percent), and cutting or piercing (14 percent). An additional 31 percent of hospitalizations listed other or unspecified mechanisms (Figure 12.6).

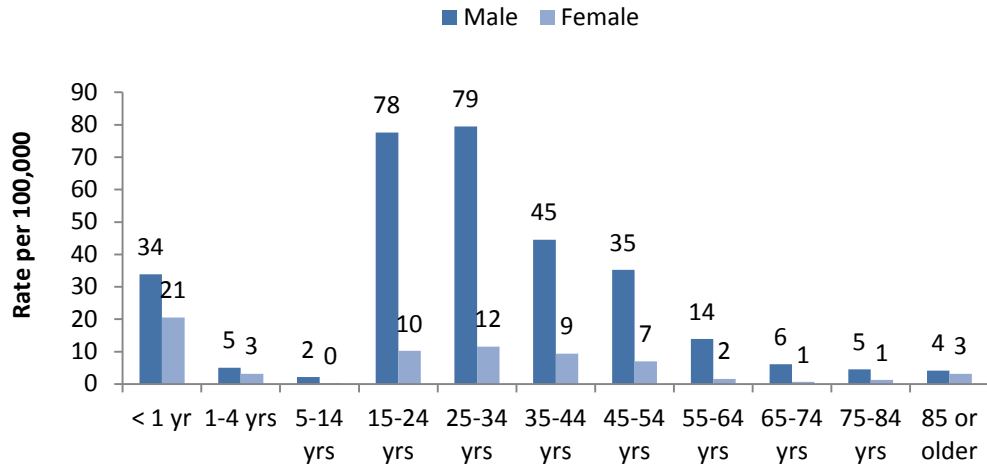
TRENDS:

The assault related hospitalization rate increased slightly from 20.5 per 100,000 in 2002 to 21.3 per 100,000 in 2010. While a slight increase was found, rates did not follow a consistent pattern. Inconsistent patterns were also found among males, females, and all age groups. Firearms, fights, cuts or pierces, and other or unspecified means were the most common mechanisms associated with assault related hospitalizations throughout the study period. However, none of the leading mechanisms followed a consistent trend. See Tables 45a-c located at the end of this section for more detailed information about assault related hospitalizations in Ohio.

Table 12.2 Assault Hospitalization Risk Profile

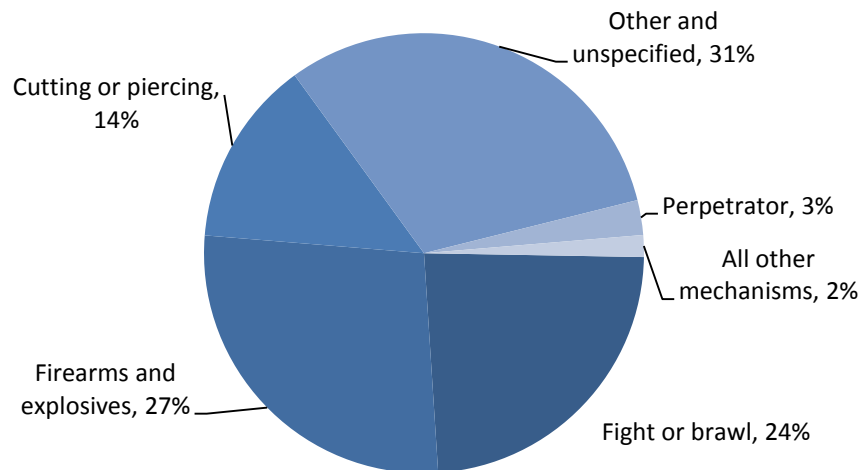
	2010 At Risk Groups	Annual Trend Since 2002
Overall		Inconsistent
Sex	Males	Inconsistent
Age	15-34	Inconsistent

Figure 12.5. Hospitalization rates for assaults by age and sex, Ohio, 2010



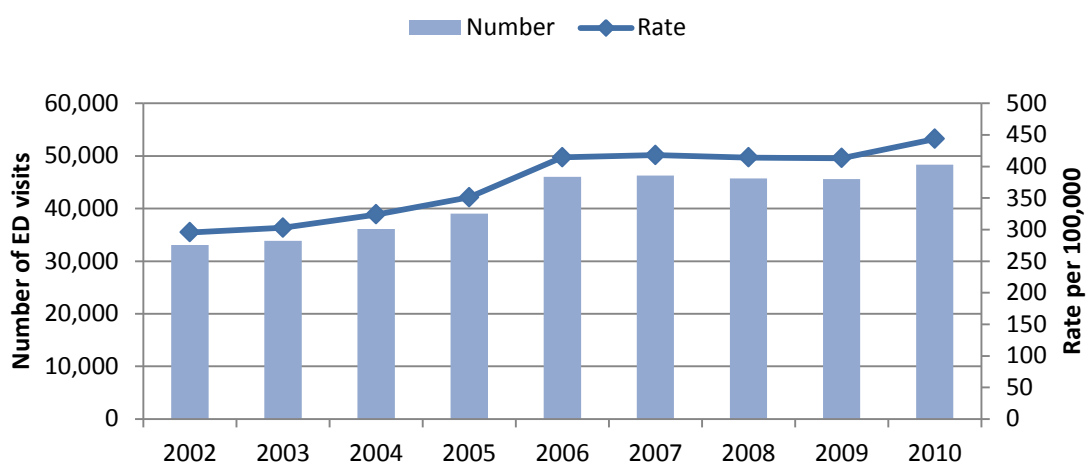
Source: Ohio Hospital Association

Figure 12.6. Distribution of hospitalizations resulting from assaults, by mechanism, Ohio, 2010



Source: Ohio Hospital Association

Figure 12.7. Number and age adjusted rate for assault related ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

Approximately 48,000 ED visits were associated with assaults in 2010. The ED visit rate was 444 per 100,000 (Figure 12.7). ED visit rates were higher among than females throughout the lifespan. ED visits increased from birth through age 24 and then steadily decreased after age 25 (Figure 12.8). See Table 12.3 for an assault ED visit risk profile.

Nearly one-half of assault related ED visits were associated with fights or brawls (43 percent) and 42 percent were associated with other or unspecified reasons.

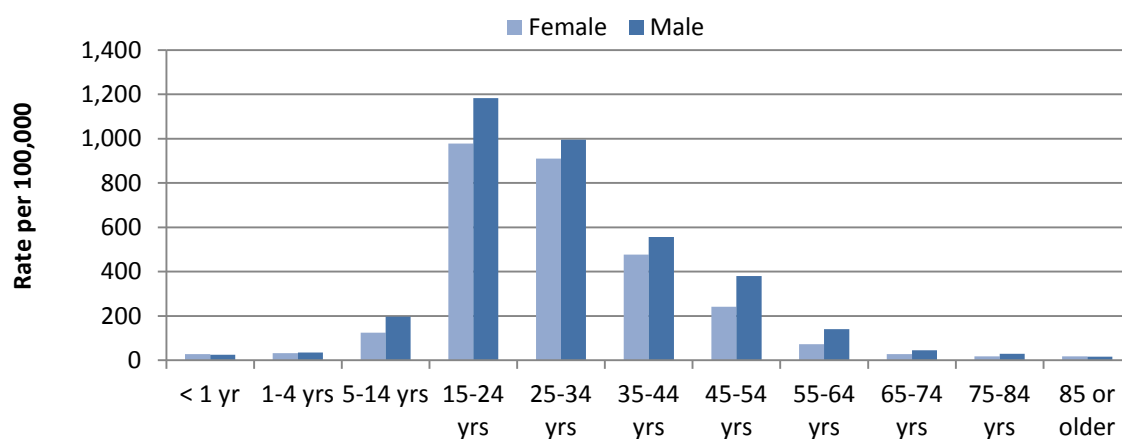
Table 12.3 Assault ED Visit Risk Profile

	2010 At Risk Groups	Annual Trend since 2002
Overall		+50%
Sex	Males	Males (largest increase)
Age	15-24	25-34 (largest increase)

TRENDS:

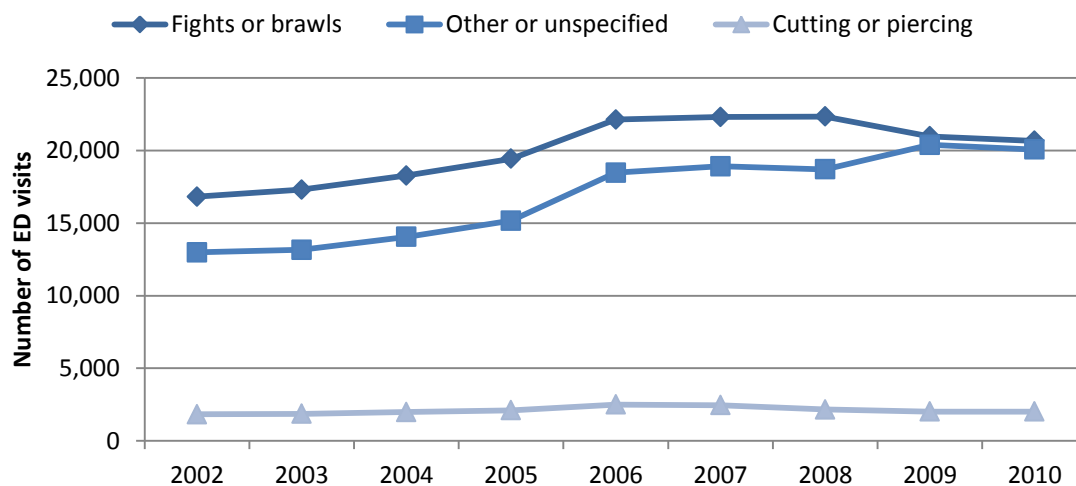
Assault related ED visits increased 50 percent from 296 per 100,000 in 2002 to 444 per 100,000 in 2010. Rates increased by an average of 20 per 100,000 per year. The average annual increase was slightly larger among males (26 per 100,000 per year) than females (20 per 100,000 per year). The largest annual increases were found among ages 25-34 (48 per 100,000 per year) and ages 15-24 (44 per 100,000). The largest annual increases in the number of ED visits resulted from other or unspecified means (1,056) and fights or brawls (623 per year). The number of ED visits resulting cuts or pierces did not follow a consistent linear trend (Figure 12.9). See Tables 46a-c located at the end of this section for more detailed information on assault related ED visits.

Figure 12.8. ED visit rates resulting from assaults by age and sex, Ohio, 2010



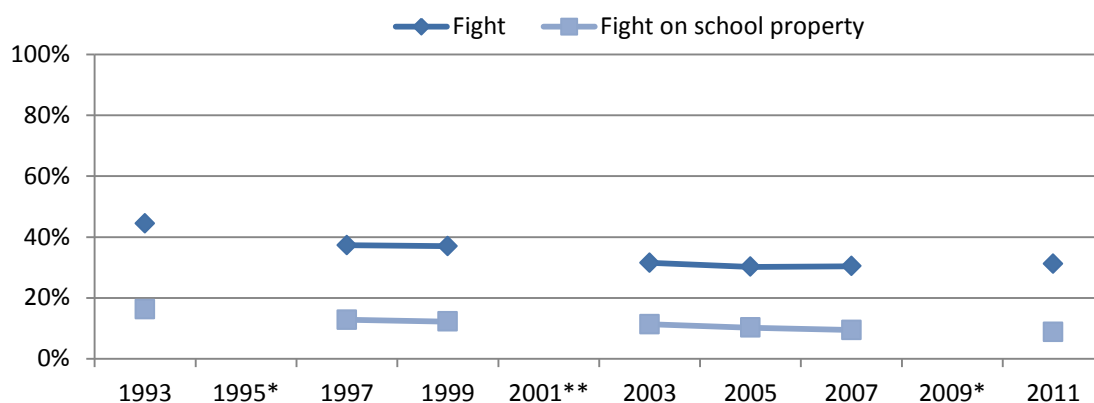
Source: Ohio Hospital Association

Figure 12.9 Number of ED visits resulting from assaults, by mechanism and year, Ohio, 2002-2010



Source: Ohio Hospital Association

Figure 12.10. Percentage of high school students who reported a physical fight and a fight on school property in last 12 months, Ohio, 1993-2011



Source: Ohio Youth Risk Behavior Survey. **Data not collected.
*Suppressed due to poor response rate.

PHYSICAL FIGHTING AMONG HIGH SCHOOL STUDENTS

In 2011, Approximately 1 in 3 high school students reported being in a physical fight in the last 12 months (Figure 12.10). Males were more likely than females to report physical fighting (38 percent versus 24 percent). Students in 9th grade (28 percent) were more likely to report being in a physical fight than students in 12th grade (21 percent). Hispanic students (45 percent) were more likely to report being in a physical fight than white, non-Hispanic students (29 percent) (Figure 12.11). See Table 12.4 for a youth physical fight risk profile.

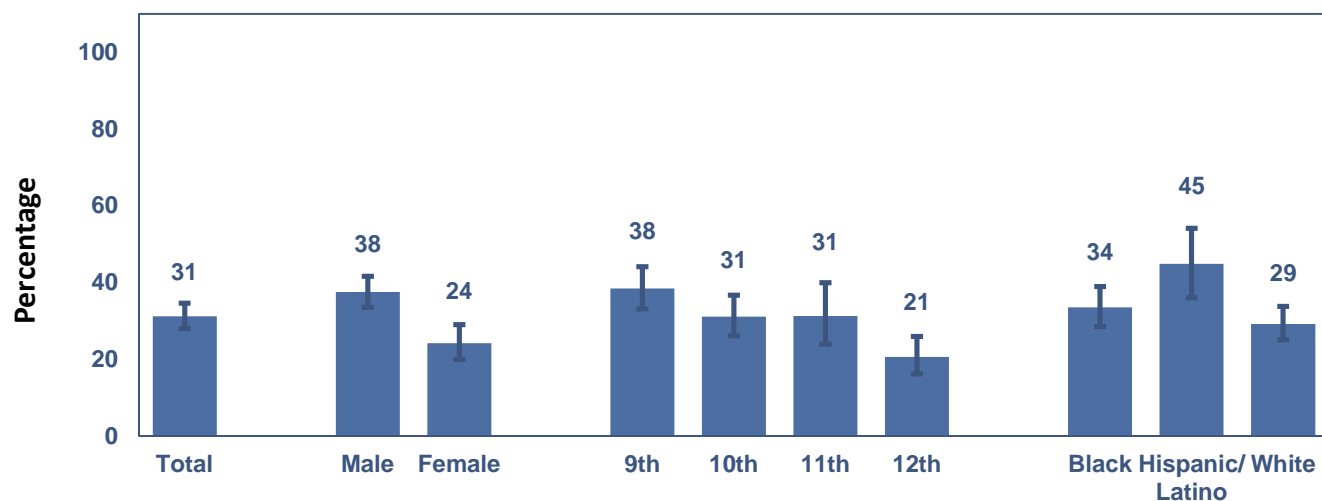
Since 1997, the percentage of students who reported being in a physical fight decreased 16 percent. The largest decreases in physical fighting were reported among female, 10th grade, and black non-Hispanic students (Figure 12.10).

Table 12.4 Youth Physical Fighting Risk Profile		
	2011 At Risk Groups	Trend since 1997
Overall	31%	Decrease (-16%)
Sex	Males	Females (-19%)
Grade	9 th grade	10 th grade (-20%)
Race and ethnicity	Hispanic	Blacks (-26%)

In 2011, approximately 1 in 12 or 9 percent of high school students reported being in a physical fight on school property in the last 12 months (Figure 12.10). Males were nearly two times more likely than females to report being in physical fight (11 percent versus 6 percent). Students in 9th grade (13 percent) were approximately 2 times more likely to report being in a physical fight than students in 12th grade (6 percent). Black non-Hispanic students (13 percent) were more likely to report being in a physical fight than white, non-Hispanic students (8 percent) (Figure 12.12).

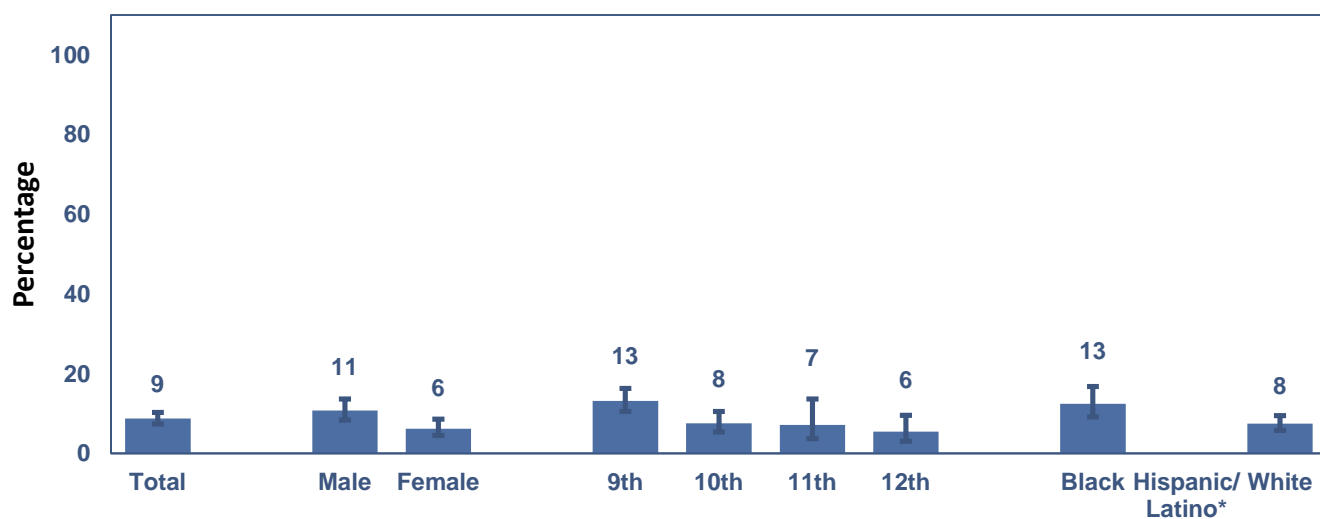
Fighting on school property followed a similar trend as physical fighting among youth as a whole with a 31 percent decrease since 1997.

Figure 12.11. Percentage of high school students who reported being in a physical fight in last 12 months, Ohio 2011



Source: Ohio Youth Risk Behavior Survey

Figure 47c. Percentage of high school students who reported being in a physical fight on school property in last 12 months, Ohio 2011



Source: Ohio Youth Risk Behavior Survey

*Suppressed due to poor response rate.

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 44a. Number of deaths resulting from assaults, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	465	522	537	536	563	631	662	635	597	629	554
Sex											
Males	313	373	387	406	421	479	506	491	465	486	436
Females	152	149	150	130	142	152	156	144	132	143	118
Age											
< 1 yr	7	17	16	17	10	14	14	11	16	13	14
1-4 yrs	18	23	18	16	12	11	19	25	17	23	16
5-14 yrs	22	14	9	9	11	20	26	10	7	16	6
15-24 yrs	104	125	146	160	156	171	168	160	159	147	145
25-34 yrs	95	115	126	132	133	168	167	174	157	165	159
35-44 yrs	88	108	100	87	102	102	124	103	102	90	79
45-54 yrs	66	66	57	64	77	84	80	97	72	88	69
55-64 yrs	21	19	30	21	27	33	35	25	32	52	36
65-74 yrs	22	20	16	13	17	18	12	18	14	16	19
75-84 yrs	17	10	16	12	15	8	10	9	19	10	8
85 or older	5	5	<5	5	<5	<5	7	<5	<5	9	<5
Race and ethnicity											
White‡	246	240	235	224	236	217	268	255	234	247	202
Black‡	207	264	285	288	289	383	363	351	336	352	335
Hispanic	6	11	7	22	30	23	23	24	23	29	12
Other‡	<5	5	6	0	<5	6	6	5	<5	<5	5

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 44b. Death rates per 100,000 resulting from assaults, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	4.1	4.6	4.8	4.8	5.0	5.6	5.9	5.7	5.3	5.5	5.0	0.11 (NL)
Sex†												
Males	5.6	6.7	7.0	7.3	7.5	8.5	9.1	8.8	8.4	8.7	8.0	0.26
Females	2.6	2.6	2.6	2.3	2.5	2.7	2.7	2.5	2.3	2.4	2.1	-0.01
Age												
< 1 yr	*	*	*	*	*	*	*	*	*	*	*	*
1-4 yrs	3.0	3.8	3.0	2.7	2.0	1.8	3.2	4.2	*	3.9	2.8	0.03 (NL)
5-14 yrs	1.3	*	*	*	*	*	*	*	*	1.1	*	*
15-24 yrs	6.7	8.0	9.2	10.1	9.8	10.8	10.6	10.2	10.1	9.4	9.1	0.19 (NL)
25-34 yrs	6.3	7.7	8.5	8.9	9.0	11.4	11.4	11.9	10.7	11.2	11.3	0.49
35-44 yrs	4.9	6.1	5.7	5.1	6.1	6.2	7.6	6.4	6.5	5.9	5.3	0.08 (NL)
45-54 yrs	4.2	4.0	3.5	3.8	4.5	4.9	4.6	5.5	4.1	5.0	4.0	0.07 (NL)
55-64 yrs	2.1	*	2.8	1.9	2.3	2.7	2.8	1.9	2.4	3.8	2.5	0.07 (NL)
65-74 yrs	2.8	2.6	*	*	*	*	*	*	*	*	*	*
75-84 yrs	*	*	*	*	*	*	*	*	*	*	*	*
85 or older	*	*	*	*	*	*	*	*	*	*	*	*
Race and ethnicity†												
White‡	2.6	2.5	2.5	2.4	2.5	2.3	2.8	2.7	2.5	2.6	2.2	<-0.01 (NL)
Black‡	15.4	19.1	20.5	20.5	20.7	27.0	25.3	24.2	23.1	24.1	22.7	0.7
Hispanic	*	*	*	8.6	9.7	8.4	7.2	6.6	8.5	7.4	*	*
Other‡	*	*	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to fewer than 20 deaths.

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 44c. Number of deaths resulting from assaults, by cause and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Drugs or biologic substances	0	0	<5	<5	<5	5	<5	<5	<5	<5	0	0%	*
Gases and vapors	5	<5	0	<5	10	<5	0	0	6	<5	0	0%	*
Unspecified chemicals	0	<5	0	0	0	0	0	0	0	0	0	0%	*
Hanging	27	17	24	23	25	27	24	30	27	25	24	4%	*
Drowning	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	*	*
Firearm	250	315	346	330	339	408	447	404	401	418	386	70%	14
Explosive material	0	0	0	0	0	0	<5	0	0	0	0	0%	*
Smoke, fire, or flames	16	<5	16	12	11	13	19	10	15	6	6	1%	*
Sharp object	61	49	52	77	64	60	69	65	41	50	54	10%	-0.75
Blunt object	<5	<5	<5	<5	<5	<5	<5	7	<5	0	0	0%	*
Pushing	<5	0	0	0	<5	<5	0	0	<5	<5	0	0%	*
Motor vehicle crash	9	10	<5	<5	<5	0	0	<5	0	0	<5	*	*
Bodily force	<5	10	<5	11	<5	<5	<5	<5	<5	<5	<5	*	*
Negligence or abandonment	<5	5	<5	<5	0	0	0	0	<5	<5	0	0%	*
Other maltreatment	8	12	13	9	9	10	8	12	10	16	9	2%	*
Other means	30	7	22	15	5	21	19	22	19	12	8	1%	*
Unspecified means	41	72	45	42	74	66	53	65	62	80	50	9%	1.39 (NL)
Sequelae of assault	8	13	<5	5	13	12	12	12	5	9	10	2%	*

*Suppressed due less than 20 deaths.

NL: Interpret with caution, does not follow linear trend ($R^2 < 0.5$)

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 45a. Number of hospitalizations resulting from assaults by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	2,295	2,480	2,547	2,572	2,628	2,668	2,543	2,473	2,345
Sex									
Males	1,909	2,077	2,113	2,179	2,198	2,257	2,110	2,069	2,002
Females	386	403	434	393	430	411	433	404	343
Age									
< 1 yr	63	70	64	62	84	86	76	76	38
1-4 yrs	35	35	30	34	38	39	50	37	24
5-14 yrs	23	31	29	39	52	41	29	35	19
15-24 yrs	693	709	729	798	740	760	741	763	705
25-34 yrs	565	599	641	604	605	632	634	601	640
35-44 yrs	512	568	570	525	527	478	449	434	397
45-54 yrs	295	343	349	351	387	472	375	359	363
55-64 yrs	57	73	81	96	120	104	125	115	110
65-74 yrs	24	22	24	36	32	31	27	27	27
75-84 yrs	23	17	22	22	28	16	24	14	14
85 or older	5	13	8	5	15	9	13	12	8

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 45b. Hospitalization rates per 100,000 resulting from assaults by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	20.5	22.1	22.8	23.0	23.5	23.8	22.8	22.2	21.3	0.07 (NL)
Sex†										
Males	34.2	37.3	38.0	39.0	39.3	40.2	37.8	37.1	36.5	0.16 (NL)
Females	6.9	7.2	7.7	7.0	7.6	7.4	7.7	7.2	6.2	-0.03 (NL)
Age										
< 1 yr	42.8	47.5	42.9	42.3	56.7	56.7	49.8	51.4	27.3	-0.36 (NL)
1-4 yrs	5.8	5.9	5.0	5.7	6.5	6.6	8.5	6.3	4.1	0.04 (NL)
5-14 yrs	1.4	1.9	1.8	2.5	3.4	2.7	1.9	2.3	*	*
15-24 yrs	43.8	44.5	45.7	50.1	46.8	48.3	47.1	48.8	44.4	0.28 (NL)
25-34 yrs	38.3	40.8	43.9	41.4	41.5	43.3	43.3	40.7	45.4	0.48 (NL)
35-44 yrs	29.3	33.3	34.0	31.9	32.5	30.0	28.9	28.6	26.8	-0.61 (NL)
45-54 yrs	17.9	20.5	20.6	20.4	22.3	27.0	21.4	20.5	20.8	0.33 (NL)
55-64 yrs	5.3	6.5	6.9	7.9	9.5	8.0	9.4	8.3	7.6	0.33 (NL)
65-74 yrs	3.1	2.9	3.1	4.7	4.2	4.0	3.3	3.2	3.2	0.02 (NL)
75-84 yrs	4.2	*	4.0	4.0	5.1	*	4.5	*	*	*
85 or older	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to less than 20 hospitalizations.

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 45c. Number of hospitalizations resulting from assaults by type and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Fight or brawl	513	525	489	511	478	578	574	530	555	24%	7 (NL)
Rape	6	6	13	5	14	6	15	8	<5	*	*
Corrosive substance	<5	<5	5	<5	<5	<5	<5	0	<5	*	*
Poisoning	4	13	9	<5	15	5	<5	<5	9	0%	*
Strangulation	<5	<5	7	<5	7	<5	<5	9	5	0%	*
Drowning	0	<5	0	0	0	<5	0	0	0	0%	*
Firearms and explosives	534	577	610	691	747	647	629	649	640	27%	11 (NL)
Cutting or piercing	347	390	379	378	361	381	357	309	321	14%	-6 (NL)
Perpetrator of abuse	67	51	65	80	110	112	98	99	60	3%	*
Other and unspecified	807	894	934	868	869	904	840	841	729	31%	-10 (NL)
Late affects of injury by other person	17	19	36	29	25	29	23	24	21	1%	*

*Suppressed due to less than 20 hospitalizations.
Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 46a. Number of ED visits resulting from assaults by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	33,109	33,897	36,150	39,063	46,029	46,272	45,736	45,583	48,332
Sex									
Males	20,404	20,669	22,212	23,945	28,479	28,493	27,861	27,120	26,744
Females	12,705	13,228	13,938	15,118	17,550	17,779	17,875	18,463	21,588
Age									
< 1 yr	22	30	23	21	34	29	35	23	37
1-4 yrs	119	122	140	133	141	151	148	155	199
5-14 yrs	2,194	2,182	2,216	2,349	2,701	2,481	2,551	2,318	2,459
15-24 yrs	12,267	12,893	13,448	14,526	17,092	16,645	16,797	16,838	17,169
25-34 yrs	8,390	8,351	9,108	9,832	11,672	12,089	11,793	12,345	13,425
35-44 yrs	6,354	6,287	6,725	7,048	7,893	7,983	7,527	7,077	7,645
45-54 yrs	2,828	3,057	3,402	3,914	4,794	5,247	5,123	5,128	5,394
55-64 yrs	594	674	779	891	1,286	1,221	1,294	1,311	1,537
65-74 yrs	197	176	183	220	260	297	293	270	304
75-84 yrs	104	91	88	101	112	89	123	85	122
85 or older	40	34	38	28	44	40	52	33	41

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 46b. ED visit rates per 100,000 resulting from assaults by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	296	303	324	351	414	418	414	413	444	19.5
Sex†										
Males	365	237	398	429	511	512	502	489	488	25.7
Females	227	237	250	273	318	324	326	337	399	19.9
Age										
< 1 yr	15	20	15	14	23	19	23	16	27	0.9 (NL)
1-4 yrs	20	20	24	22	24	26	25	26	34	1.4
5-14 yrs	136	137	140	151	176	164	170	155	162	3.9
15-24 yrs	775	808	843	912	1,080	1,057	1,069	1,076	1,082	43.8
25-34 yrs	569	570	623	675	801	827	806	835	952	47.5
35-44 yrs	364	368	401	428	487	501	484	466	517	19.0
45-54 yrs	172	183	201	228	276	300	293	292	310	18.9
55-64 yrs	55	60	67	73	102	94	97	95	106	6.5
65-74 yrs	26	23	24	29	34	38	36	32	36	1.7
75-84 yrs	19	16	16	18	20	16	23	16	23	0.4
85 or older	21	17	19	14	20	18	23	15	18	NL

†Rates are age adjusted to the 2000 U.S. standard population
 NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

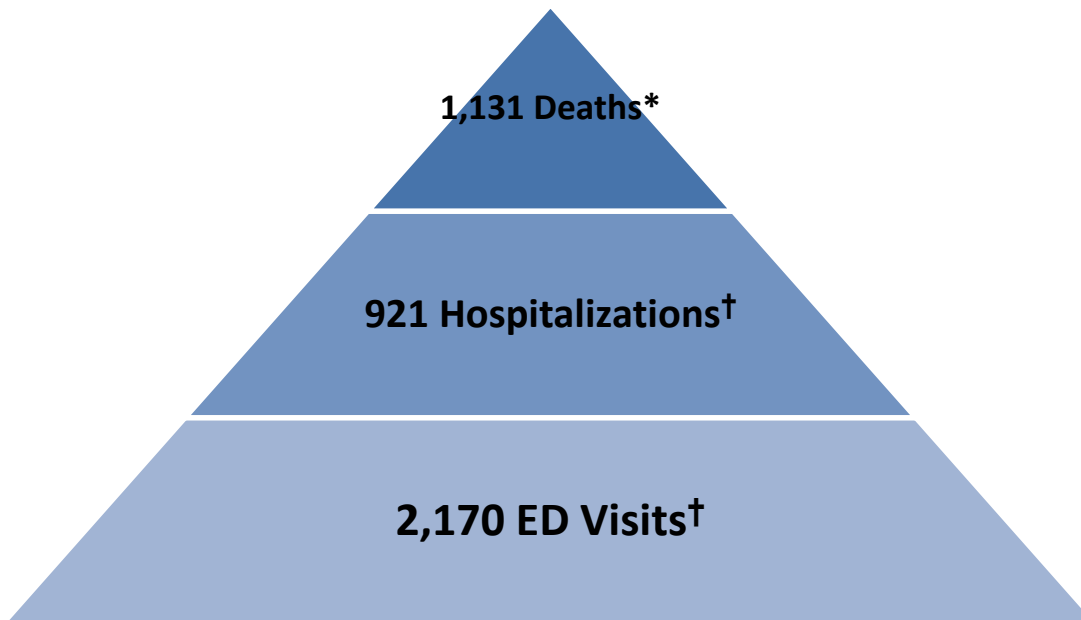
Table 46c. Number of ED visit rates resulting from assaults by type and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Fight or brawl	16,826	17,309	18,279	19,429	22,141	22,316	22,343	20,982	20,668	42.8%	623
Rape	516	378	342	416	457	435	420	492	484	1.0%	6 (NL)
Corrosive substance	25	23	23	29	46	30	41	27	31	0.1%	1 (NL)
Poisoning	46	41	46	47	66	35	42	33	48	0.1%	-1 (NL)
Strangulation	41	68	64	67	101	106	88	99	143	0.3%	10
Drowning	<5	5	<5	0	<5	<5	<5	0	0	0.0%	*
Firearms and explosives	484	522	722	821	1,184	1,018	1,059	706	737	1.5%	41 (NL)
Cutting or piercing	1,829	1,862	1,981	2,103	2,493	2,449	2,159	2,009	2,009	4.2%	31 (NL)
Perpetrator of abuse	0	0	0	0	0	0	0	0	3,292	6.8%	*
Other and unspecified	12,988	13,161	14,054	15,169	18,470	18,917	18,708	20,395	20,072	41.5%	1052
Late affects of injury by other person	357	532	639	987	1,073	967	877	841	848	1.8%	56 (NL)

*Suppressed due to small cell sizes.
Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

SECTION 4.3: FIREARMS



*SOURCE: OHIO DEPARTMENT OF HEALTH, VITAL STATISTICS, 2010

† SOURCE: OHIO HOSPITAL ASSOCIATION

CHAPTER HIGHLIGHTS:

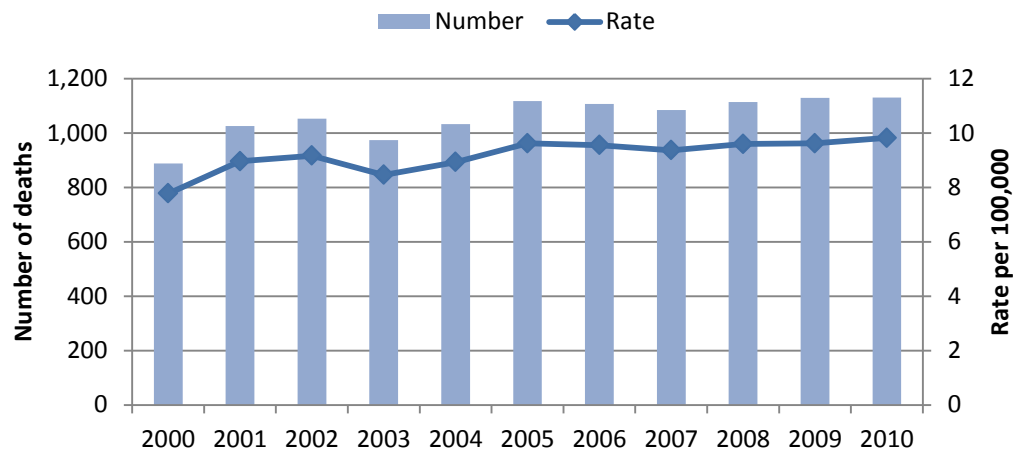
Patterns:

- 3 people die from a firearm fatality in Ohio each day.
- Males were more likely to experience a fatal or non-fatal injury than females.
- Blacks were 6 times more likely to die from a firearm related injury than whites.
- Highest rates of fatal and non-fatal injuries were found among persons age 15-34.
- Among households with a firearm, nearly one-half reported the firearm was in an unlocked location.

Trends:

- Firearm related fatalities increased 26 percent since 2000.
- Hospitalization and ED visit rates increased from 2002 to 2006 then decreased between 2006 and 2010.
- Fatal and non-fatal firearm injury rates were consistently higher among males and ages 15-34.
- Fatal injury rates were consistently higher among blacks compared to other race or ethnic groups.

Figure 13.1. Number and age adjusted death rate for firearm related injuries by year, Ohio, 2002-2010



Source: Ohio Department of Health, Office of Vital Statistics

DEATHS:

In 2010, 1,131 people died from a firearm related injury in Ohio. The firearm related fatality rate was 9.8 per 100,000 (Figure 13.1). Males were 6 times more likely to die from a firearm related injury than females (17.6 per 100,000 versus 2.6 per 100,000). The age distribution of firearm related fatalities differed by sex. Among males, the highest rates were found among ages 25-34 and 85 or older. Among females, the highest rates were found ages 15-44 (Figure 13.2). The highest fatality rates were found among ages 25-34 (17 per 100,000) and 15-24 (13 per 100,000). Blacks (22 per 100,000) were 6 times more likely to die from a firearm related injury than whites (3.7 per 100,000). See Table 13.1 for a firearm death risk profile. Most firearm related deaths were associated with suicides (63 percent) and homicides (34 percent).

Table 13.1 Firearm Death Risk Profile		
	2010 At Risk Groups	Annual Trend since 2000
Overall		+26%
Sex	Males	Males (largest increase)
Age	25-34	25-34 (largest increase)
Race and ethnicity	Blacks	Blacks (largest increase)

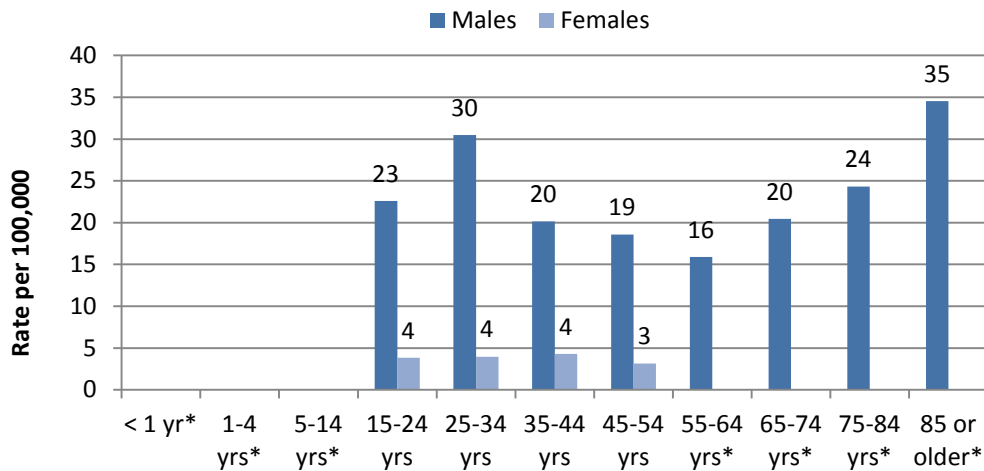
TRENDS:

Firearm related death rates increased 26 percent from 7.8 per 100,000 in 2000 and 9.8 per 100,000 in 2010. The average annual increase was 0.15 per 100,000 per year. Rates increased by an average of 0.2 per 100,000 per year among males while rates did not follow a consistent trend among females. The largest increases in rates were found among ages 25-34 (0.5 per 100,000 per year) and ages 35-44 (0.2 per 100,000 per year). A decrease in rates was found among older adults ages 75-84 (0.4 per 100,000 per year). Increases were found among both blacks and whites with a larger annual increase found among blacks (0.6 per 100,000 per year). The number of firearm related homicides increased by an average of 14 per year while the number of firearm

Ohio Violence and Injury Prevention Program, Ohio Department of Health

related suicides did not follow a consistent pattern (Figure 13.3). See Tables 48a-c located at the end of this section for more detailed information on firearm related deaths in Ohio.

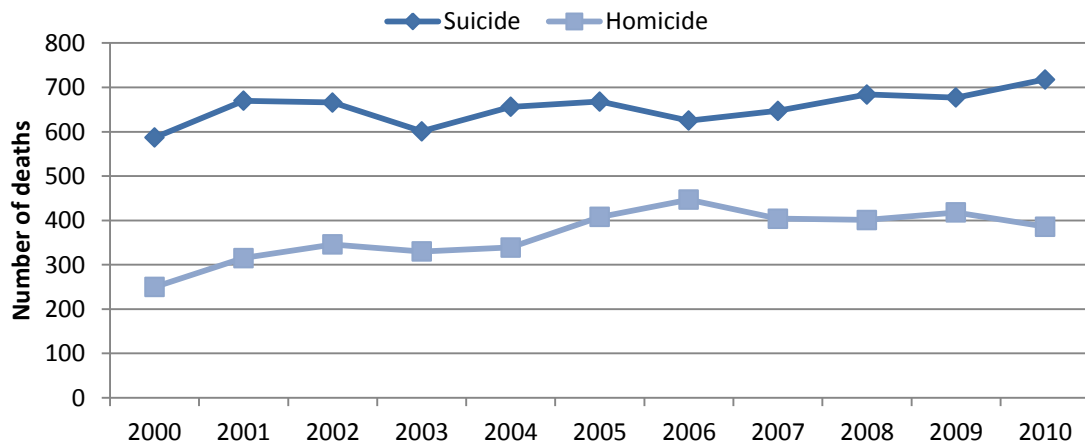
Figure 13.2. Firearm related fatality rates by age and sex, Ohio, 2010



Source: Ohio Department of Health, Office of Vital Statistics

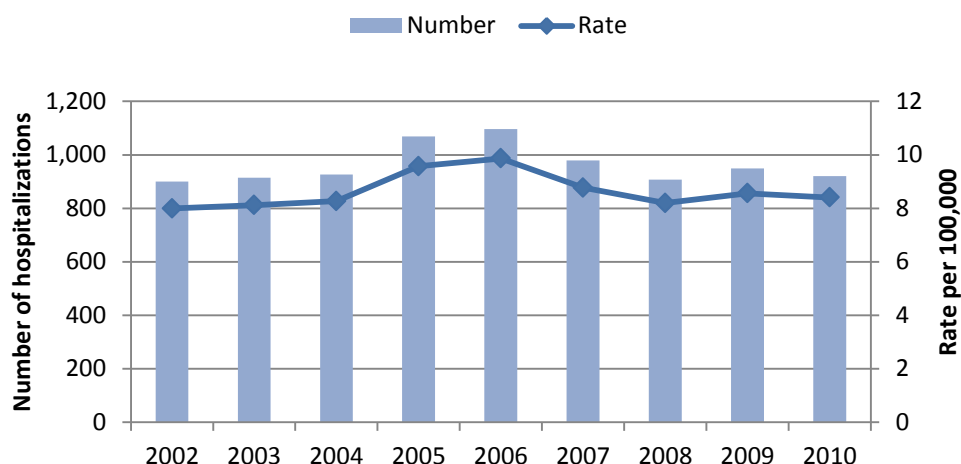
*Data suppressed due to less than 20 deaths

Figure 13.3. Number of firearm related deaths by intent and year, Ohio, 2000-2010



Source: Ohio Department of Health, Office of Vital Statistics

Figure 13.4. Number and age adjusted rate for firearm related hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

In 2010, approximately 900 hospitalizations were associated with firearms. The hospitalization rate was 8.4 per 100,000 (Figure 13.4). The rate was over 10 times higher among males (15.5 per 100,000) than females (1.4 per 100,000). Among males and females, the highest hospitalization rates were found among ages 15-24 (25 per 100,000) followed by ages 25-34 (18 per 100,000) (Figure 13.5). See Table 13.2 for an assault hospitalization risk profile. Approximately 68 percent of firearm related hospitalizations were associated with assaults and 20 percent were related to unintentional mechanisms (Figure 13.6).

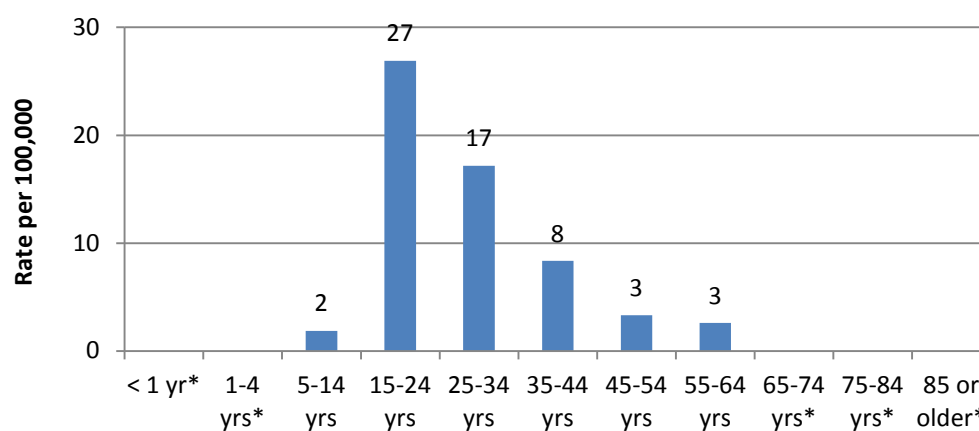
Table 13.2 Assault Hospitalization Risk Profile

	2010 At Risk Groups	Annual Trend Since 2002
Overall		Increase then decrease
Sex	Males	Females (largest decrease)
Age	15-34	15-24 (largest increase)

TRENDS:

Rates of firearm related hospitalizations increased between 2002 and 2006 then decreased from 2006 to 2010. A slight decrease was found among females (-0.1 per 100,000 per year) while rates among males did not follow a consistent pattern. An increase in rates was found among ages 25-34 (0.3 per 100,000 per year) while rates among other age groups did not follow a consistent trend over time. The distribution of assault related hospitalizations by mechanism remained the same throughout the study period. See Tables 49a-c located at the end of this section for more detailed information about assault related hospitalizations in Ohio.

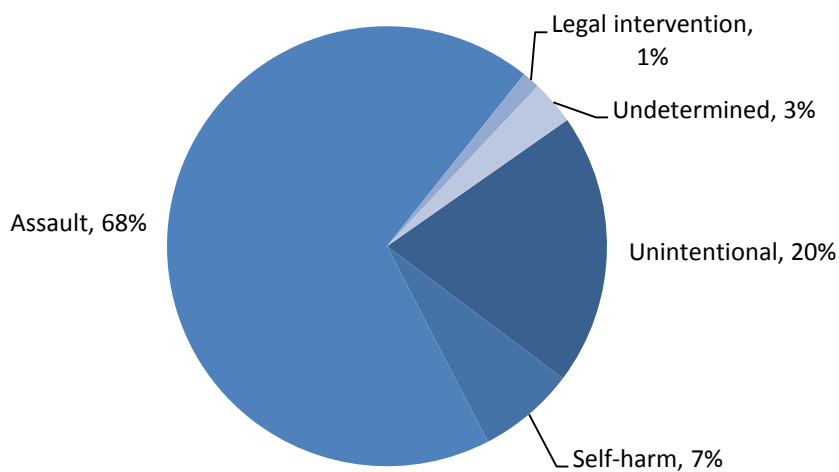
Figure 13.5. Hospitalization rates for firearm related injuries by age, Ohio, 2010



Source: Ohio Hospital Association

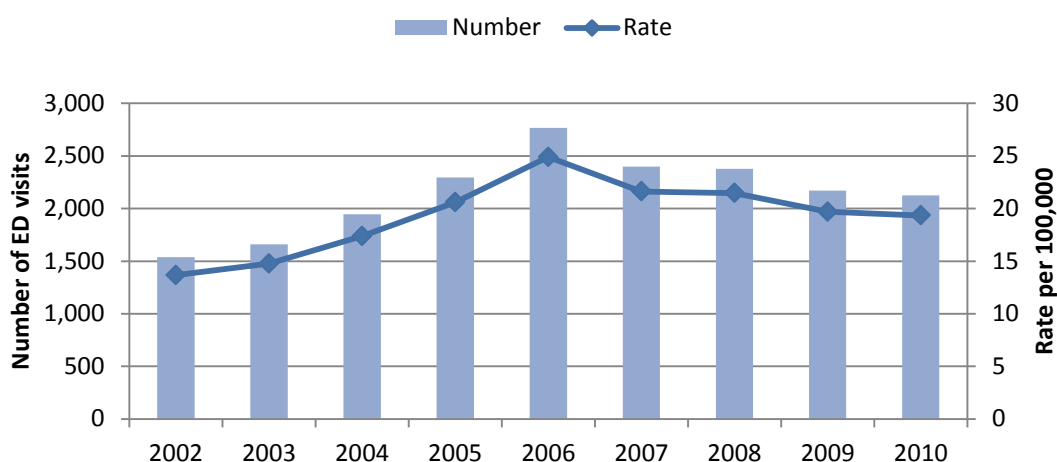
*Rates suppressed due to less than 20 hospitalizations

Figure 13.6. Percentage of hospitalizations resulting from assaults, by intent, Ohio, 2010



Source: Ohio Hospital Association

Figure 13.7. Number and age adjusted rate for firearm related ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

Approximately 2,100 ED visits were associated with firearms in 2010. The ED visit rate was 19.3 per 100,000 (Figure 13.7). Males were 7 times more likely than females to visit the ED for a firearm related injury. For both males and females, ED visits increased from birth through age 24 and then steadily decreased after age 25 (Figure 13.8). The highest rates occurred among ages 15-24. See Table 13.3 for a firearm ED visit risk profile. Over half of ED visits were associated with unintentional mechanisms (58 percent) and 31 percent resulted from assaults.

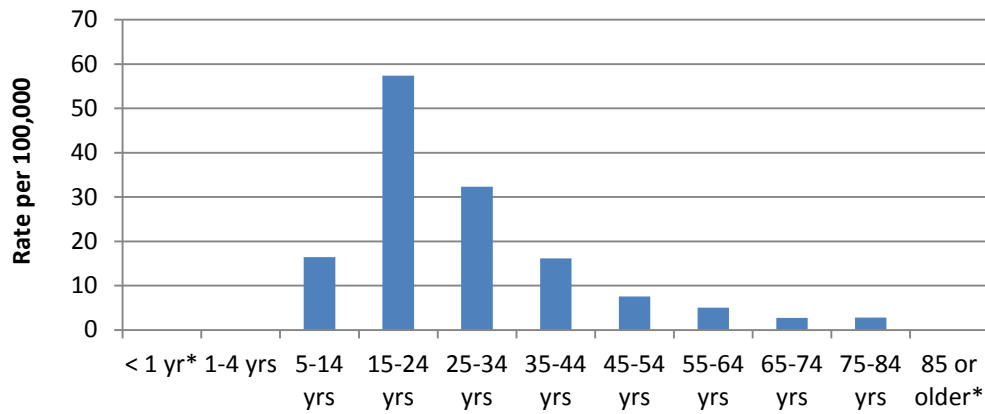
Table 13.3 Firearm ED Visit Risk Profile

	2010 At Risk Groups	Annual trend since 2002
Overall		Increase then decrease
Sex	Males	Females (largest increase)
Age	15-24	Inconsistent trends

TRENDS:

ED visit rates resulting from firearm related injuries increased between 2002 and 2006 then decreased from 2007 to 2010. Rates among females increased slightly (0.2 per 100,000 per year) while rates among males did not follow consistent trend. Rates did not follow a consistent trend among any age group. The number of ED visits associated unintentional mechanisms increased by an average of 41 per year while the number of ED visits resulting from assaults increased in 2002-2006 and then decreased in 2007-2010 (Figure 13.9). See Tables 50a-c located at the end of this section for more detailed information on self-harm related ED visits.

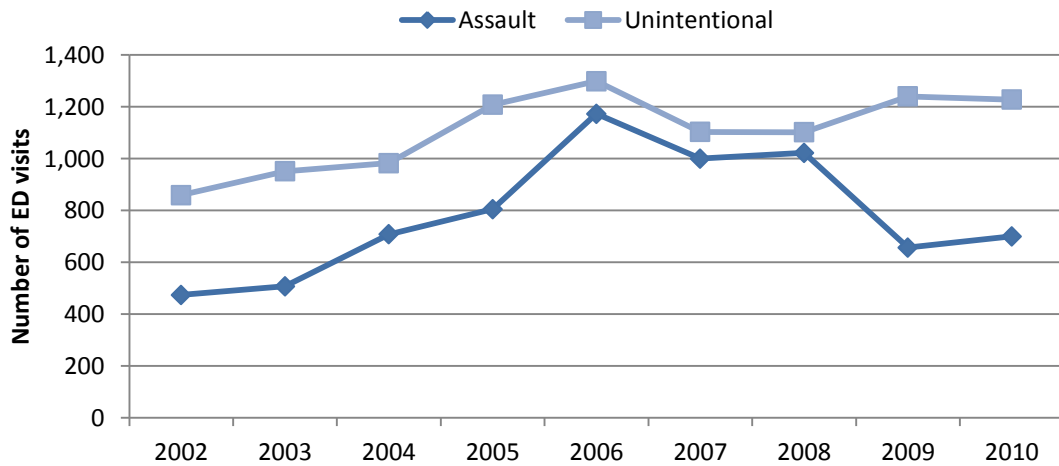
Figure 13.8. ED visit rates resulting from firearm injuries by age and sex, Ohio, 2010



Source: Ohio Hospital Association

*Suppressed due to small cell sizes

Figure 13.9. Number of ED visits resulting from firearm injuries, by intent and year, Ohio, 2002-2010



Source: Ohio Hospital Association

FIREARMS AND STORAGE PRACTICES IN HOMES:

According to the results from the Behavioral Risk Factor Surveillance System, an estimated 1.7 million or 37 percent of households in Ohio reported a firearm in their home. Males were more likely to report a firearm in their home than females (43 percent versus 31 percent). Respondents from households above the federal poverty level (39 percent) were more likely to report a firearm in their home than respondents below the poverty level (25 percent). Respondents from suburban (40 percent), rural (44 percent) or Appalachian (53 percent) counties were more likely to have a firearm in their home compared to respondents from households from metropolitan (28 percent) counties. The percentage of respondents with a firearm in their home was similar across all age groups (Table 13.4). See Tables 51a for more detailed information on the percentage of adults who reported a firearm in their home.

Table 13.4 Firearm Storage Risk Profile		
	Firearm in home	Unlocked firearm in home
Overall	1.7 million*	800,000*
Sex	Males	Males
Age	Similar for all ages	45 or older
Household income	Above poverty	Similar for all income levels
Economic development	Rural and Appalachian	Similar for all county groups
*Households in Ohio		

Among households with a firearm, nearly 800,000 or one-half (46 percent) reported their firearm was in an unlocked location. Males were more likely to report an unlocked firearm in their home than females (50 percent versus 40 percent). Adults ages 45 or older were more likely report unlocked firearms in their home than adults less than 45 years of age. No differences were found by poverty levels or county economic development level (Table 13.4). See Table 51b located at the end of this section for more detailed information on the percentage of adults who reported an unlocked firearm in their home.

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 48a. Number of deaths resulting from firearms, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	888	1,026	1,053	974	1,033	1,118	1,107	1,085	1,114	1,129	1,131
Sex											
Males	763	894	922	868	885	983	957	959	989	971	983
Females	125	132	131	106	148	135	150	126	125	158	148
Age											
< 1 yr	0	0	0	<5	0	0	0	0	0	<5	0
1-4 yrs	0	<5	<5	<5	0	<5	<5	<5	<5	7	<5
5-14 yrs	19	11	11	6	8	17	16	10	7	13	7
15-24 yrs	155	193	203	208	206	224	229	226	226	211	212
25-34 yrs	164	188	199	211	204	209	242	222	227	219	242
35-44 yrs	166	195	188	153	167	176	168	183	188	170	180
45-54 yrs	140	165	159	152	191	198	193	194	181	206	187
55-64 yrs	74	98	98	95	98	124	109	109	127	149	128
65-74 yrs	69	76	89	65	79	65	58	63	84	73	86
75-84 yrs	75	74	79	62	65	75	68	58	55	54	60
85 or older	26	24	26	19	15	27	21	17	18	26	25
Race and ethnicity											
White‡	676	747	767	686	744	762	739	736	748	775	785
Black‡	201	260	256	269	260	326	341	326	332	328	320
Hispanic	5	12	15	13	24	23	20	14	26	23	17
Other‡	<5	7	6	<5	<5	<5	5	8	7	<5	8

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 48b. Death rates per 100,000 resulting from firearms, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	7.8	9.0	9.2	8.5	8.9	9.6	9.6	9.4	9.6	9.6	9.8	0.15
Sex†												
Males	14.3	16.5	17.0	15.7	16.0	17.6	17.1	17.1	17.6	17.1	17.6	0.22
Females	2.1	2.3	2.2	1.8	2.5	2.3	2.6	2.1	2.1	2.7	2.6	0.04 (NL)
Age												
< 1 yr	*	*	*	*	*	*	*	*	*	*	*	*
1-4 yrs	*	*	*	*	*	*	*	*	*	*	*	*
5-14 yrs	*	*	*	*	*	*	*	*	*	*	*	*
15-24 yrs	10.0	12.3	12.8	13.1	13.0	14.1	14.5	14.4	14.4	13.5	13.4	0.28 (NL)
25-34 yrs	10.8	12.6	13.4	14.3	13.8	14.2	16.5	15.1	15.4	14.8	17.2	0.46
35-44 yrs	9.2	11.0	10.8	9.0	10.0	10.7	10.3	11.4	12.0	11.2	12.2	0.23
45-54 yrs	8.9	10.1	9.7	9.1	11.3	11.5	11.1	11.1	10.3	11.7	10.7	0.20 (NL)
55-64 yrs	7.3	9.6	9.0	8.4	8.4	10.2	8.6	8.4	9.5	10.8	8.8	0.13 (NL)
65-74 yrs	8.8	9.7	11.5	8.4	10.3	8.5	7.5	8.0	10.3	8.7	10.1	-0.04 (NL)
75-84 yrs	13.8	13.5	14.2	11.1	11.6	13.4	12.2	10.5	10.0	10.0	11.1	-0.37
85 or older	14.6	13.3	14.1	*	*	13.6	10.2	*	*	11.5	10.9	-0.5 (NL)
Race and ethnicity†												
White‡	2.1	2.8	2.7	2.9	2.8	3.6	3.8	3.6	3.7	3.6	3.7	0.15
Black‡	15.1	19.2	18.7	19.4	18.4	22.7	23.8	22.5	22.9	22.5	21.7	0.64
Hispanic	*	*	*	*	8.3	8.9	6.2	*	8.4	8.6	*	*
Other‡	*	*	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to fewer than 20 deaths.

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Table 48c. Number of deaths resulting from firearms, by intent and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Unintentional	33	25	19	18	19	26	23	17	12	13	8	1%	*
Suicide	587	670	666	601	656	668	625	647	684	677	718	63%	7 (NL)
Homicide	250	315	346	330	339	408	447	404	401	418	386	34%	14
Undetermined	11	8	12	11	10	5	5	9	9	9	10	1%	*
Legal intervention	7	8	10	14	9	11	7	8	8	12	9	1%	*

*Trends suppressed due to fewer than 20 deaths.

Source: Ohio Department of Health, Office of Vital Statistics

NL: Interpret with caution because trend does not follow linear pattern

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 49a. Number of hospitalizations resulting from firearms by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	900	915	926	1,069	1,096	979	907	949	921
Sex									
Males	804	820	826	966	996	904	824	877	846
Females	96	95	100	103	100	75	83	72	75
Age									
< 1 yr	0	0	<5	0	0	0	0	<5	0
1-4 yrs	<5	<5	<5	<5	6	<5	<5	<5	<5
5-14 yrs	18	18	23	28	45	33	23	28	15
15-24 yrs	348	394	381	477	465	424	401	421	400
25-34 yrs	262	241	267	276	301	242	223	254	250
35-44 yrs	129	132	138	166	157	136	138	127	130
45-54 yrs	83	82	82	75	75	90	68	58	80
55-64 yrs	21	24	22	24	26	34	24	36	24
65-74 yrs	14	9	9	14	8	10	20	12	13
75-84 yrs	13	10	<5	7	10	5	5	8	<5
85 or older	9	<5	0	<5	<5	<5	<5	<5	<5

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 49b. Hospitalization rates per 100,000 resulting from firearms by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	8.0	8.1	8.3	9.6	9.9	8.8	8.2	8.6	8.4	0.03 (NL)
Sex†										
Males	14.5	14.6	15.1	17.3	17.9	16.2	14.9	15.8	15.5	0.1 (NL)
Females	1.69	1.67	1.75	1.84	1.77	1.35	1.49	1.27	1.37	-0.06
Age										
< 1 yr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0	*
1-4 yrs	*	*	*	*	*	*	*	*	*	*
5-14 yrs	*	*	1.5	1.8	2.9	2.2	1.5	1.9	*	*
15-24 yrs	22.0	24.7	23.9	29.9	29.4	26.9	25.5	26.9	25.2	0.33 (NL)
25-34 yrs	17.8	16.4	18.3	18.9	20.7	16.6	15.2	17.2	17.7	-0.11 (NL)
35-44 yrs	7.4	7.7	8.2	10.1	9.7	8.5	8.9	8.4	8.8	0.12 (NL)
45-54 yrs	5.0	4.9	4.8	4.4	4.3	5.1	3.9	3.3	4.6	-0.13 (NL)
55-64 yrs	1.9	2.1	1.9	2.0	2.1	2.6	1.8	2.6	1.7	0.01 (NL)
65-74 yrs	*	*	*	*	*	*	2	*	*	*
75-84 yrs	*	*	*	*	*	*	*	*	*	*
85 or older	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to less than 20 hospitalizations

†Rates are age adjusted to 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear trend pattern

Source: Ohio Hospital Association

Table 49c. Number of hospitalizations resulting from firearms by intent and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Unintentional	202	195	173	197	205	200	172	203	184	20%	-1 (NL)
Self-harm	86	76	74	61	69	72	63	71	66	7%	-2 (NL)
Assault	528	561	601	685	729	640	619	630	629	68%	10 (NL)
Legal intervention	9	16	13	18	8	13	16	9	12	*	*
Undetermined	75	67	65	108	85	55	37	36	30	3%	-6 (NL)

*Suppressed due to less than 20 hospitalizations

NL: Interpret with caution because trend does not follow linear trend pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 50a. Number of ED visits resulting from firearms by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	1,538	1,661	1,946	2,296	2,766	2,398	2,377	2,170	2,125
Sex									
Males	1,371	1,467	1,713	2,019	2,457	2,122	2,106	1,934	1,831
Females	167	194	233	277	309	276	271	236	294
Age									
< 1 yr	0	0	<5	<5	<5	<5	0	<5	0
1-4 yrs	12	8	13	11	9	7	22	11	16
5-14 yrs	217	246	264	281	341	239	285	274	250
15-24 yrs	589	666	781	996	1,238	1,037	1,041	898	911
25-34 yrs	313	336	430	474	594	528	483	493	456
35-44 yrs	206	201	240	294	300	297	252	244	239
45-54 yrs	103	107	135	150	153	172	181	126	132
55-64 yrs	35	60	49	48	64	63	61	68	73
65-74 yrs	26	24	20	27	36	24	30	24	23
75-84 yrs	23	10	10	9	20	20	13	22	15
85 or older	14	<5	<5	<5	10	10	9	9	10

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 50b. ED visit rates per 100,000 resulting from firearms by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	13.7	14.8	17.4	20.6	24.9	21.6	21.5	19.7	19.3	0.78 (NL)
Sex†										
Males	24.6	26.1	30.6	36.1	44.1	38.1	37.9	35.0	33.3	1.33 (NL)
Females	3.0	3.4	4.2	5.0	5.6	5.1	4.9	4.3	5.4	0.2
Age										
< 1 yr	0.0	0.0	*	*	*	*	0.0	*	0.0	*
1-4 yrs	*	*	*	*	*	*	3.7	*	*	*
5-14 yrs	13.4	15.4	16.7	18.1	22.2	15.8	19.0	18.3	16.4	0.39 (NL)
15-24 yrs	37.2	41.8	48.9	62.5	78.3	65.9	66.2	57.4	57.4	2.76 (NL)
25-34 yrs	21.2	22.9	29.4	32.5	40.8	36.1	33.0	33.4	32.3	1.44 (NL)
35-44 yrs	11.8	11.8	14.3	17.8	18.5	18.6	16.2	16.1	16.2	0.58 (NL)
45-54 yrs	6.3	6.4	8.0	8.7	8.8	9.8	10.3	7.2	7.6	0.22 (NL)
55-64 yrs	3.2	5.3	4.2	4.0	5.1	4.9	4.6	4.9	5.0	0.13 (NL)
65-74 yrs	3.4	3.1	2.6	3.5	4.7	3.1	3.7	2.9	2.7	-0.03 (NL)
75-84 yrs	4.2	*	*	*	3.6	3.7	*	4.1	2.8	*
85 or older	*	*	*	*	*	*	*	*	*	*

*Rates suppressed due to less than 20 ED visits

†Rates are age adjusted to the 2000 U.S. standard population

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Table 50c. Number of ED visits resulting from firearms by intent and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Assault	474	507	708	805	1,173	1,000	1,022	657	700	31%	36 (NL)
Legal intervention	23	25	24	36	46	25	33	57	36	3%	3 (NL)
Suicide	73	56	74	68	73	83	54	69	80	3%	1 NL
Undetermined	112	122	157	179	176	187	167	147	81	7%	<1 (NL)
Unintentional	859	951	983	1,208	1,299	1,103	1,102	1,240	1,228	58%	41

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 51a. Percentage of respondents who reported a firearm in their home, Ohio, 2010*

	N	Percent	95% CI
Overall	1,838	36.6	(34.8-38.4)
Sex			
Male	903	43.2	(40.2-46.3)
Female	935	30.7	(28.6-32.8)
Age			
18-24 yrs	30	32.6	(21.3-44.0)
25-34 yrs	124	32.6	(27.1-38.0)
35-44 yrs	275	38.7	(34.5-43.0)
45-54 yrs	398	37.2	(33.8-40.7)
55-64 yrs	478	38.8	(35.6-42.1)
65 or older yrs	533	35.5	(32.6-38.3)
Household Poverty Status			
Below poverty	97	24.7	(18.9-30.4)
Above poverty < 200%	307	34.9	(30.8-39.0)
Above poverty ≥ 200%	1,239	39.9	(37.6-42.2)
Missing household income	194	32.5	(26.9-38.0)
County Urbanality			
Metropolitan	909	28.4	(26.2-30.7)
Suburban	344	39.8	(35.4-44.2)
Rural	228	43.7	(38.4-49.0)
Appalachian	340	52.5	(47.5-57.5)

*Source: Behavioral Risk Factor Surveillance System (BRFSS)

Ohio Violence and Injury Prevention Program, Ohio Department of Health

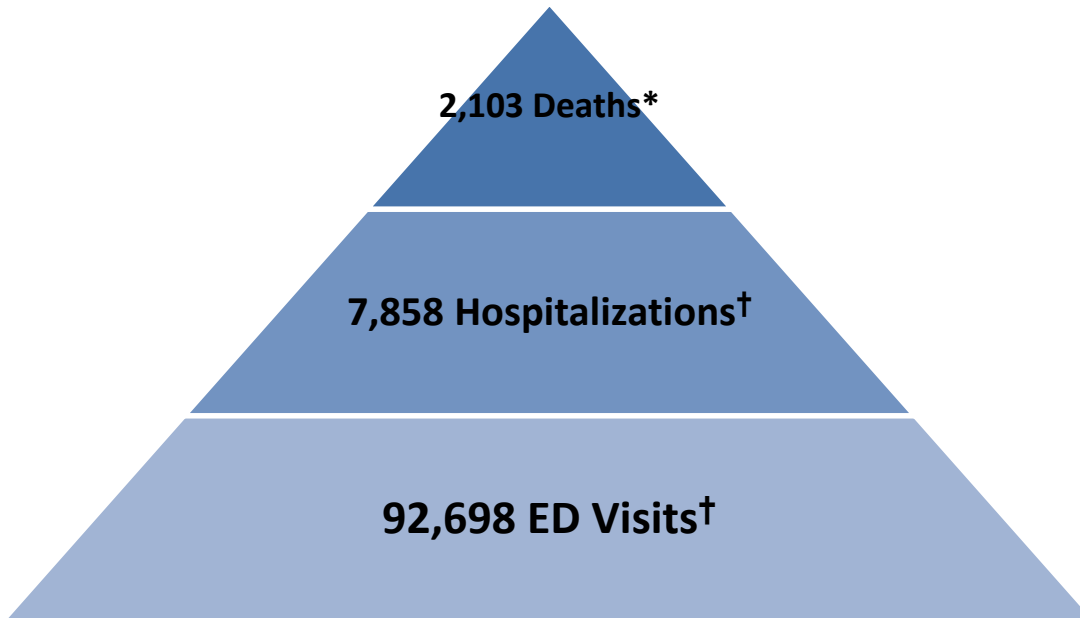
Table 51b. Percentage of respondents who reported an unlocked firearm in their home among those who have a firearm, Ohio, 2010

	N	Percent	95% CI
Overall	903	45.8	(42.6-48.9)
Sex			
Male	500	50.3	(45.7-55.0)
Female	403	39.9	(35.8-44.0)
Age			
18-24 yrs	10	+	(7.8-44.9)
25-34 yrs	52	43.6	(33.3-53.8)
35-44 yrs	98	37.0	(29.9-44.1)
45-54 yrs	197	50.9	(44.9-56.9)
55-64 yrs	249	51.6	(46.0-57.1)
65 or older yrs	297	55.7	(50.4-61.1)
Household Poverty Status			
Below poverty	38	38.9	(25.4-52.4)
Above poverty < 200%	143	43.5	(36.0-51.0)
Above poverty ≥ 200%	627	46.9	(43.1-50.7)
Missing household income	95	47.7	(36.7-58.7)
County Urbanality			
Metropolitan	438	45.2	(40.5-49.9)
Suburban	179	47.5	(40.3-54.7)
Rural	109	46.0	(37.6-54.5)
Appalachian	169	43.5	(37.0-49.9)

*Source: Behavioral Risk Factor Surveillance System (BRFSS)

+Suppressed due to less than 20 respondents

SECTION 5: TRAUMATIC BRAIN INJURIES (TBIs)



CHAPTER HIGHLIGHTS:

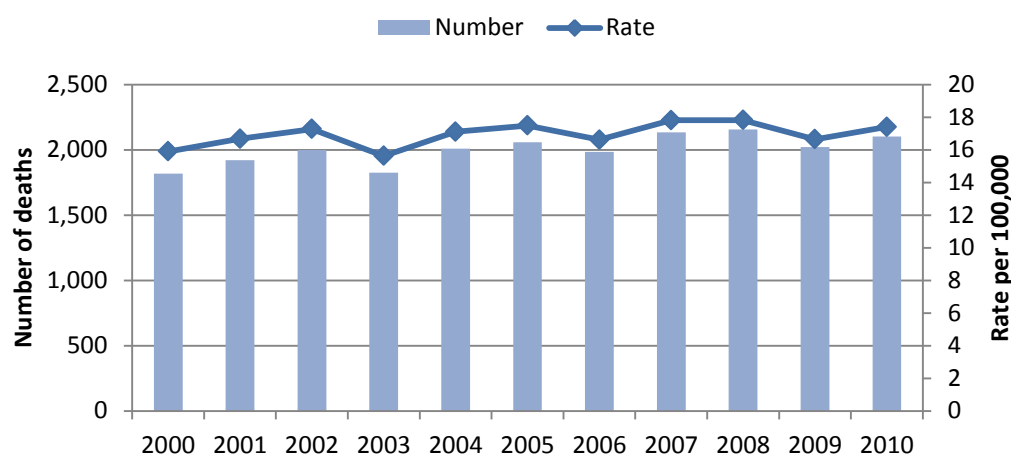
Patterns:

- Males were more likely to experience fatal and non-fatal TBI than females.
- Highest rates of fatal and non-fatal TBIs were found among ages 85 or older.
- Falls were the most common causes of fatal and non-fatal TBIs.

Trends:

- Rates of fatal TBIs did not change over time.
- TBI related hospitalizations increased from 2002-2007 then decreased from 2007-2010.
- ED visit rates increased 78 percent in 2002-2010.
- Largest increases in fatal and non-fatal TBI rates were found among adults ages 85 or older.
- Fatal and non-fatal fall related TBI rates have increased while motor vehicle traffic crash related TBI rates have decreased.

Figure 14.1. Number and age adjusted death rate for traumatic brain injuries by year, Ohio, 2000-2010



Source: Ohio Department of Health, Vital Statistics

DEATHS:

Approximately 2,100 Ohioans died from a traumatic brain injury (TBI) in 2010. The death rate was 17.4 per 100,000 (Figure 14.1). Rates were 3 times higher among males (27.4 per 100,000) than females (8.7 per 100,000). Among both males and females, the highest rates of deaths occurred among adults ages 75 or older (Figure 14.2). The highest rates of TBI deaths occurred among blacks (19.4 per 100,000) followed by whites (17.0 per 100,000), other races (12.1 per 100,000) and Hispanics (11.6 per 100,000). See Table 14.1 for TBI risk profile. The most common mechanisms associated with TBI deaths were falls (28 percent), suicides (27 percent), motor vehicle traffic crashes (21 percent), and homicides (10 percent).

Table 14.1 Traumatic Brain Injury Death Risk Profile		
	2010 At Risk Groups	Annual Trend since 2000
Overall		Inconsistent trend
Sex	Males	Inconsistent trend
Age	75 or older	85 or older (largest increase)
Race and ethnicity	Blacks	Inconsistent trends

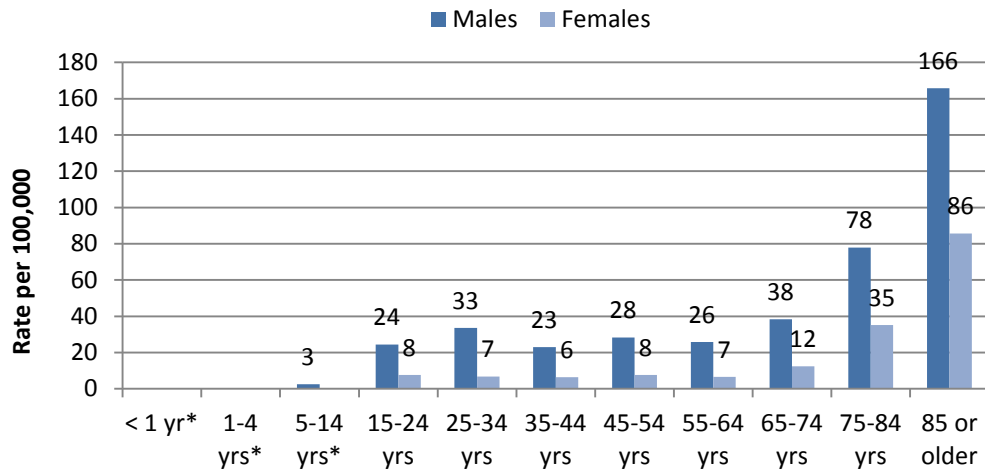
TRENDS:

TBI death rates did not follow a consistent linear trend over the study period. Inconsistent trends were also found among males, females, all race and ethnic groups. Consistent trends were found among some age groups with the largest increases found among older adults. Rates increased on average by 5 deaths per 100,000 per year among adults ages 85 or older and 1 death per 100,000 per year among ages 75-84. The number of TBI deaths associated with falls (37 per year) and suicide (10 per year) increased while the number of deaths associated with motor vehicle traffic crashes decreased (-20 per year) (Figure 14.3). See Tables 52a-

Ohio Violence and Injury Prevention Program, Ohio Department of Health

c located at the end of this section for more detailed information on the number and rate of TBI deaths in Ohio.

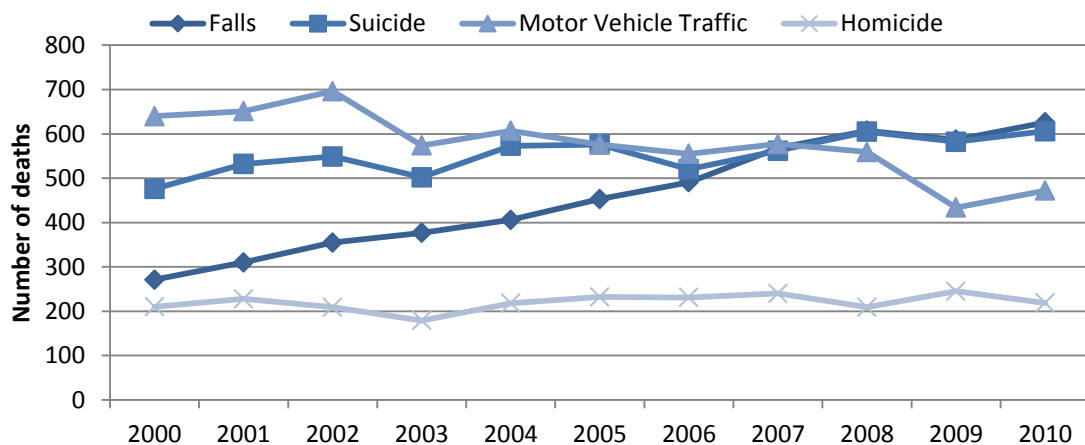
Figure 14.2. Traumatic brain injury fatality rates by age and sex, Ohio, 2010



Source: Ohio Department of Health, Office of Vital Statistics

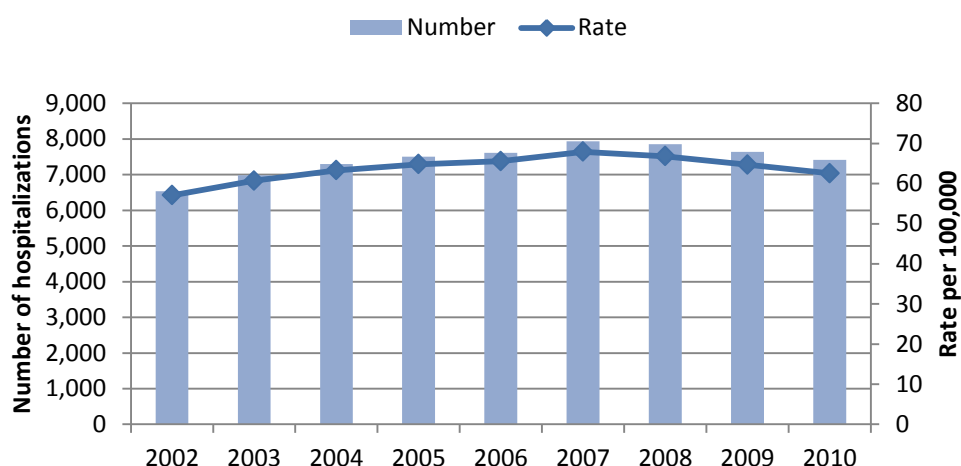
*Data suppressed due to less than 20 deaths

Figure 14.3. Number of traumatic brain injury deaths by mechanism and year, Ohio, 2000-2010



Source: Ohio Department of Health, Office of Vital Statistics

Figure 14.4. Number and age adjusted rate for traumatic brain injury related hospitalizations by year, Ohio, 2002-2010



Source: Ohio Hospital Association

HOSPITALIZATIONS:

In 2010, approximately 7,900 hospitalizations were associated with traumatic brain injuries (TBI). The hospitalization rate was 62.5 per 100,000 (Figure 14.4). The rate was 2 times higher among males (90 per 100,000) than females (43 per 100,000). For both males and females, the highest hospitalization rates were found among ages 75 or older (Figure 14.5). See Table 14.2 for a TBI hospitalization risk profile. The most common mechanisms associated with TBI were falls (26 percent) and motor vehicle crashes (21 percent). In addition, 40 percent of hospitalizations did not have external cause of injury listed.

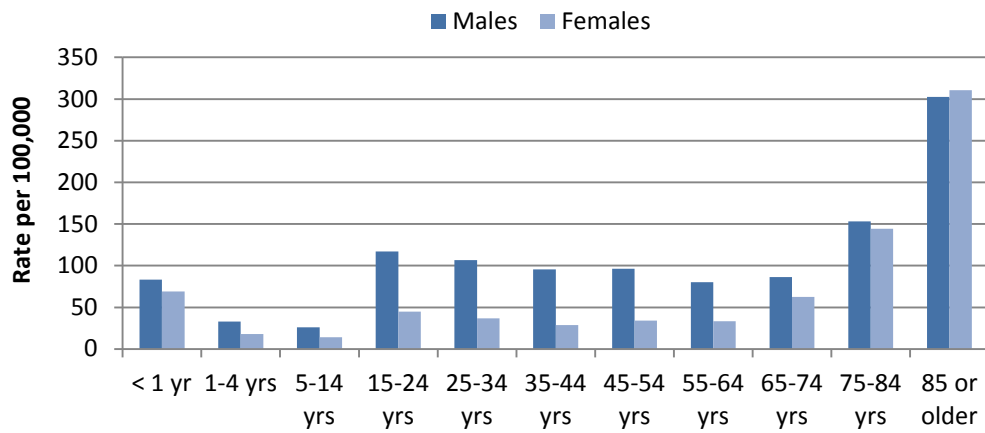
Table 14.2 TBI Hospitalization Risk Profile

	2010 At Risk Groups	Annual Trend Since 2002
Overall		Increased then decreased
Sex	Males	Increased then decreased
Age	75 or older	85 or older (largest increase)

TRENDS:

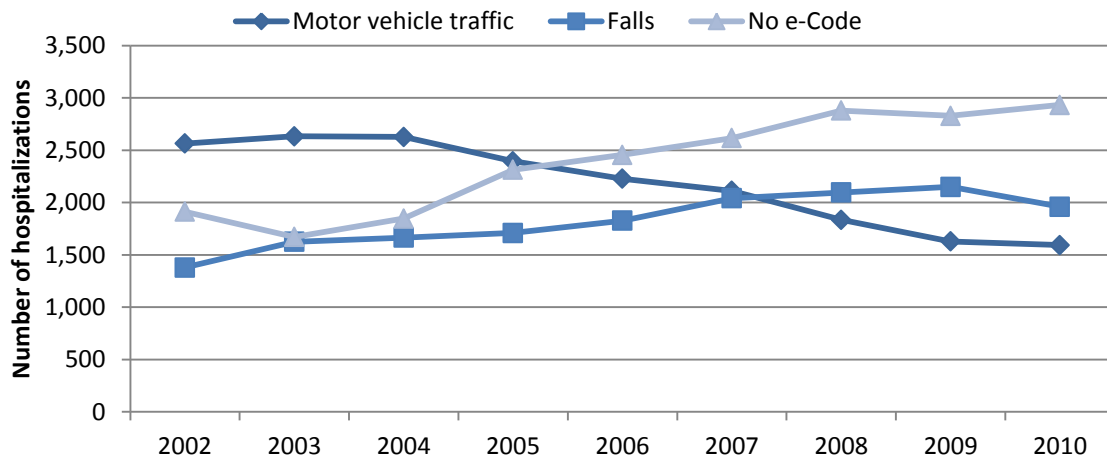
Hospitalization rates appeared to increase in 2002-2007 then decrease in 2007-2010. Rates among males followed the same pattern while rates among females increased in 2002-2008 then decreased in 2008-2010. Trend patterns varied by age group. A decrease in rates was found among ages 5-14 (1 per 100,000 per year) and ages 15-24 (2 per 100,000 per year) while an increase was found among ages 45 or older. The largest annual increase was found among adults ages 85 or older (14 per 100,000 per year). The mechanisms of TBI related hospitalizations shifted between 2002 and 2010. The number of hospitalizations associated with motor vehicle traffic crashes decreased by 146 per year while the number of hospitalizations associated with falls and without an external cause of injury code increased by 85 per year and 165 per year, respectively (Figure 14.6). See Tables 53a-c located at the end of this section for more detailed information about TBI related hospitalizations in Ohio.

Figure 14.5. Hospitalization rates for traumatic brain injuries by sex and age, Ohio, 2010



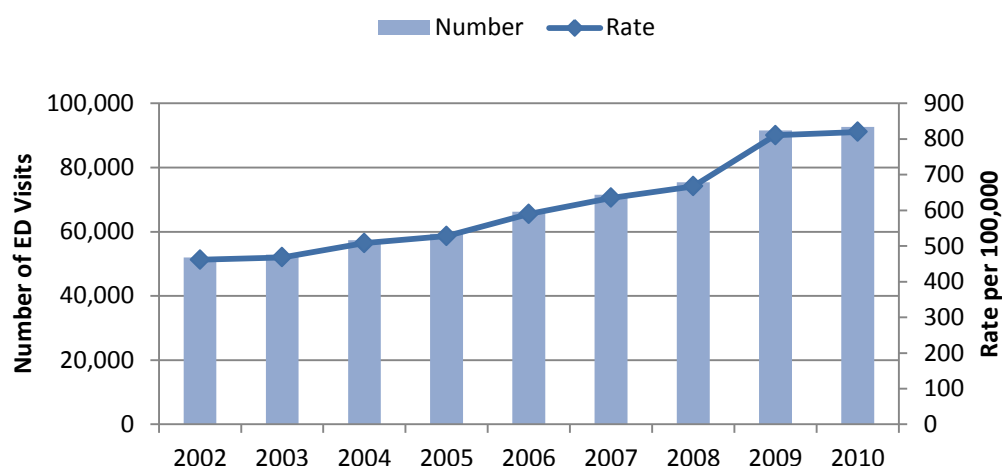
Source: Ohio Hospital Association

Figure 14.6. Number of hospitalizations resulting from traumatic brain injuries, by mechanism and year, Ohio, 2002-2010



Source: Ohio Hospital Association

Figure 14.7. Number and age adjusted rate for traumatic brain injury related ED visits by year, Ohio, 2002-2010



Source: Ohio Hospital Association

EMERGENCY DEPARTMENT VISITS:

Nearly 93,000 emergency department (ED) visits were associated with traumatic brain injuries (TBI) in 2010. The ED visit rate was 820 per 100,000 (Figure 14.7). Overall, males were more likely to experience a TBI related ED visit than females (886 versus 747 per 100,000). However, this pattern changed by age group. Among ages 54 or younger, ED visit rates were higher among males compared to females while rates were higher among females compared to males among ages 55 or older. For both males and females, TBI related ED visits followed a bimodal age distribution with the highest rates of ED visits found among infants less than 1 year of age and adults ages 85 or older (Figure 14.8). See Table 14.3 for TBI ED visit risk profile. The most common mechanisms associated with ED visits were falls (36 percent), being struck by or against (14 percent), and motor vehicle traffic crashes (11 percent). In addition, 23 percent of TBI related ED visits did not have an external cause of injury code.

Table 14.3 TBI ED Visit Risk Profile

	2010 At Risk Groups	Annual Trend Since 2002
Overall		+78%
Sex	Males	Similar for males and females
Age	85 or older	85 or older (largest increase)

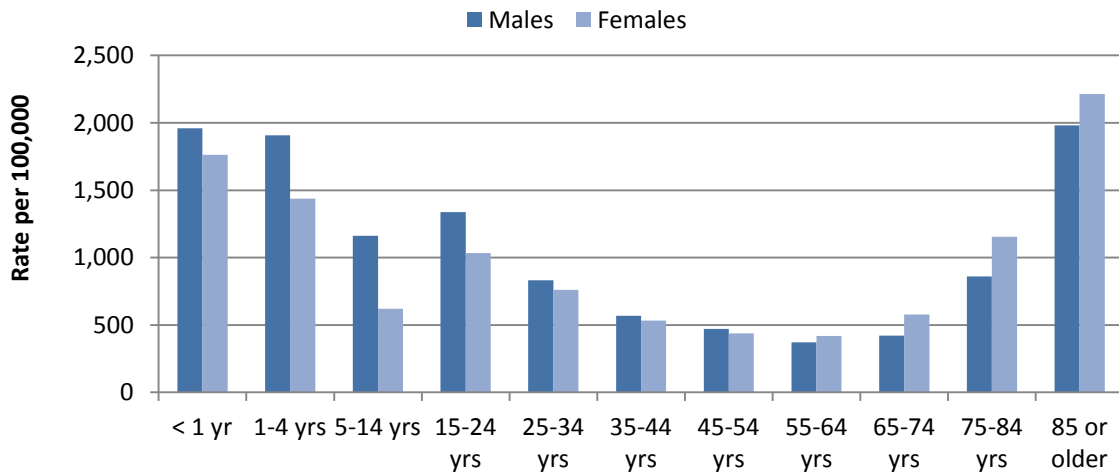
TRENDS:

Rates of TBI related ED visits increased 78 percent from 461 per 100,000 in 2002 to 820 per 100,000 in 2010. The average annual increase was 53 per 100,000 per year. The increase in rates was similar for both males and females. Rates increased among all age groups with the largest increase found among adults ages 85 or older (180 per 100,000 per year). The distribution of ED visits by mechanism shifted during the study period. Increases in the number of ED visits were found among falls (2,755 per year), being struck by or against (927 per year), sports or recreation activities (360 per year) and motor vehicle traffic crashes (334 per year) (Figure

Ohio Violence and Injury Prevention Program, Ohio Department of Health

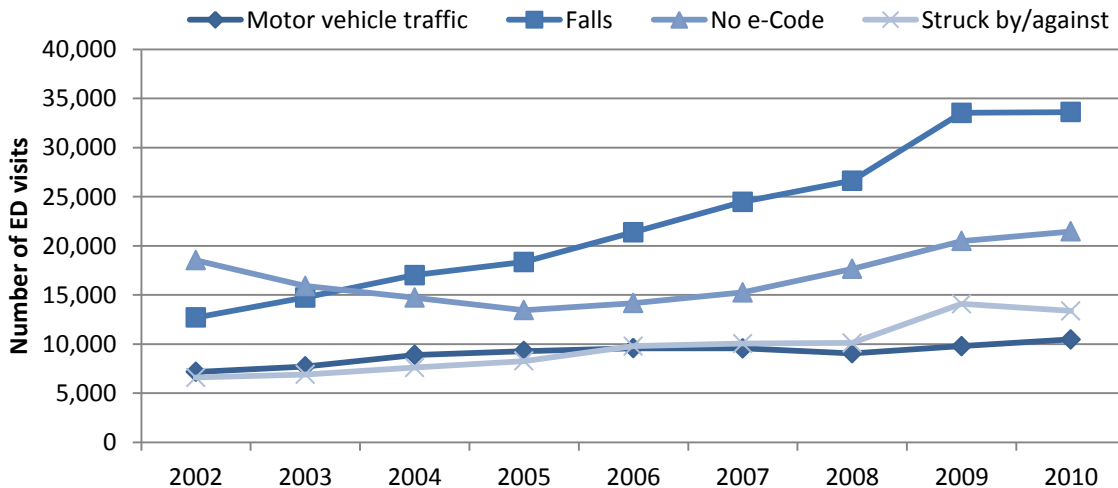
14.9). The number of ED visits without an external cause code appeared to decrease in 2002-2005 then increase in 2005-2010. See Tables 54a-c located at the end of this section for more detailed information on the number and rate of TBI related ED visits.

Figure 14.8. ED visit rates for traumatic brain injuries by age and sex, Ohio, 2010



Source: Ohio Hospital Association

Figure 14.9. Number of ED visits resulting from traumatic brain injuries, by mechanism and year, Ohio, 2002-2010



Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 52a. Number of deaths resulting from traumatic brain injuries, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Overall	1,818	1,921	1,999	1,825	2,009	2,060	1,986	2,136	2,156	2,022
Sex										
Males	1,331	1,420	1,471	1,309	1,488	1,512	1,420	1,569	1,581	1,491
Females	487	501	528	516	521	548	566	567	575	531
Age										
< 1 yr	6.0	8.5	6.8	6.8	6.7	6.8	6.1	7.3	10.1	10.1
1-4 yrs	4.3	4.7	3.5	4.5	2.8	3.9	2.2	4.4	4.1	4.7
5-14 yrs	4.5	3.1	3.5	2.1	2.7	3.2	3.0	1.7	2.1	2.1
15-24 yrs	21.8	20.8	20.3	19.0	22.3	17.9	19.3	20.9	17.1	15.4
25-34 yrs	16.5	17.1	18.5	16.1	17.2	18.3	17.4	17.4	18.1	15.4
35-44 yrs	16.4	16.6	16.8	13.7	14.8	17.1	11.8	15.5	15.3	15.5
45-54 yrs	12.9	16.7	17.4	14.4	18.1	17.9	17.7	17.5	18.1	17.5
55-64 yrs	13.8	16.4	15.2	15.4	17.1	17.8	16.3	17.4	18.3	17.7
65-74 yrs	19.0	19.5	22.9	20.2	21.8	22.8	22.2	23.9	23.9	21.4
75-84 yrs	38.0	43.7	40.7	40.9	47.1	48.3	48.4	49.8	52.9	48.4
85 or older	70.9	65.7	91.5	95.2	74.3	86.9	102.5	113.4	119.4	110.6
Race and ethnicity										
White‡	270	253	250	234	270	206	215	244	188	180
Black‡	6	9	7	5	5	8	5	8	12	9
Hispanic	14	20	12	19	15	14	8	18	17	17
Other‡	63	36	41	24	33	42	36	20	24	22

‡Non-Hispanic

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 52b. Death rates per 100,000 resulting from traumatic brain injuries, by year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	15.9	16.7	17.3	15.6	17.1	17.5	16.6	17.8	17.8	16.6	17.4	0.12 (NL)
Sex†												
Males	25.2	26.7	27.8	24.6	27.3	27.8	25.9	28.6	28.8	26.9	27.1	0.18 (NL)
Females	7.8	8.0	8.4	8.0	8.1	8.4	8.4	8.4	8.4	7.8	8.7	0.04 (NL)
Age												
< 1 yr	6.0	8.5	6.8	6.8	6.7	6.8	6.1	7.3	10.1	10.1	12.2	0.44
1-4 yrs	4.3	4.7	3.5	4.5	2.8	3.9	2.2	4.4	4.1	4.7	4.3	0.01 (NL)
5-14 yrs	4.5	3.1	3.5	2.1	2.7	3.2	3.0	1.7	2.1	2.1	1.4	-0.22
15-24 yrs	21.8	20.8	20.3	19.0	22.3	17.9	19.3	20.9	17.1	15.4	16.1	-0.54
25-34 yrs	16.5	17.1	18.5	16.1	17.2	18.3	17.4	17.4	18.1	15.4	20.0	0.12 (NL)
35-44 yrs	16.4	16.6	16.8	13.7	14.8	17.1	11.8	15.5	15.3	15.5	14.6	-0.16 (NL)
45-54 yrs	12.9	16.7	17.4	14.4	18.1	17.9	17.7	17.5	18.1	17.5	17.8	0.32 (NL)
55-64 yrs	13.8	16.4	15.2	15.4	17.1	17.8	16.3	17.4	18.3	17.7	15.9	0.25 (NL)
65-74 yrs	19.0	19.5	22.9	20.2	21.8	22.8	22.2	23.9	23.9	21.4	24.4	0.41
75-84 yrs	38.0	43.7	40.7	40.9	47.1	48.3	48.4	49.8	52.9	48.4	52.7	1.34
85 or older	70.9	65.7	91.5	95.2	74.3	86.9	102.5	113.4	119.4	110.6	110.8	4.80
Race and ethnicity†												
White‡	15.4	16.2	17.1	15.3	16.8	16.9	16.0	17.4	17.6	16.4	17.0	0.13 (NL)
Black‡	20.1	21.4	18.1	18.7	19.3	21.1	21.7	20.6	19.5	19.4	19.8	0.01 (NL)
Hispanic	16.9	13.8	18.0	19.7	13.1	16.2	12.7	16.3	17.9	9.7	11.6	-0.46 (NL)
Other‡	*	*	*	*	*	*	*	*	*	*	12.1	*

†Rates age-adjusted to 2000 U.S. standard population

*Suppressed due to less than 20 deaths

‡Non-Hispanic

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Department of Health, Office of Vital Statistics

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 52c. Number of deaths resulting from traumatic brain injuries, by mechanism and year, Ohio, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
MV traffic	640	651	696	574	607	576	555	577	559	434	472	21.3%	-20
Falls	271	310	355	377	406	453	491	568	607	587	626	28.3%	37
Pedestrian	83	78	62	73	66	76	74	83	73	70	68	3.1%	-<1 (NL)
Pedal cycle	17	13	15	7	14	11	12	11	10	12	8	0.4%	*
Homicide	210	228	209	179	218	232	231	240	209	245	219	9.9%	2
Suicide	476	532	549	502	573	576	520	562	605	582	606	27.4%	10

Source: Ohio Department of Health, Office of Vital Statistics

NL: Interpret with caution because trend does not follow linear pattern

*Suppressed due to less than 20 deaths

Table 53a. Number of hospitalizations resulting from traumatic brain injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	7,200	7,439	7,669	7,897	8,095	8,422	8,293	8,097	7,858
Sex									
Males	4,702	4,804	4,956	5,158	5,305	5,545	5,325	5,171	5,039
Females	2,498	2,635	2,713	2,739	2,790	2,877	2,968	2,926	2,819
Age									
< 1 yr	126	147	126	144	125	133	143	130	106
1-4 yrs	202	168	191	193	170	165	166	184	149
5-14 yrs	524	531	501	441	477	427	419	372	308
15-24 yrs	1,581	1,528	1,533	1,599	1,637	1,536	1,360	1,376	1,292
25-34 yrs	984	997	1,054	1,023	1,071	1,152	1,046	1,018	1,010
35-44 yrs	1,045	1,096	1,130	1,117	1,118	1,093	1,058	1,021	917
45-54 yrs	845	902	953	1,009	1,056	1,210	1,194	1,138	1,128
55-64 yrs	504	561	576	646	705	714	788	753	812
65-74 yrs	437	471	471	520	494	582	584	606	625
75-84 yrs	558	608	678	703	714	791	869	810	801
85 or older	394	430	456	502	528	619	666	689	710

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 53b. Hospitalization rates per 100,000 resulting from traumatic brain injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	62.9	64.7	66.6	68.2	69.8	72.1	70.6	68.7	66.4	0.6 (NL)
Sex†										
Males	85.9	87.5	89.9	93.6	95.5	100.0	95.7	92.8	90.3	0.86 (NL)
Females	40.7	42.4	43.5	43.8	44.1	45.1	45.9	44.7	42.8	0.35 (NL)
Age										
< 1 yr	85.6	99.7	84.4	98.3	84.4	87.7	93.7	88.0	76.2	-1.08 (NL)
1-4 yrs	33.6	28.1	32.1	32.5	29.0	28.1	28.1	31.1	25.6	-0.59 (NL)
5-14 yrs	32.4	33.2	31.7	28.4	31.1	28.2	28.0	24.9	20.2	-1.36
15-24 yrs	99.9	95.8	96.1	100.4	103.5	97.6	86.5	87.9	81.4	-1.99
25-34 yrs	66.7	68.0	72.1	70.2	73.5	78.8	71.5	68.9	71.6	0.50 (NL)
35-44 yrs	59.9	64.2	67.4	67.8	68.9	68.6	68.0	67.2	62.0	0.32 (NL)
45-54 yrs	51.3	53.9	56.2	58.7	60.8	69.2	68.2	64.9	64.7	2.02
55-64 yrs	46.5	49.8	49.3	53.2	56.1	55.0	59.1	54.3	55.9	1.21
65-74 yrs	56.6	61.3	61.4	67.9	64.2	74.4	72.3	72.5	73.5	2.16
75-84 yrs	100.9	109.4	122.0	126.8	129.9	145.7	162.4	149.4	148.0	6.80
85 or older	208.6	219.4	227.5	242.5	245.8	278.2	291.3	303.0	308.1	13.53

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

NL: Interpret with caution because trend does not follow linear pattern

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 53c. Number of hospitalizations resulting from traumatic brain injuries by mechanism and year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Motor vehicle traffic	2564	2,633	2,626	2,395	2,228	2,112	1,835	1,628	1,593	21%	-146
Motor vehicle non traffic	341	369	375	361	366	411	341	365	278	4%	-5 (NL)
Pedal cycle	128	148	161	162	168	190	184	172	141	2%	3 (NL)
Pedestrian	200	220	206	216	224	166	180	160	158	2%	-8
Falls	1379	1,626	1,665	1,709	1,827	2,042	2,097	2,150	1,960	26%	85
Assaults	573	657	696	662	734	763	722	723	627	8%	11 (NL)
Struck by/against	188	192	156	165	219	189	168	167	159	2%	-2 (NL)
Sports and recreation	99	109	90	77	102	92	92	89	84	1%	1 (NL)
Suicide	60	62	75	61	64	78	68	69	66	1%	-2 (NL)
No e-Code	1,913	1,672	1,847	2,313	2,456	2,616	2,879	2,829	2,933	40%	165

*Mechanisms not mutually exclusive

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 54a. Number of ED visits resulting from traumatic brain injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Overall	51,953	52,878	57,329	59,416	66,250	71,562	75,400	91,576	92,698
Sex									
Males	29,991	30,036	32,812	33,364	37,326	39,839	40,872	48,493	48,515
Females	21,962	22,842	24,517	26,052	28,924	31,723	34,528	43,083	44,183
Age									
< 1 yr	1,830	1,698	1,831	1,858	2,162	2,187	2,329	2,858	2,591
1-4 yrs	6,614	6,114	6,277	6,302	7,535	7,562	7,937	10,607	9,758
5-14 yrs	9,611	8,923	9,254	9,258	10,315	10,832	10,544	14,191	13,659
15-24 yrs	12,009	12,241	13,337	13,871	15,185	15,927	15,752	19,097	18,847
25-34 yrs	6,082	6,287	7,150	7,730	8,060	8,808	9,363	10,649	11,224
35-44 yrs	5,269	5,466	6,066	6,103	6,479	6,902	7,426	7,946	8,144
45-54 yrs	3,434	4,009	4,502	4,907	5,379	6,057	6,912	7,631	7,910
55-64 yrs	1,966	2,318	2,570	2,783	3,174	3,826	4,345	5,260	5,740
65-74 yrs	1,564	1,851	1,951	1,977	2,351	2,719	3,193	3,997	4,304
75-84 yrs	2,148	2,360	2,664	2,713	3,245	3,813	4,216	5,094	5,592
85 or older	1,426	1,611	1,727	1,914	2,365	2,929	3,383	4,246	4,929

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 54b. ED visit rates per 100,000 resulting from traumatic brain injuries by year, Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Trend (per yr)
Overall†	461.2	468.3	508.3	527.6	589.6	634.9	667.3	810.4	819.8	52.6
Sex†										
Males	540.3	540.9	591.8	603.3	677.4	723.9	743.3	883.8	885.5	53.0
Females	378.8	391.4	420.6	447.7	496.1	540.5	585.6	729.3	746.7	51.8
Age										
< 1 yr	1,243.4	1,152.0	1,226.8	1,268.2	1,459.1	1,442.5	1,526.4	1,934.7	1,863.5	99.3
1-4 yrs	1,099.1	1,022.3	1,054.0	1,060.4	1,283.5	1,286.3	1,342.6	1,792.3	1,677.2	96.2
5-14 yrs	595.0	558.2	586.0	595.8	672.0	715.0	704.5	949.6	897.1	49.1
15-24 yrs	758.9	767.5	835.8	870.8	959.9	1,011.6	1,002.2	1,220.3	1,187.7	66.7
25-34 yrs	412.2	428.8	489.4	530.4	553.4	602.8	639.8	720.4	796.1	51.8
35-44 yrs	301.8	320.3	362.0	370.4	399.4	433.1	477.3	522.8	550.3	36.0
45-54 yrs	208.6	239.7	265.4	285.7	309.7	346.6	394.7	435.0	454.0	34.5
55-64 yrs	181.5	206.0	219.9	229.3	252.5	294.6	326.0	379.5	395.2	30.1
65-74 yrs	202.7	240.8	254.2	258.1	305.6	347.6	395.6	478.2	506.2	41.0
75-84 yrs	388.3	424.5	479.3	489.5	590.5	702.4	788.0	939.7	1,033.0	86.6
85 or older	754.9	822.1	861.5	924.8	1,100.9	1,316.3	1,479.6	1,867.0	2,139.1	179.9

†Rates are age adjusted to 2000 U.S. standard population

Source: Ohio Hospital Association

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 54c. Number of ED visits resulting from traumatic brain injuries by mechanism* and year, Ohio, 2002-2010

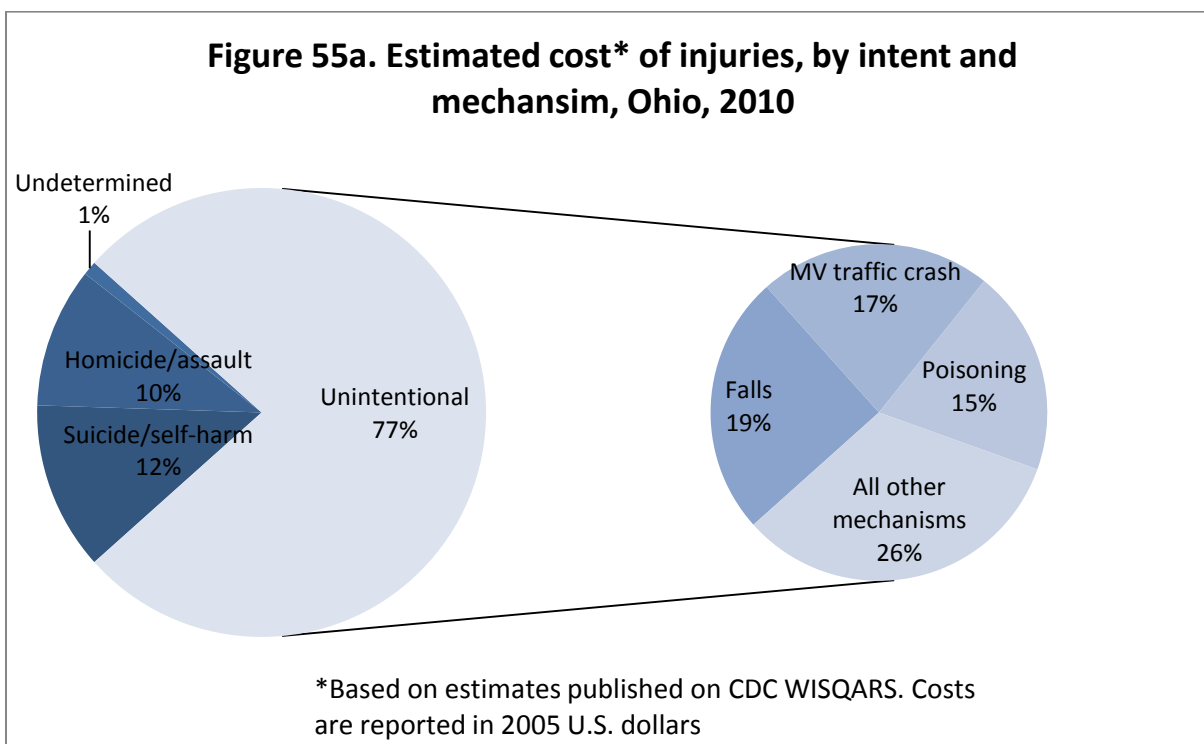
	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Trend (per yr)
Mechanism of TBI											
Motor vehicle traffic	7,169	7,714	8,899	9,277	9,575	9,567	9,059	9,788	10,467	11%	334
Motor vehicle non-traffic	1,829	1,980	2,335	2,367	2,438	2,672	2,475	2,987	2,786	3%	124
Pedal cycle	1,097	1,116	1,274	1,271	1,367	1,574	1,414	1,746	1,553	2%	72
Pedestrian	335	347	357	379	334	429	401	370	404	0%	8 (NL)
Falls	12,707	14,742	17,015	18,346	21,375	24,480	26,624	33,523	33,605	36%	2755
Assaults	3,862	4,356	5,363	6,036	7,083	7,475	7,455	8,230	8,427	9%	592
Struck by/against	6,602	6,911	7,603	8,279	9,789	10,048	10,105	14,086	13,369	14%	927
Sports and recreation	2,596	2,686	2,955	3,138	5,242	4,123	4,024	5,715	4,944	5%	360
No e-Code	18,535	15,918	14,724	13,448	14,168	15,262	17,650	20,482	21,470	23%	552 (NL)

*Mechanisms not mutually exclusive

NL: Interpret with caution because trend does not follow linear pattern

Source: Ohio Hospital Association

SECTION 6: ECONOMIC BURDEN OF INJURIES



ECONOMIC BURDEN:

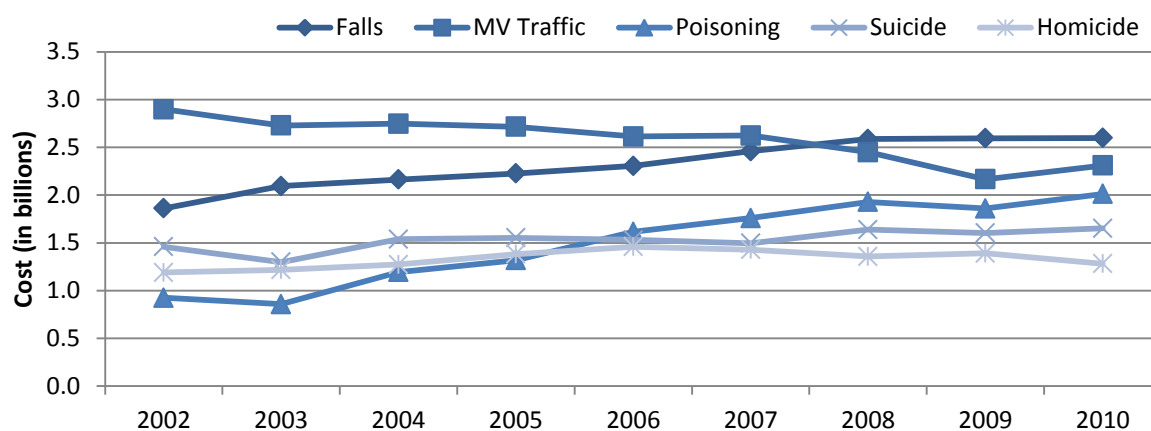
Injuries cost Ohio an estimated \$13.4 billion or \$1,163 per resident in 2010. Fatal injuries cost \$6.7 billion which includes \$76 million associated with medical care and \$6.6 billion related to work loss. Hospitalizations resulting from injuries cost \$3.0 billion which includes \$900 million in medical care and \$2.1 billion associated with work loss. ED visits associated with injuries cost \$3.7 billion which includes \$800 in medical care and \$2.9 billion in work loss.

Unintentional injuries were associated with the largest share of injury cost at \$10.3 billion or 77 percent. Other injuries making a significant contribution to the cost of injuries were suicide and self-harm behaviors (\$1.7 billion or 12 percent) and homicides and assaults (\$1.3 billion or 10 percent). Approximately \$135 million was associated with undetermined intents and 29 million (less than 1 percent) resulted from legal interventions (see Figure 55a).

Among unintentional injuries, mechanisms associated with highest costs were falls (\$2.6 billion or 19 percent), motor vehicle traffic crashes (\$2.3 billion or 17 percent), and poisoning (\$2.0 billion or 15 percent). Other mechanisms making significant contributions to the cost of injuries were burns (\$212 million), pedestrian (\$183 million), suffocation (\$152 million), pedal cycling (\$138 million), and drowning (\$117 million) (see Figure 55a). Of note, the cost for a substantial percentage of hospitalizations (38 percent) and ED visits (25 percent) is unknown because the injuries do not have an external cause code. This limitation leads to an underestimate in the true cost of injuries by mechanism in Ohio.

In addition to unintentional mechanisms, significant costs were associated with traumatic brain injuries and firearms. Traumatic brain injuries were associated with \$3.2 billion and firearms were associated with \$1.4 billion in 2010.

Figure 55b. Costs (in billions)* associated with injury deaths, hospitalizations, and ED visits, by mechanism and year, Ohio, 2002-2010



*Based on estimates published on CDC WISQARS. Costs are reported in 2005 U.S. dollars

TRENDS:

The cost of injuries has increased 21 percent from \$11 billion in 2002 to \$13.4 in 2010. The increase in the cost of injuries has largely been driven by costs associated with deaths and emergency department visits. Costs associated with deaths increased 20 percent from \$5.6 billion in 2002 to \$6.7 billion in 2010. ED visits increased 43 percent from \$2.6 billion in 2002 to \$3.7 billion in 2010. Costs associated with hospitalizations remained similar (see Figure 55b).

Costs associated with unintentional injuries increased 25 percent from 8.2 billion in 2002 to \$10.3 billion in 2010. Costs associated with intentional injuries increased 11 percent from \$2.6 billion in 2002 to \$2.9 billion in 2010 while costs associated with undetermined intents and legal interventions increased 31 percent and 33 percent respectively.

Among the leading causes of injuries, increases in costs were found among unintentional poisonings (117 percent), falls (40 percent), suicide/self-harm (12 percent), and homicides/assaults (10 percent). In contrast, decreases in costs were found among motor vehicle traffic crashes (20 percent), drowning (9 percent), pedestrian injuries (7 percent), burns (5 percent), and pedal cycle injuries (1 percent).

Costs associated with traumatic brain injuries increased 22 percent from \$2.6 billion in 2002 to \$3.2 billion in 2010 while costs associated with firearms increased 7 percent from \$1.3 billion in 2002 to \$1.4 in 2010. See table 55a for more detailed information on costs associated with injuries in Ohio.

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Table 55a. Total costs* (in millions) associated with injury deaths, hospitalizations, and ED visits in Ohio, 2002-2010

	2002	2003	2004	2005	2006	2007	2008	2009	2010	% in 2010	Change 02-10
Total costs	11,002	11,054	11,843	12,173	12,729	12,842	13,165	12,793	13,358		21%
Unintentional											
All unintentional	8,228	8,432	8,903	9,132	9,610	9,821	10,028	9,614	10,261	77%	25%
Falls	1,861	2,094	2,163	2,226	2,306	2,460	2,586	2,595	2,598	25%	40%
Motor Vehicle Traffic	2,898	2,729	2,748	2,716	2,614	2,623	2,449	2,166	2,310	23%	-20%
Poisoning	925	859	1,194	1,318	1,615	1,760	1,929	1,854	2,012	20%	117%
Burns	193	193	175	184	204	197	200	181	183	2%	-5%
Pedestrian	229	223	247	236	240	247	226	215	212	2%	-7%
Pedal Cycle	140	133	137	141	154	164	172	165	138	1%	-1%
Suffocation	133	151	179	146	171	147	183	183	153	1%	15%
Drowning	128	116	112	122	115	129	139	105	117	1%	-9%
Intentional											
All intentional	2,649	2,516	2,811	2,935	2,991	2,926	2,997	2,995	2,934	22%	11%
Self-harm and suicide	1,459	1,298	1,538	1,553	1,531	1,496	1,639	1,604	1,652	12%	13%
Assaults and homicide	1,190	1,218	1,273	1,382	1,460	1,430	1,358	1,391	1,282	10%	8%
Other Intent											
Undetermined	103	79	100	80	104	78	119	153	135	1%	31%
Legal Intervention	22	28	29	27	23	17	22	30	29	0.2%	33%
All Intents†											
Traumatic brain injury	2,634	2,600	2,770	2,852	2,919	3,097	3,125	3,196	3,207		22%
Firearm	1,317	1,226	1,297	1,411	1,402	1,364	1,391	1,412	1,412		7%
Missing e-Code (discharges only)	702	710	826	990	1,176	1,325	1,563	1,697	1,376		96%

*Costs based on estimates from the Centers for Disease Control and Prevention and reported in 2005 dollars

†Includes both intentional and unintentional mechanisms

SECTION 7: APPENDICES

APPENDIX 1: DATA SOURCES

This report uses data from behavioral risk factor surveys, hospital discharge records and death certificates to study patterns and trends in injuries among Ohio residents. The following is brief summary of each data source referenced in this report.

Cost of Injuries

The medical and work loss cost of injuries was estimated by the Centers for Disease Control and Prevention (CDC). Cost estimates for fatal and non-fatal injuries can be queried on the CDC's Web-based Injury Statistics Query and Reporting System Web (WISQARS).

http://www.cdc.gov/injury/wisqars/pdf/WISQARS_Cost_Methods-a.pdf

Death Records

Death records are maintained by ODH's Office of Vital Statistics. Death certificates provide limited information about circumstances of injury circumstances or contributing factors. Both injuries and their external causes were classified according to the 10th Revision of the International Classification of Diseases (ICD-10). See Appendix 3 for a complete list of external cause of injury codes by mechanism and intent.

<http://dwhouse.odh.ohio.gov/datawarehousev2.htm>

Hospital Discharge Records

Hospital discharge records are collected and maintained by the Ohio Hospital Association (OHA) from information provided by member hospitals. Both injuries and their external causes were classified according to the 9th Revision of the International Classification of Diseases, Clinical Modification (ICD-9-CM). For hospitalizations, a case was defined as an Ohio resident with an injury listed in the primary diagnosis field. For ED visits, a case was defined as an Ohio resident with an injury listed in the primary diagnosis field or a valid external cause of injury code any of the 15 diagnosis fields. Injury mechanisms for both hospitalizations and ED visits were based on the first listed external cause of injury. See Appendix 2 for a complete list external cause of injury codes by mechanism and intent.

<http://www.ohanet.org/>

Leading Causes of Death

The data source for WISQARS Fatal Injury Data is the National Vital Statistics System (NVSS) operated by the National Center for Health Statistics. WISQARS provides death counts and death rates for the United States and by state, county, age, race, Hispanic ethnicity, sex, and leading cause of death, injury intent, and injury mechanism categories. WISQARS can be used to query death data for the years 1999 - 2009, of which the underlying cause of death is specified using ICD-10 codes.

http://www.cdc.gov/injury/wisqars/leading_causes_death.html

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Ohio Behavioral Risk Factor Surveillance System (BRFSS)

The Ohio Behavioral Risk Factor Surveillance System (BRFSS) is a random digit dial telephone survey of non-institutionalized adults aged 18 years of older. The BRFSS has been conducted annually by the Ohio Department of Health since 1984. The survey collects information on the prevalence of health behaviors, health care usage, and disease diagnosis associated with the leading cause of disease, injury and death in the United States. Results from the survey are weighted to represent the age, sex, race, and ethnic composition of Ohio.

<http://www.odh.ohio.gov/healthstats/brfss/behrisk1.aspx>

Ohio Population Estimates

The National Center for Health Statistics releases bridged-race population estimates of the resident population of the United States for use in calculating vital rates. These estimates result from bridging the 31 race categories used in Census 2000 and Census 2010. The bridged-race population estimates are produced under a collaborative arrangement with the U. S. Census Bureau.

http://www.cdc.gov/nchs/nvss/bridged_race.htm

Ohio Pregnancy Risk Assessment Monitoring System (PRAMS)

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a population-based survey designed to examine maternal behaviors and experiences before, during and after a woman's pregnancy, and during the early infancy of her child. The Centers for Disease Control and Prevention initiated PRAMS in 1987 in an effort to reduce infant mortality and the incidence of low birth weight. PRAMS were implemented in Ohio in 1999.

<http://www.odh.ohio.gov/healthstats/pramshs/prams1.aspx>

Ohio Traffic Crash Reports

The Ohio Department of Public Safety compiles statistical data on crashes that occur on Ohio's roads and highways. Crash data is available in the form of annual reports. Users can also develop customized queries of the data online.

http://ohiohighwaysafetyoffice.ohio.gov/otso_annual_crash_facts.stm

Ohio Youth Risk Behavior Survey (YRBS)

The Ohio Youth Risk Factor Survey (YRBS) is an anonymous paper and pencil survey of high school students enrolled in public and non-public schools. The YRBS has been conducted in Ohio since 1993 and is collaborative project between the Ohio Departments of Education and Health. The survey collects information on the prevalence of health behaviors, health care usage, and disease diagnosis associated with the leading cause of disease, injury and death in the United States. Results from the survey are weighted to represent the age, sex, race, and ethnic composition of Ohio.

http://www.odh.ohio.gov/odhprograms/chss/ad_hlth/youthrsk/youthrsk1.aspx

APPENDIX 2: ANALYTIC METHODS

This analysis was limited to descriptive statistics, which were generated through the use of Statistical Analysis System (SAS) Version 9.1, Cary, N.C. The data were analyzed using injury surveillance guidelines from the Centers for Disease Control and Prevention (CDC).

Deaths:

- Injury deaths were defined as a death with the underlying cause of death listed as an injury. Traumatic brain injury deaths were defined as deaths with an injury as underlying cause of death and a traumatic brain injury listed in one of the multiple cause of death fields. See Appendix 4 for a list of ICD-10 codes for injury mechanisms and Appendix 6 for a list of mechanism subcategories.
- Deaths included in this report were restricted to Ohio residents.
- Rates were calculated by dividing the number of injuries by the number of Ohio residents. Population estimates were based on estimates from the National Center for Health Statistics. Rates were age adjusted to the 2000 U.S. standard population.

Hospitalizations:

- Discharge dataset includes nonfederal, acute care, or inpatient facilities. The dataset does not include Veterans' Affairs and other federal hospitals, rehabilitation centers, or psychiatric hospitals.
- Injury hospitalizations were defined as an inpatient visit with an injury listed in the primary discharge diagnosis field. See Appendix 5 for a list of ICD-9-CM codes for injury mechanisms and Appendix 7 for a list of mechanism subcategories.
- Datasets include readmissions, transfers, and deaths occurring in the hospital.
- Hospitalizations included in this report were restricted to Ohio residents.
- The external cause of injury code used in the analysis was the first listed cause of the discharge diagnosis fields. If the codes E000-E030, E849, E967, E869.4, E870-E879, or E930-E949 were the first listed codes then the next valid external cause code was used.
- Rates were calculated by dividing the number of injuries by the number of Ohio residents. Population estimates were based on estimates from the National Center for Health Statistics. Rates were age adjusted to the 2000 U.S. standard population.

Emergency Department Visits:

- Discharge dataset includes nonfederal, acute care, or inpatient facilities. The dataset does not include Veterans' Affairs and other federal hospitals, rehabilitation centers, or psychiatric hospitals.

Ohio Violence and Injury Prevention Program, Ohio Department of Health

- Injury ED visits were defined as an ED visit with an injury listed in the primary discharge diagnosis field or a valid external cause of injury code in any of the discharge diagnosis fields. See Appendix 5 for a complete list of ICD-9-CM codes.
- ED visits included in this report were restricted to Ohio residents.
- Persons who are treated at an ED and later admitted to a hospital are removed from the ED dataset, and therefore are not included in any analysis of ED data.
- The external cause of injury code used in the analysis was the first listed cause of the discharge diagnosis fields. If the codes E000-E030, E849, E967, E869.4, E870-E879, or E930-E949 were the first listed codes then the next valid external cause code was used.
- Rates were calculated by dividing the number of injuries by the number of Ohio residents. Population estimates were based on estimates from the National Center for Health Statistics. Rates were age adjusted to the 2000 U.S. standard population.

Trend Analysis for Deaths, Hospitalizations and Emergency Department Visits:

- Trend analysis for annual injury death, hospitalization, and ED visit rates was conducted in Microsoft Excel. Annual injury rates were plotted and a linear trend line was drawn to minimize the distance between the trend line and data point. The goodness of fit for the linear trend line was determined by the R-squared value. Linear trends were defined as a trend line with an R-squared value of 0.5 or higher. Non-linear trends were defined as a trend line with an R-squared value of less than 0.5. The slope and goodness of fit of the trend line were reported in the data tables. Non-linear trends were labeled with (NL) next to the slope.

Poverty Status and County Urbanity Classifications:

- County urbanity was derived from county of residence reported by Ohio Behavioral Risk Factor Surveillance System respondents. County urbanity classifications were based on a combination of proximity and connectedness to urban core economic development area and definitions of Appalachian counties established by the Appalachian Development Commission. See Appendix 11 for a map with county classifications.
- Poverty status was derived from household income and household composition reported by Ohio Behavioral Risk Factor Surveillance System respondents. Respondents were grouped into categories based on the 2010 Federal Poverty Guidelines. See Appendix 12 for household income and composition thresholds.

Cost of Injuries:

- Fatal Injury costs were calculated by multiplying the number of injury deaths in Ohio by the average cost associated the death for Ohio published on the CDC's

Ohio Violence and Injury Prevention Program, Ohio Department of Health

WISQARS website. See Appendix 8 for average cost estimates by mechanism and intent.

- Non-fatal injury costs for hospitalizations were calculated by multiplying the number of hospitalizations by the average cost associated with hospitalizations for the United States published on the CDC's WISQARS website. See Appendix 9 for average cost estimates by mechanism and intent.
- Non-fatal injury costs for ED visits were calculated by multiplying the number of ED visits by the average cost associated with ED visits for the United States published on the CDC's WISQARS website. See Appendix 10 for average cost estimates by mechanism and intent.
- Total injury costs were calculated by adding the estimated costs for injury deaths, hospitalizations and ED visits.

APPENDIX 3: LIMITATIONS OF INJURY SURVEILLANCE DATA

Death Certificate Data:

- The cause of death reported on the death certificate is based on the underlying cause of death determined by a physician or coroner. While physicians and coroners are well trained to investigate and determine causes of death, a standardized process for investigating and determining causes of death does not exist in Ohio. This lack of uniformity may lead to differences in how underlying causes of death are classified and pose limitations for comparing rates across local jurisdictions.

Hospital Discharge Data:

- In each year of the study period, approximately 30 percent of injuries treated in the as inpatients and emergency departments were not assigned an external cause code (E-code). This most likely resulted in an underestimate of total costs and incidence rates, because not all mechanism and intents for injuries could be identified and included in the analysis by mechanism.
- Of the non-fatally injured, only those who sought medical care were captured for this analysis.
- Discharges, not individuals, were the unit of measurement, thereby resulting in duplication when readmissions for the same initial event occurred. The inclusion of readmissions would lead to an overestimate of incidence rates.
- Race and ethnicity are largely incomplete in the hospital discharge data and were not included in the analysis.
- Ohio residents treated in out-of-state hospitals are not consistently included, thereby affecting rates, particularly of border counties.
- Severity of injury is assumed based on type of medical treatment received (i.e., inpatient treatment is for more severe injuries than ED visits).

Behavioral Risk Factor Data:

- Data from the Pregnancy Risk Assessment Monitoring System (PRAMS), Ohio Youth Risk Behavior Survey (YRBS) and Behavioral Risk Factor Surveillance System (BRFSS) are based on self-reported behaviors by respondents. The accuracy of self-reported data depends on the respondents' ability to recall and willing to report the information. Self-reported data can lead to overestimates or underestimates of the true prevalence in the population depending on the topic being asked.
- Results from Ohio YRBS represent a random sample of students enrolled in high schools in Ohio. The results do not represent high school age youth who have dropped out of school.
- Results from the Ohio BRFSS represent a random sample of non-institutionalized adults ages 18 or older in Ohio with a landline in their home. The BRFSS excludes institutionalized adults and adults living in cell phone only households.

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

APPENDIX 4: EXTERNAL CAUSE OF INJURY CODING FOR ICD-10-CM

Mechanism	Intent				
	Unintentional	Suicide	Homicide	Undetermined	Legal intervention
All injury	V01–X59, Y85–Y86	*U03, X60–X84, Y87.0	*U01–*U02, X85–Y09, Y87.1	Y10–Y34, Y87.2, Y89.9	Y35–Y36, Y89(.0,.1)
Cut or pierce	W25–W29, W45, W46	X78	X99	Y28	Y35.4
Drowning	W65–W74	X71	X92	Y21	...
Fall	W00–W19	X80	Y01	Y30	...
Fire or hot object or substance	X00–X19	X76–X77	*U01.3, X97–X98	Y26–Y27	Y36.3
Fire or flame	X00–X09	X76	X97	Y26	...
Hot object or substance	X10–X19	X77	X98	Y27	...
Firearm	W32–W34	X72–X74	*U01.4, X93–X95	Y22–Y24	Y35.0
Machinery	W24, W30–W31	...	...	...	...
All transport	V01–V99	X82	*U01.1, Y03	Y32	Y36.1
Motor vehicle traffic	[V02–V04](.1,.9), V09.2, [V12–V14](.3–.9), V19(.4–.6), [V20–V28](.3–.9), [V29–V79](.4–.9), V80(.3–.5), V81.1, V82.1, [V83–V86](.0–.3), V87(.0–.8), V89.2	...	...	...	...
Occupant	[V30–V79](.4–.9), [V83–V86](.0–.3)	...	...	...	...
Motorcyclist	[V20–V28](.3–.9), V29(.4–.9)	...	...	...	...
Pedal cyclist	[V12–V14](.3–.9), V19(.4–.6)	...	...	...	...
Pedestrian	[V02–V04](.1,.9), V09.2	...	...	...	...
Other	V80(.3–.5), V81.1, V82.1	...	...	...	...
Unspecified	V87(.0–.8), V89.2	...	...	...	...
Pedal cyclist, other	V10–V11, [V12–V14](.0–.2), V15–V18, V19(.0–.3,.8,.9)	...	...	...	...
Pedestrian, other	V01, [V02–V04](.0), V05, V06, V09(.0–.1,.3,.9)	...	...	...	...
Other land transport	[V20–V28](.0–.2), [V29–V79](.0–.3), V80(.0–.2,.6–.9), [V81–V82](.0,.2–.9), [V83–V86](.4–.9), V87.9, V88(.0–.9), V89(.0,.1,.3,.9)	X82	Y03	Y32	...
Other transport	V90–V99	...	*U01.1	...	Y36.1
Natural or environmental	W42–W43, W53–W64, W92–W99, X20–X39, X51–X57	...	...	...	...
Overexertion	X50	...	...	...	...
Poisoning	X40–X49	X60–X69	*U01(.6–.7), X85–X90	Y10–Y19	Y35.2
Struck by or against	W20–W22, W50–W52	X79	Y00, Y04	Y29	Y35.3
Suffocation	W75–W84	X70	X91	Y20	...
Other specified, classifiable	W23, W35–W41, W44, W49, W85–W91, Y85	*U03.0, X75, X81	*U01(.0,.2,.5), X96, Y02, Y05–Y07	Y25, Y31	Y35(.1,.5), Y36(.0,.2,.4–.8)
Other specified, NEC	X58, Y86	X83, Y87.0	*U01.8, *U02, Y08, Y87.1	Y33, Y87.2	Y35.6, Y89(.0–.1)
Unspecified	X59	*U03.9, X84	*U01.9, Y09	Y34, Y89.9	Y35.7, Y36.9

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

APPENDIX 5: EXTERNAL CAUSE OF INJURY CODING FOR ICD-9-CM

Mechanism or cause	Manner or intent				
	Unintentional	Suicide	Homicide	Undetermined	Other
Cut or pierce	E920(.0-.9)	E956	E966	E986	E974
Drowning or submersion	E830(.0-.9), E832(.0-.9), E910(.0-.9)	E954	E964	E984	...
Fall	E880.0-E886.9, E888	E957(.0-.9)	E968.1	E987(.0-.9)	...
Fire or burn	E890.0-E899, E924(.0-.9)	E958(.1-.2, .7)	E961, E968(.0, .3)	E988(.1-.2, .7)	...
<i>Fire or flame</i>	E890.0-E899	E958.1	E968.0	E988.1	...
<i>Hot</i>	E924(.0-.9)	E958(.2, .7)	E961, E968.3	E988(.2, .7)	...
<i>object or</i>					...
<i>substance</i>					
Firearm	E922(.0-.9)	E955(.0-.4)	E965(.0-.4)	E985(.0-.4)	E970
Machinery	E919(.0-.9)	...	...	...	...
MV traffic	E810-E819 (.0-.9)	E958.5	...	E988.5	...
<i>Occupant</i>	[E810-E819] (.0-.1)	...	...	...	...
<i>Motorcyclist</i>	[E810-E819] (.2-.3)	...	...	...	...
<i>Pedal cyclist</i>	E810-E819 (.6)	...	...	...	...
<i>Pedestrian</i>	E810-E819 (.7)	...	...	...	...
<i>Unspecified</i>	E810-E819 (.9)	...	...	...	...
Pedal cyclist, other	[E800-E807](.3), [E820-E825] (.6); E826(.1, .9); [E827-E829] (.1)	...	...	...	...
Pedestrian, other	[E800-E807](.2), [E820-E825] (.7), [E826-E829](.0)	...	...	...	...
Transport, other	[E800-E807](.0,.1,.8-.9), [E820- E825](.0-.5,.8-.9), E826(.2-.8), [E827-E829](.2-.9), E831(.0-.9), E833.0-E845.9	E958.6	...	E988.6	...
Natural or environmental	E900.0-E909, E928(.0-.2)	E958.3	...	E988.3	...
<i>Bites and stings</i>	E905(.0-.6,.9); E906(.0-.4,.9)	...	...	...	...
Overexertion	E927	...	...	...	...
Poisoning	E850.0-E869.9	E950.0-E952.9	E962(.0-.9)	E980.0-E982.9	E972
Struck by or against	E916-E917.9	...	E960.0, E968.2	...	E973, E975
Suffocation	E911-E913.9	E953(.0-.9)	E963	E983(.0-.9)	...
Other specified, classifiable	E846-E848, E914-E915, E918, E921(.0-.9), E923(.0-.9), E925.0-E926.9, E929(.0-.5)	E955(.5,.9), E958(.0,.4)	E960.1, E965(.5- .9), E967(.0-.9), E968.4	E985.5, E988(.0,.4)	E971, E978, E990-E994, E996, E997(.0-.2)
Other specified, not elsewhere classifiable	E928.8, E929.8	E958.8, E959	E968.8, E969	E988.8, E989	E977, E995, E997.8, E998, E999
Unspecified	E887, E928.9, E929.9	E958.9	E968.9	E988.9	E976, E997.9
All injury	E800-E869, E880-E929	E950-E959	E960-E969	E980-E989	E970-E978, E990-E999

Appendix 6: Fatal Injury Mechanism Subcategories

Mechanism:	ICD-10 Codes:
Drug Poisoning	
Drug Types	
Heroin	T40.1
Methadone	T40.3
Cocaine	T40.5
All opioids	T40.0-T40.4, T40.6
Prescription opioids	T40.2-T40.4, T40.6
Barbituates	T42.3
Benzodiazepine	T42.4
Other and unspecified	T50.9
Motor Vehicle Traffic Crashes:	
Occupant injured	
Pedestrian	V02-V04 (0.1), V09.2, V09.3
Pedal cycle	V10-18 (0.4, 0.5, and 0.9), V19 (0.4-0.9)
Motorcycle	V20-28 (0.4, 0.5, and 0.9), V29 (0.4-0.9)
Three wheeled vehicle	V30-38 (0.5-0.9), V39 (0.4-0.9)
Car	V40-48 (0.5-0.9), V49 (0.4-0.6)
Pickup truck or van	V50-58 (0.5-0.9), V59 (0.4-0.6)
Heavy transport vehicle	V60-68 (0.5-0.9), V69 (0.4-0.6)
Bus	V70-78 (0.5-0.9), V79 (0.4-0.6)
Other or unspecified	V80-88 (0.0-0.3), V89 (0.2-0.3)
Falls:	
Same level	W01 and W03
Carried by other persons	W04
Wheelchair	W05
Bed	W06
Chair	W07
Other furniture	W08
Playground	W09
Stairs or steps	W10
Ladder or scaffolding	W11 and W12
From/out of building	W13
Tree	W14
Cliff	W15
Jumping or diving in water (not drowning)	W16
Other fall from different level	W17
Other fall from same level	W18
Unspecified	W19
Pedestrian:	
Motor vehicle traffic	V00-V05 (0.1), V09.2, V09.3
Non-motor vehicle traffic	V00-V05 (0.0), V09.0, V09.1
Unspecified	V00-V05 (0.9), V09.9
Pedal Cycle:	
Motor vehicle traffic	V10-V19 (0.4, 0.5, and 0.9)

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Non-motor vehicle traffic	V10-V19 (0.0-0.2)
Suffocation:	
In bed	W75
Other suffocation	W76
Cave-in, falling earth	W77
Inhalation of gastric contents	W78
Ingestion of food	W79
Ingestion of other objects	W80
Low oxygen environment	W81
Other specified	W83
Unspecified	W84
Drowning:	
Bath tub	W65 and W66
Swimming pool	W67 and W68
Natural body of water	W69 and W70
Other	W73
Unspecified	W74
Fire and burns:	
Uncontrolled fire	X00 and X01
Controlled fire	X02 and X03
Flammable material	X04
Nightwear	X05
Other clothing	X06
Other fire	X07
Unspecified fire	X08
Hot water	X09
Other hot fluids	X11
Household appliances	X12
Hot heating appliances	X15
Other hot metals	X16
Unspecified substance	X19
Suicide	
Poisoning	X60-69
Hanging	X70
Drowning	X71
Firearm	X72-74
Explosive material	X75
Smoke, fire, or flames	X76
Steam or hot vapors	X77
Sharp or blunt object	X78-79
Jumping	X80-81
Motor vehicle crash	X82
Other means	X83
Unspecified means	X84
Sequelae of suicide	Y87.0

Burden of Injury in Ohio, 2000-2010

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Homicide		
Drugs or biologic substances		X85
Gases or vapors		X88
Unspecified chemicals		X89
Hanging		X91
Drowning		X92
Firearm		X93-95
Explosive material		X96
Smoke, fire, or flames		X97
Sharp object		X98
Blunt object		X99
Pushing		Y01-02
Motor vehicle crash		Y03
Bodily force		Y04
Neglect or abandonment		Y06
Other maltreatment		Y07
Other specified means		Y08
Unspecified means		Y09
Sequelae of assault		Y87.1
Traumatic Brain Injury:		
Motor vehicle traffic crash		V30-79 (0.4-0.9), V81-82 (0.1), V83-86 (0.0-0.3), V20-28 (0.0-0.3), V29 (0.4-0.9), V12-14 (0.3-0.9), V19 (0.4-0.6), V02.1, V02.9, V04.1, V04.9, V09.2, V80 (0.3-0.5), V87(0.0-0.8), V89.2
Falls		W00-19
Pedestrian		V01-09
Pedal cycle		V10-19
Homicide		X85-Y09
Suicide		X60-84

Appendix 7: Hospitalization and ED Visit Injury Mechanism Subcategories

Mechanism:	ICD-9 Codes:
Drug Poisoning	
Drug Types	
Tranquilizers	967x, 969.1-969.3, 969.5, E852.0-E9852.5, E852.8, E852.9, E853.0, E853.1, E853.8, E853.9, E937, E937.1, E937.2, E937.4-E937.6, E937.8, E937.9, E939.1-E939.3, E939.5, E950.2, E950.3, E980.2, and E980.3
Barbituates	304.1, 304.10, 304.11, 304.4, 304.40-304.42, 967.0, E851, E937.0, E950.1, E980.1
Methadone	965.02, E850.1, E935.1
Benzodiazepines	969.4, E853.2, E939.4
Alcohol	291.81, 303.0, 303.00-303.02, 303.9, 303.90-303.93, 305.0, 305.00-305.02, 790.3, 980, 980.0, 980.9, E860, E860.0, E860.1, E860.9, V79.1
Cocaine	304.2, 304.20-304.22, 305.6, 305.60-305.62, 968.5, E855.2, E938.5
All Opioids	304.0, 304.00-304.02, 304.7, 304.70-304.72, 305.5, 305.50, 965.0, 965.00-965.02, 965.09, 965.8, E850.0-E850.2, E850.8, E935.0-E935.2, E935.8
Prescription Opioids	304.0, 304.00-304.02, 304.7, 304.70-304.72, 305.5, 305.50, 965.0, 965.02, 965.09, 965.8, E850.0-E850.2, E850.8, E935.0-E935.2, E935.8
Motor Vehicle Traffic Crashes by nature of accident	
Collision with train	E810
Re-entrant collision with other MV	E811
Collision with other MV	E812
Collision with other non-motor Vehicle	E813
Collision with pedestrian	E814
Collision on highway	E815
Loss of control, not on highway	E816
Noncollision while boarding or Alighting	E817
Other noncollision	E818
Unspecified	E819

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Motor Vehicle Traffic Crashes by occupant injured	
Driver	
Passenger	E810-E819 (.0)
Motorcyclist	E810-E819 (.1)
Motorcycle passenger	E810-E819 (.2)
Street car occupant	E810-E819 (.3)
Occupant of animal drawn vehicle	E810-E819 (.4)
Pedal cyclist	E810-E819 (.5)
Pedestrian	E810-E819 (.6)
Other specified person	E810-E819 (.7)
Unspecified person	E810-E819 (.8)
Falls:	
Steps or stairs	E880
Ladders or scaffolding	E881
Building or other structure	E882
Hole or other opening	E883
From one level to another	E884
Fall from same level	E885
Other or unspecified	E886
Hip Fracture:	820 in any discharge diagnosis field
Pedestrian and Pedal Cycle:	
Motor vehicle traffic	E810-819
Non-motor vehicle traffic	E820-825
Railway	E800-809
Other road vehicle	E826-829
Sports and Recreation:	
Sports, no mention of wheels	E886.0, E917.0, E917.5
Recreation, no mention of wheels	E849.4, E883.0, E884.0, E885.3, E885.4, E902.2, E910.0-E910.2, E922.2, E922.4, E922.5, E987.2
Recreation, wheels	E885.0-E885.2
Suffocation:	
Food objects	E911
Non-food objects	E912
Mechanical suffocation	E913
Drowning:	
Accidental drowning	E910
Watercraft causing submersion	E830
Other water transport	E832

Ohio Violence and Injury Prevention Program, Ohio Department of Health

Fire or burn:	
Conflagration	E890-892
Ignition of objects	E893-894
Controlled fire	E895-897
Other fire	E898
Unspecified fire	E899
Hot object	E924
Self-harm:	
Poisoning	E950-952
Hanging	E953
Drowning	E954
Firearms	E955
Cutting or piercing	E956
Jumping	E957
Other and unspecified	E958
Late affects	E959
Assaults:	
Fight or brawl	E960.0
Rape	E960.1
Corrosive substance	E961
Poisoning	E962
Hanging	E963
Drowning	E964
Firearms	E965
Cutting or piercing	E966
Perpetrator of abuse	E967
Other and unspecified	E968
Late affects of assault	E969
Traumatic Brain Injury:	
Falls	E880-888
Motor vehicle traffic crashes	E810-819
Motor vehicle non-traffic crashes	E820-829
Pedal cycle	E800-809(0.3), E810-825(0.6), E826.1, E829.1, E827.1, E828.1, E829.1
Pedestrian	E800-809(0.2), E810-825(0.7), E826.0, E827.0, E828.0, E829.0
Assaults	E960-969
Self-harm	E950-959
Sports and recreation	E886.0, E917.0, E917.5
Struck by/against	E849.4, E883.0, E884.0, E885.3, E885.4, E902.2, E910.0-E910.2, E922.2, E922.4, E922.5, E987.2
	E885.0-E885.2
	E916, E917

Appendix 8: Fatal Injury Costs

Average costs associated with fatal injuries by intent and mechanism, Ohio, 2005 U.S. dollars

Intent	Medical Care	Work Loss
Unintentional	11,634	837,333
Suicide	2,926	1,064,570
Homicide	6,901	1,362,975
Undetermined	6,804	989,746
Legal Intervention	4,755	1,321,443
Unintentional mechanisms		
Falls	20,728	251,529
MV traffic	9,547	1,095,338
Drowning	3,905	1,127,124
Fire/burn	19,095	780,015
Poisoning	3,957	1,191,574
Pedal	17,645	1,118,621
Pedestrian	11,972	987,488
Suffocation	14,259	540,573
All intents		
Traumatic brain injuries	6,433	465,960
Firearms	3,769	1,160,514

Appendix 9: Injury Hospitalization Costs

Average costs associated with injury hospitalizations by intent and mechanism, United States, 2005

Intent	Medical Care	Work Loss
Unintentional	21,996	47,781
Suicide	8,183	17,012
Homicide	20,154	119,478
Undetermined		
Legal Intervention	16,807	72,992
Unintentional mechanisms		
Falls	19,672	35,628
MV traffic	40,825	79,625
Drowning	35,106	283,010
Fire/burn	18,247	51,981
Poisoning	9,621	3,024
Pedal	39,672	96,557
Pedestrian	42,814	87,372
Suffocation	37,898	25,925
All intents		
Traumatic brain injuries	61,017	99,667
Firearms	14,716	79,615

Appendix 10: Injury Emergency Department Visit Costs

Average costs associated with injury ED visits by intent and mechanism, United States, 2005

Intent	Medical Care	Work Loss
Unintentional	786	2,877
Suicide	959	3,086
Homicide	1,187	868
Legal Intervention	946	2,634
Unintentional mechanisms		
Falls	954	456
MV traffic	661	2,922
Drowning	676	556
Fire/burn	517	1,108
Poisoning	1,186	3,255
Pedal	1,035	3,496
Pedestrian	1,087	2,597
Suffocation	931	2,775
All intents		
Traumatic brain injuries	1,650	8,610
Firearms	849	3,200

Appendix 11: County Urbanity Classifications

The map describes county urbanity classification used in this report. Counties were classified as urban if they had an urban core that served as a center of economic activity for surrounding counties. Counties were considered suburban if they were located adjacent to an urban county and strongly connected with economic activity in the urban county. Rural counties do not have an urban core and not strongly connected to an adjacent urban county. The Appalachian classification was based on the Appalachian Development Commission with the exception of Mahoning and Trumbull counties. Mahoning County was classified as an urban county and Trumbull was considered to be a suburban county in the report.



Appendix 12: 2010 Federal Poverty Guidelines

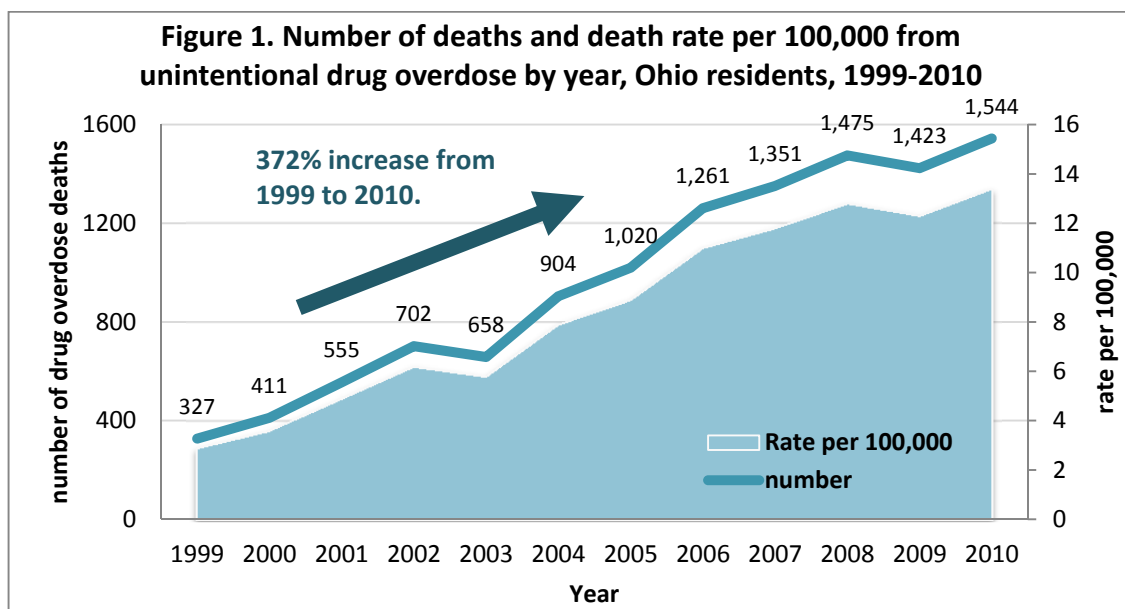
Family Size:	Annual Household Income Threshold		
	Below Poverty	Less than 200% above poverty	200% or more above poverty
1	\$10,830	\$10,831-21,659	\$21,660+
2	\$14,570	\$14,571-29,139	\$29,140+
3	\$18,310	\$18,131-36,259	\$36,260+
4	\$22,050	\$22,051-44,009	\$44,100+
5	\$25,790	\$25,791-51,579	\$51,580+
6	\$29,530	\$29,531-59,059	\$59,060+
7	\$33,270	\$33,271-66,539	\$66,540+
8	\$37,010	\$37,011-74,019	\$74,020+



Violence and Injury Prevention Program

2010 OHIO DRUG OVERDOSE DATA: GENERAL FINDINGS¹

- Drug overdose deaths continue to be a public health crisis in Ohio with a 372 percent increase from 1999 to 2010. (See Figure 1.)
- Unintentional drug overdoses caused **1,544** deaths to Ohio residents in 2010. **This is the highest number of deaths on record for drug overdose** and surpasses the previous highest number (1,475) in 2008 by 5 percent
- This is equivalent to 4 Ohioans dying every day or one Ohioan dying every 6 hours.
- Unintentional drug overdose continues to be the leading cause of injury-related death in Ohio, ahead of motor vehicle traffic crashes, suicide and falls. This trend began in 2007 and continues through 2010.
- Prescription drugs are involved in most of the unintentional drug overdoses and have largely driven the rise in deaths. Pain medications (opioids) and multiple drug use are the largest contributors to the epidemic. (see Figure 2.)



¹ Source: Ohio Department of Health; Center for Public Health Statistics and Informatics

The Ohio Department of Health and other partners are responding to the crisis through coordinated efforts. A description of ODH's efforts can be found on page 4.

Additional data, resources and background information are available at:
<http://www.healthyohioprogram.org/vipp/drug/dpoison.aspx>

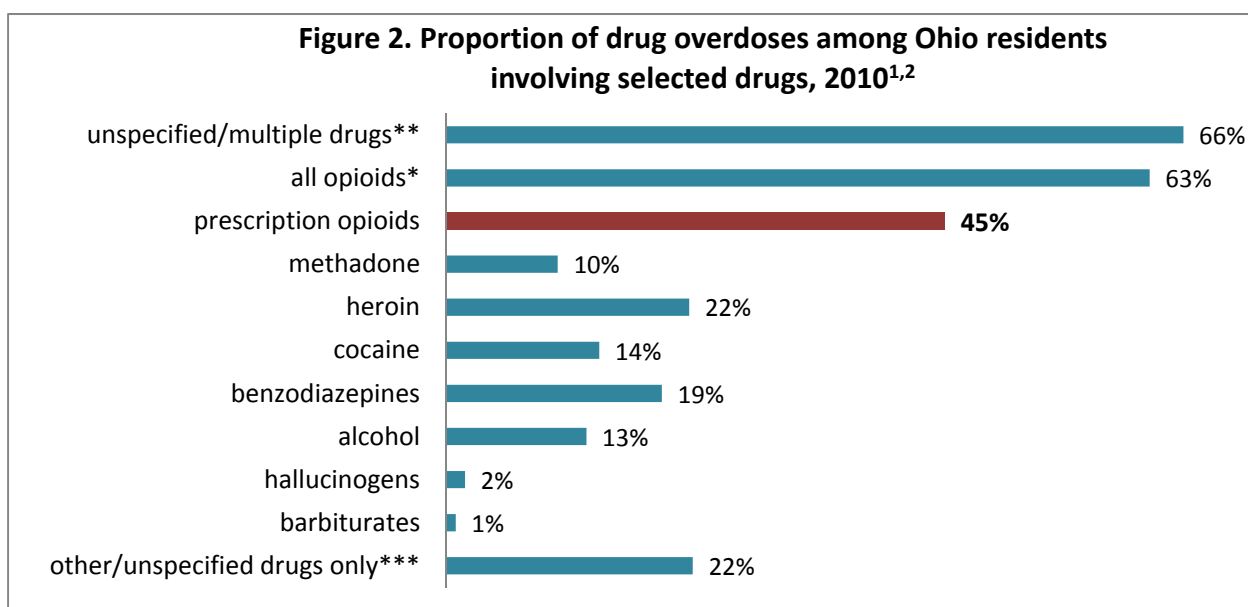
¹Source: Ohio Department of Health, Office of Vital Statistics,
Center for Public Health Statistics and Informatics



2010 OHIO DRUG OVERDOSE DATA: SPECIFIC DRUG INVOLVEMENT:

- **Prescription opioids (pain medications) are associated with more fatal overdoses than any other prescription or illegal drug including cocaine and heroin combined.** Nearly half (45 percent*) of fatal unintentional overdoses involved prescription opioids in Ohio in 2010, compared to 39 percent in 2009 (see Figure 2).
 - More than one-fourth (431; 28 percent*) of the overdoses involved commonly-prescribed opioids such as oxycodone, hydrocodone and morphine (data not shown).
 - Ten percent* of the overdoses involved methadone (prescription opioid) (see Table 1).
- Approximately two-thirds (979; 63 percent*) of the drug overdoses involved **any opioid** (prescription or heroin) in 2010, compared to 55 percent (783) in 2009.
- **Heroin-involved deaths** have continued to increase from 16 percent (233) in 2008 to 20 percent (283) in 2009 to a high of 22 percent* of all drug overdoses (338) in 2010.
- **Deaths involving benzodiazepines** have also increased from 212* (15 percent) in 2009 to 300 (19 percent*) in 2010.
- **Multiple drug use** is a major contributing factor to the overdose epidemic. In 2010, two-thirds (66 percent*) of drug overdoses involved multiple substances.

***In approximately one-fourth (22 percent) of the cases, no specific drug is identified in the death certificate data. As such, we assume that the reported drugs are likely under-estimates of their true contribution to the burden of fatal drug overdose in Ohio.**



¹ Source: Ohio Department of Health; Center for Public Health Statistics and Informatics

² Multiple substances are usually involved in overdose deaths.

*Includes involvement of prescription opioids and/or heroin

**at least two substances were involved

***no specific drug was identified



Violence and Injury Prevention Program

2010 OHIO DRUG OVERDOSE DATA: SPECIFIC DRUG INVOLVEMENT:

Table 1. Unintentional drug poisoning deaths of Ohio residents by specific drug(s) as mentioned on the death certificate and by year, 2000-2010^{1,2,3}

Drug Category ⁴	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	% of all 2010 overdose deaths
Unspecified/ multiple drugs**	282	391	553	428	643	725	901	1,015	1,098	1,012	1,026	8,074	66%
all opioids*	198	266	344	296	429	489	551	631	735	783	979	5,701	63%
prescription opioids	138	199	257	221	319	388	462	508	546	550	694	4,282	45%
methadone	14	30	47	55	116	144	161	176	170	169	155	1,237	10%
heroin	71	81	108	87	124	131	117	146	233	283	338	1,719	22%
cocaine	102	112	154	140	221	223	317	287	252	220	213	2,241	14%
benzodiazepines	46	63	79	38	69	90	121	133	154	211	300	1,304	19%
alcohol	49	50	43	40	38	58	89	135	181	173	195	1,051	13%
hallucinogens	1	1	7	7	8	8	10	13	14	9	26	104	2%
barbiturates	1	7	6	5	3	5	3	7	3	5	13	58	1%
other/unspecified drugs only***	96	139	186	154	256	289	378	453	475	396	343	3,165	22%
Number of Fatal Drug Poisonings	411	555	702	658	904	1,020	1,261	1,351	1,475	1,423	1,544	11,304	
Annual death rate per 100,000	3.6	4.9	6.2	5.8	7.9	8.9	11.0	11.8	12.8	12.3	13.4		

1 Source: ODH, Center for Public Health Statistics & Informatics in partnership with the Violence and Injury Prevention Program

2 Total includes out of state deaths of Ohio residents for all years

3 Individual drugs do not add up to totals as more than 1 drug may be coded on the death certificate for 1 death.

4 Data completeness varies from year to year for residents who died out of state.

* Includes prescription opioids and heroin

**Includes all instances where 'T50.9' (other/unspecified) is included as contributing to death

***Includes only those instances where no other drug than T50.9 (other/unspecified) is included as contributing to death

National Data: (Source: CDC)

- According to the Centers for Disease Control and Prevention (CDC) prescription painkiller overdoses (opioids including hydrocodone, oxycodone, methadone, morphine, etc.) killed nearly 15,000 people in the U.S. in 2008. This is more than three times the 4,000 people killed by these drugs in 1999.
- The quantity of prescription painkillers sold to pharmacies, hospitals, and doctors' offices was four times larger in 2010 than in 1999.
- Enough prescription painkillers were prescribed in 2010 to medicate every American adult around-the-clock for a month.



Violence and Injury Prevention Program

CONTRIBUTING FACTORS

- Key factors leading to this epidemic include 1) changes in clinical pain management guidelines in the late 1990's (i.e., Federation of State Medical Boards releases *Model Guidelines for the Use of Controlled Substances for the Treatment of Pain*; Ohio Revised Code 4731.21 Drug Treatment of Intractable Pain) and 2) aggressive marketing by pharmaceutical companies of new, extended-release prescription opioids to physicians (*Source: FDA Warning Letters*). These factors initially led to rapidly increasing use of prescription opioids within health care settings.
- From 1997 to 2007, there was a 506 percent increase in the amount of prescription opioid grams per 100,000 population distributed to retail pharmacies in Ohio (*Source: DEA ARCOS*).
- In 2010, there was an average of 67 doses of opioids dispensed for every Ohio resident. In Scioto County, incidentally having the highest fatal overdose rate in the State, this ratio was nearly twice as high with 123 doses for every Scioto County resident (*Source: Ohio Board of Pharmacy, Ohio Automated Rx Reporting System*).
- Additional societal and medical trends that lead to this problem include marketing of medications directly to consumers, over-prescribing, substance abuse, widespread diversion of medications, deception of providers including doctor shopping and prescription fraud, illegal online "pharmacies," unscrupulous providers (e.g., "pill mills"), overmedication and mixing medications, and improper storage and disposal of excess medications.

WHAT IS ODH DOING TO ADDRESS THE PROBLEM?

- **Surveillance of drug overdose trends and patterns** and providing data on the [Ohio Drug Poisoning website](#).
- **Coordination of the Prescription Drug Abuse Action Group (PDAAG)** in conjunction with ODADAS. The PDAAG is an ongoing state-level work group comprised of over 100 member organizations dedicated to reducing prescription drug abuse, misuse and overdose in Ohio. The PDAAG serves as a conduit for information sharing, networking and the development of state-level recommendations to address the issue.
- **Conducting a social marketing campaign: *Prescription for Prevention: Stop the Epidemic* (P4P)** (<http://www.p4pohio.org>). P4P is a multi-level social marketing campaign to combat the epidemic of prescription drug overdose that includes coalition establishment and support in high risk counties, public education and outreach, TV and radio public service announcements, peer-to-peer programs in schools and education at work sites.
- **Funding two pilot projects in Scioto and Montgomery Counties from 2010-2013** with funding from the CDC's Preventive Health and Health Services Block Grant. These projects engage in activities such as coalition development, education of healthcare prescribers and service providers, formation of a poison death review committee, policy development and implementation of public education and awareness campaigns.
- **Providing start-up support and resources for Scioto County's naloxone distribution program: DAWN** (Deaths Avoided with Naloxone) <http://bit.ly/projectdawn>; the first of its kind in the State.
- **Encouraging excess drug disposal solutions and methods** such as take back events and permanent drug disposal drop boxes through the development of take-back guidelines and support for permanent drop boxes.
- **Collaboration with other state organizations to plan conferences, summits and educational opportunities.**
- Providing support for the Governor's Opiate Cabinet Action Team, Prescriber Education Workgroup including development of Emergency and Acute Care Opioid and Other Controlled Substances Prescribing Guidelines.



For complete information on what ODH is doing to address the issue, please visit:
<http://www.healthyohioprogram.org/vipp/drug/dpoison.aspx>



OHIO

Special Emphasis Report: Infant and Early Childhood Injury, 2010

Injury is a Leading Cause of Death in Children

Injuries are a major public health problem across the United States and in Ohio. They are the leading cause of death and disability for Ohio children aged 1 to 5 and a leading cause of death for infants.

In 2010, 155 Ohio children ages 0 to 5 years died as a result of injury, or more than one child every two days. As tragic as they are, deaths are only the tip of the iceberg. For every injury death to an Ohio child in this age range, there were 10 injury-related hospital stays, and 742 injuries treated and released from an emergency department (ED) in 2010. These numbers do not include those treated at home or in a physician's office.

Injuries are not accidents! Most child injuries follow predictable patterns and can fortunately be prevented using evidence-based strategies. Prevention strategies using multiple approaches such as education and training as well as policy, systems, engineering or environmental change are most effective.

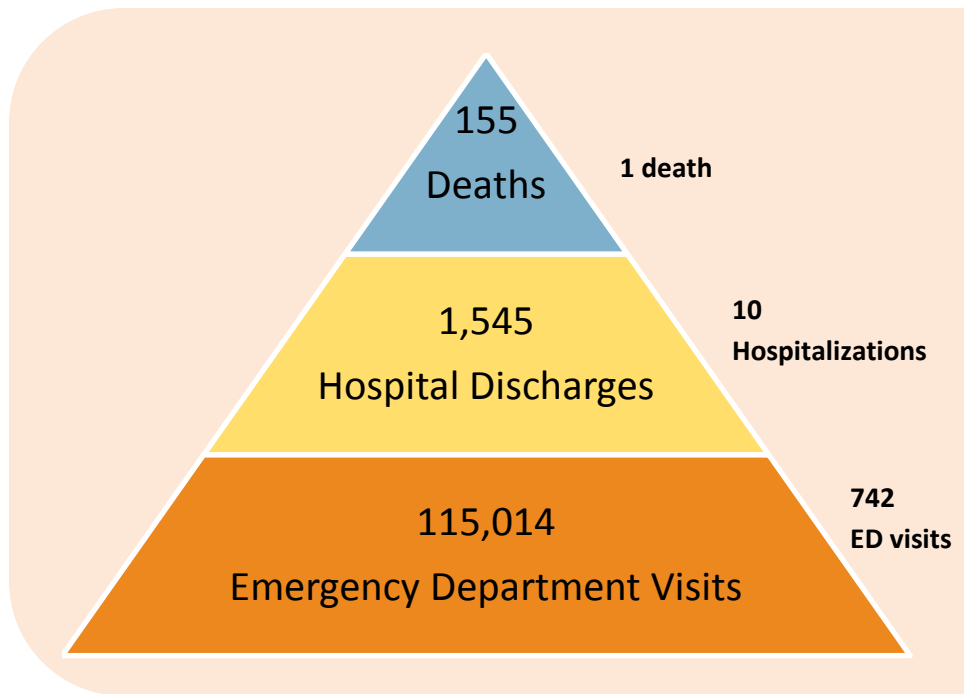


Figure 1: Annual Injuries among Children Ages 0-5 Years, Ohio, 2010

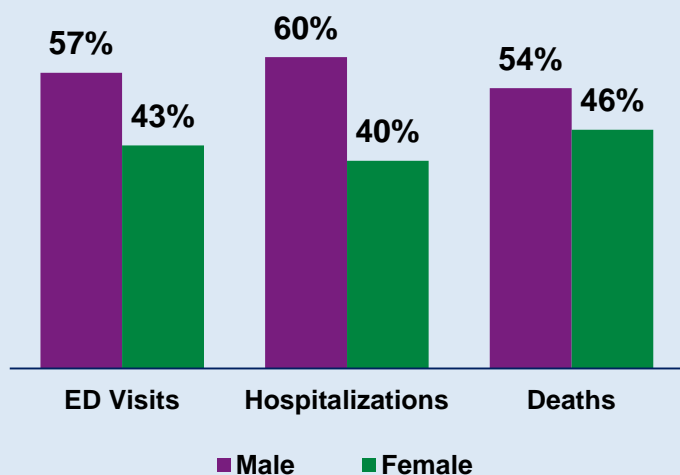


Figure 2: Percent of Injury Deaths, Hospitalizations and Emergency Department Visits among Children Ages 0-5 Years, by Sex, Ohio, 2010

Childhood Injury by Sex

Male children are more likely to experience fatal and nonfatal injuries than female children.

- 54% of injury deaths occurred among males.
- 60% of injury hospitalizations occurred among males.
- 57% of injury ED visits occurred among males.



This document was produced in conjunction with CDC's Core Violence and Injury Prevention Program under Cooperative Agreement 11-1101.



OHIO

Special Emphasis Report: Infant and Early Childhood Injury, 2010

Injury-Related Death

Injury Deaths in Infants

- The leading causes of injury death among infants were unintentional suffocation in bed (42%), homicide (19%), other unintentional suffocation (16%), and transportation (7%).
- All other unintentional causes* contributed to 9% of injury deaths
- Deaths of undetermined intent led to 8% of injury deaths.

**Other unintentional causes include fire/burns, natural causes, and other specified causes.*

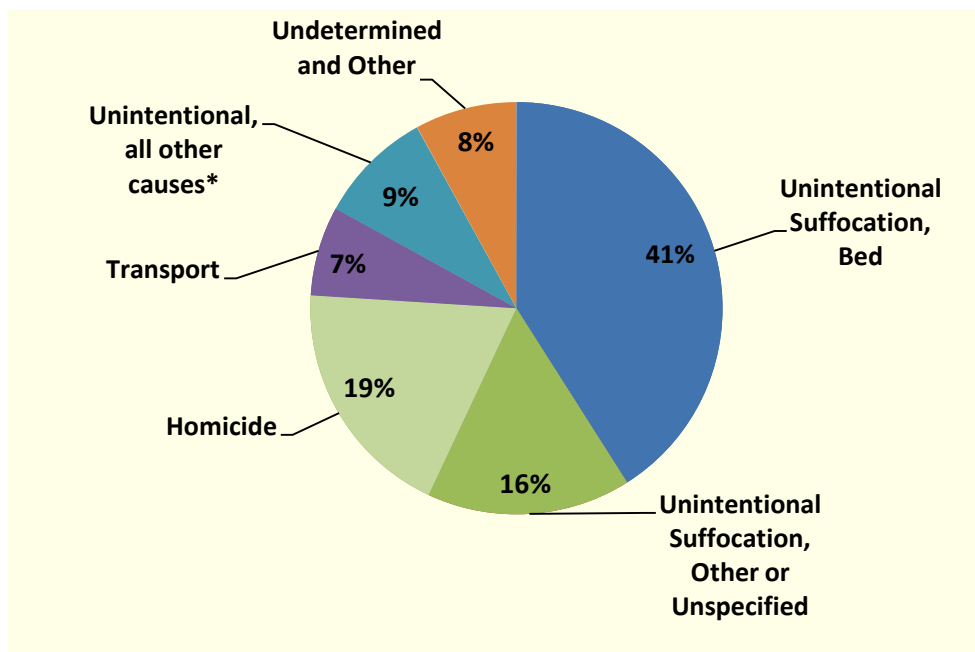


Figure 3: Injury Deaths among Infants Less than 1 Year, Ohio, 2010

Injury Deaths in Young Children

- The leading causes of injury death among young children were homicides (19%), unintentional drowning (18%), transportation (18%), and fire/burns (15%).
- All other unintentional causes* contributed to 15% of injury deaths.
- Deaths of undetermined intent led to 9% of injury deaths.

**Other unintentional causes include falls, poisoning, struck by/against, and natural causes.*

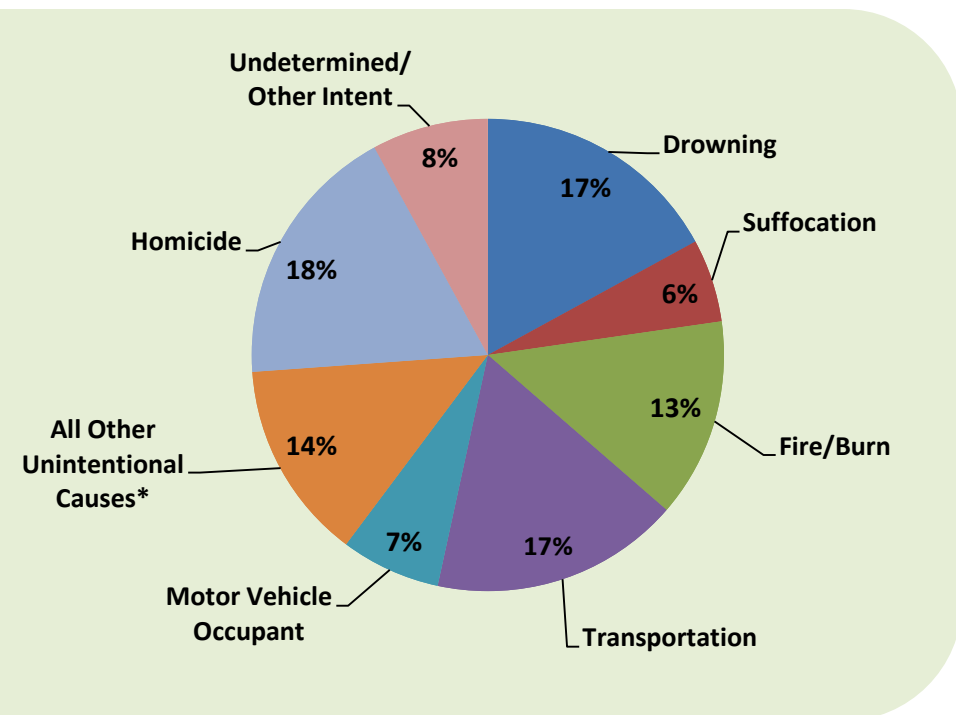


Figure 4: Injury Deaths in Children Ages 1 – 5 Years, Ohio, 2010



OHIO

Special Emphasis Report: Infant and Early Childhood Injury, 2010

Injury-Related Hospitalizations

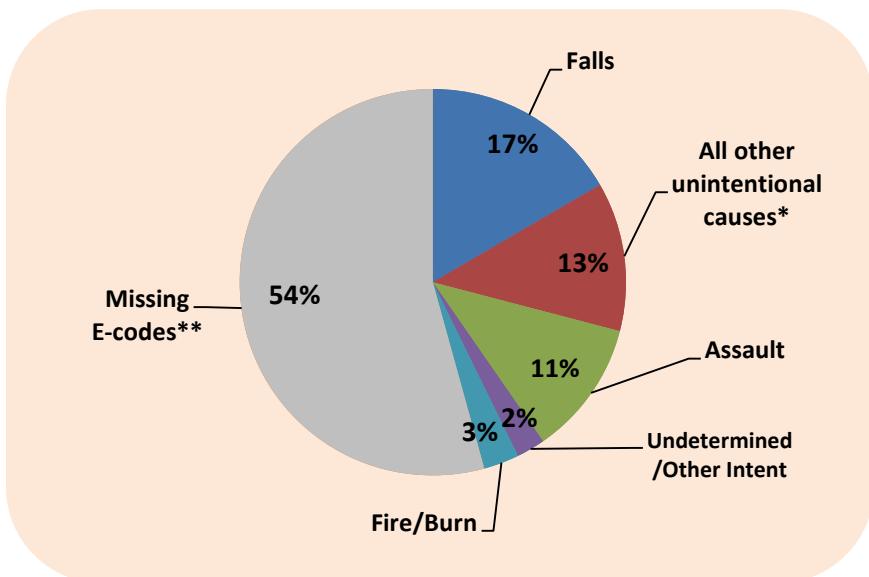


Figure 5: Injury-Related Hospital Discharges among Infants <1 Year, Ohio, 2010

Injury Hospitalizations in Infants

- 337 hospitalizations resulted from injuries among infants less than 1 year of age in 2010.
- The leading causes of injury hospitalizations among infants were falls (17%), assaults (11%), and fire/burn (3%).
- A combination of other unintentional causes* accounted for 13% of hospitalizations.
- Approximately one-half of hospitalizations did not have an external cause of injury recorded.

**Other unintentional causes include drowning, cuts/pierces, foreign body, natural causes, poisoning, struck by, suffocation, and transport.*

***E-codes = External cause of injury*

Injury Hospitalizations in Young Children

- 1,208 hospitalizations resulted from injuries among children 1-5 years of age in 2010.
- The leading causes of injury hospitalizations among children were falls (11%), poisoning (10%), fire/burn (5%) and transport (4%).
- A combination of other unintentional causes* accounted for 10% of hospitalizations.
- Approximately one-half of hospitalizations did not have an external cause of injury recorded.

**Other unintentional causes include drowning, cuts/pierces, foreign body, natural causes, struck by, and suffocation.*

***E-codes = External cause of injury*

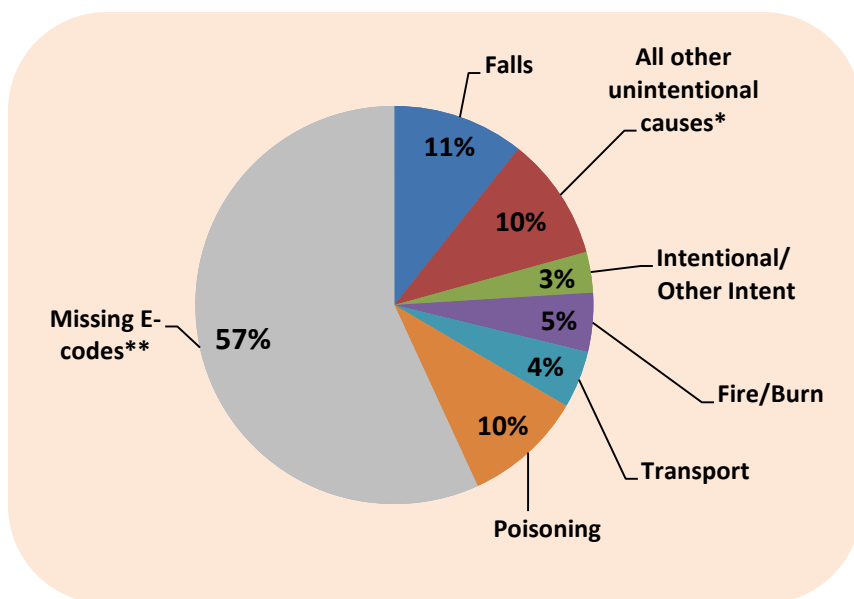


Figure 6: Injury-Related Hospital Discharges among Children Ages 1 – 5 Years, Ohio, 2010



OHIO

Special Emphasis Report: Infant and Early Childhood Injury, 2010

Injury-Related Emergency Department Visits

- There were 10,026 injury-related ED visits among infants less than 1 year old and 104,988 among children ages 1-5 years. Combined, that is the equivalent of 13 children aged 5 years and younger receiving ED treatment for an injury every hour in Ohio.
- The leading causes of injury related ED visits were similar among infants and children. The leading causes of injury were unintentional falls (26%), being struck by or against (11%), natural environment (6%), and transportation related injuries (4%).
- A combination of other unintentional causes was associated with 16% of ED visit injuries. These causes included overexertion, being caught between two objects, and other specified*.
- Approximately one-quarter of ED visits did not have an external cause of injury code (E-codes), thus limiting the ability to identify the type of injury involved.

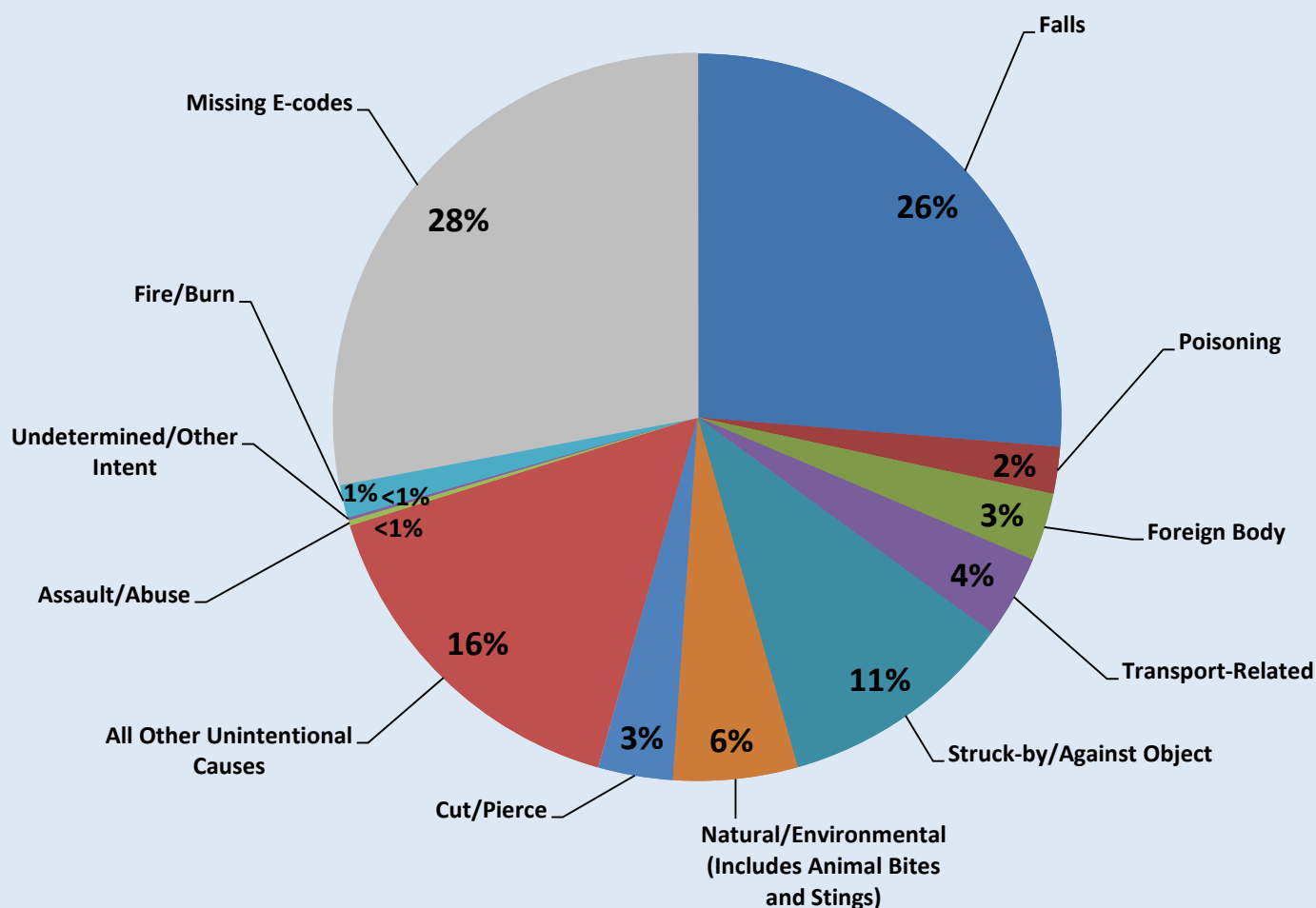


Figure 6: Injury-Related Emergency Department Visits among Children Ages 0 – 5 Years, Ohio, 2010



OHIO

Special Emphasis Report: Infant and Early Childhood Injury, 2010

Table 1: Injury-Related Hospital Discharges and Emergency Department (ED) Visits among Children Ages 0 -5 Years, by Age Group, Ohio, 2010

	Infants less than 1 Year			Children Ages 1-5 Years	
	Hospital Discharges	ED Visits		Hospital Discharges	ED Visits
Unintentional Injuries	108	6,862		480	72,153
Cut/pierce	0	205		11	3,963
Drowning/submersion	<5	11		13	58
Falls (off/from):	56	3,541		129	29,561
Furniture	19	1,387		21	4,839
Steps/stairs	8	398		20	2,957
With strike against object	<5	422		8	6,395
Slipping/tripping/stumbling	0	189		10	4,761
Playground equipment	0	16		20	1,853
Building	0	<5		9	63
Other fall from one level to another	22	643		26	2,339
Other/unspecified	5	484		15	6,354
Fire/Burn	10	245		58	1,639
Foreign Body	9	287		18	3,527
Natural and Environmental	5	338		17	6,611
Excessive heat	0	10		0	21
Dog bites	<5	55		9	1,685
Other bites/stings/animal injury	0	267		5	4,867
All other natural/environmental	<5	6		<5	38
Poisoning	7	165		117	2,448
Struck-by/against object	3	816		37	12,415
Suffocation	5	34		5	144
Transport-related	<5	582		56	4,015
Motor vehicle (MV)-occupant	<5	553		21	2,301
Bicycle/tricycle (MV & non-MV)	0	2		6	1,035
Pedestrian (MV & non-MV)	0	6		16	151
Other transport	0	21		12	490
All other unintentional causes Includes: overexertion, caught between objects, and other specified causes.	9	638		19	7,772
Assault/Abuse	38	37		24	260
Undetermined/Other Intent	8	17		16	152
Missing external cause of injury	183	3,096		687	32,082
Total number of injuries	337	10,026		1,208	104,988



OHIO

Special Emphasis Report: Infant and Early Childhood Injury, 2010

Ohio Child Injury Prevention Activities

The Ohio Department of Health's Violence and Injury Prevention Program (VIPP) is engaged in state-level activities to address child injuries in Ohio.

Prevention:

- **Child Passenger Safety (CPS)**- The VIPP promotes CPS in Ohio by coordinating the Ohio Buckles Buckeyes program. With a coordinator in each of Ohio's 88 counties, eligible low income families receive training, child safety seats and support to ensure children ride safely on every trip.
- **Local Injury Prevention Grants** - The VIPP also provides grant funding to support four local child injury prevention programs focused on pedestrian and bicycle safety and youth sports safety.

Surveillance: VIPP conducts statewide surveillance through death certificates, inpatient hospitalizations, and ED visits.

Partnerships: The VIPP coordinates the Ohio Injury Prevention Partnership's (OIPP) Child Injury Action Group (CIAG). The CIAG is a multi-disciplinary statewide coalition of organizations concerned with the prevention of injury to Ohio children and youth. The CIAG has identified and is addressing five priority areas including: teen driving safety, bicycle and wheeled sports helmets, infant safe sleep, sports-related traumatic brain injury, and child passenger safety.

Accomplishments/Successes: The CIAG completed a five-year state strategic plan and moved into its implementation phase with the completion of action plans for each of the five priority areas. The CIAG developed a website for members to track activities and update action plans ohiociaag.org. The CIAG has offered mini-grants to local projects focused on one of the five priority areas in the plan to build capacity for child injury prevention activities within the state and increase engagement with the strategic plan.



Ohio Help Me Grow Program

The Help Me Grow Program is Ohio's birth to age 3 system that provides trans-disciplinary and family-centered services for expectant parents, newborns, infants, toddlers, and their families. The program includes both Early Intervention and Home Visiting, with the goal to:

- Link families with needed services to enhance their infant or toddler's health, development, and safety;
- Teach parenting education around child development, appropriate discipline, home environment safety and readiness for kindergarten; and
- Connect with families as early in pregnancy and infancy as possible to have the greatest impact possible on the development of the parent's skills and the child's development.

Professional development is provided to ensure that professionals who work with children and families have evidence-based and up-to-date information. The Ohio Department of Health, Bureau for Children with Developmental and Special Health Needs administers the program in collaboration with all 88 counties throughout the state.

Notes: Data are provided by the Ohio Department of Health, Office of Vital Statistics (death data) and the Ohio Hospital Association (hospital and ED data).

All injuries are considered unintentional unless specified otherwise. Reference to any commercial entity or product or service on this page should not be construed as an endorsement by the Government of the company or its products or services.

Ohio Department of Health, Violence and Injury Prevention Program

<http://www.healthyohioprogram.org/vipp/injury.aspx>

Released December, 2012

2012 Edition



**OHIO INJURY PREVENTION
PARTNERSHIP**

This Page Intentionally Left Blank

Dear Ohio Decision Maker,

Thank you for taking the time to review the 2012 edition of Preventing Injuries in Ohio: A Resource for State Policy Makers. The goal of this document is to inform you of the burden of injury and provide evidence-based policy recommendations to improve the health and safety of all Ohioans.

In Ohio, injury (intentional & unintentional) is the leading cause of death and disability for Ohioans ages 1 through 44. In fact, injury (including homicide and suicide) is the third-leading cause of death for all Ohio residents following only heart disease and cancer. In 2009, more than 550 Ohioans died each month as a result of injury. That's more than the equivalent of fatalities from one large jet crash each month in Ohio alone.

In addition to fatal injuries, non-fatal injuries result in significant medical and societal costs. Every day, on average, there are 3,200 emergency department (ED) visits and 193 hospitalizations among Ohioans who were injured seriously enough to require medical attention. These numbers translate into significant costs for Ohio's health care system. Over \$1.6 billion in ED charges and \$2.3 billion in hospitalization charges are incurred each year in Ohio as a result of injury. Of the millions of Ohioans who survive these injuries, many suffer long-term consequences which lead to even greater societal costs amounting to billions of dollars more annually in worker compensation claims, lost productivity, rehabilitation and criminal justice system expenses.

Adoption of evidence-based prevention policies can reduce injury-related deaths and prevent higher costs of dealing with the long-term consequences of injury. Over the past 20 years, injury prevention policies have saved thousands of lives. For example, policies promoting increased seat belt use have resulted in a significant reduction in motor vehicle crash fatalities. Recognized by the Centers for Disease Control and Prevention (CDC) as a "winnable battle," motor vehicle traffic crash deaths in Ohio decreased 31 percent from 1999 to 2009. Evidence-based injury prevention policies, such as seat belt laws, have the ability to reduce death and disability and improve the overall health and safety of our state. As policy makers, we trust that you are aware of the crucial role you play in ensuring that all Ohioans live injury free.

Thank you for your interest in learning how to help every Ohioan live his or her life to its fullest potential by reducing the burden of injury. If you have any questions or need additional information, please contact us at OhioInjuryPrevention@gmail.com.



Vince Caraffi
Chair
Ohio Injury Prevention Partnership



Dara Bakes
Immediate Past Chair
Ohio Injury Prevention Partnership

ABOUT THE OHIO INJURY PREVENTION PARTNERSHIP



Mission: To prevent injuries in Ohio using data and collaborative partnerships.

Vision: Working together to create a safe and injury-free Ohio.

The Ohio Injury Prevention Partnership (OIPP) is a group of professionals representing a broad range of agencies and organizations concerned with building Ohio's capacity to address the prevention of injury, particularly related to the group's identified priority areas of:

- Falls among older adults
- Prescription drug abuse and overdose
- Child/Youth Injury with a specific focus on:
 - o Motor vehicle traffic crashes
 - o Traumatic brain injury
 - o Infant suffocation
- Intentional injury including:
 - o Suicide
 - o Firearm-related violence

The OIPP was convened in November 2007 and is coordinated by the Ohio Department of Health (ODH) with funds from the Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control (NCIPC). OIPP action groups have been developed to create and implement action plans to address injury priorities, promote policy and systems change, and improve the quality and accessibility of statewide data. For more information on becoming a member of the OIPP or one of its action groups, please visit: www.healthyohioprogram.org/vipp/oipp/oipp.aspx.

ACKNOWLEDGEMENT

We would like to thank the Johns Hopkins Center for Injury Research and Policy for developing "Preventing Injury in Maryland: A Resource for State Policy Makers," which served as the model for this document. For more information about the Center please visit: <http://www.jhsph.edu/injurycenter>.

DISCLAIMER

The policies featured in this publication do not necessarily reflect the views of the Ohio Department of Health or any other state agency. Allowable activities related to contact with public policy makers vary by state; therefore it is important to consult internal agency rules, state laws, and (where applicable) federal laws to ensure full compliance.

YOUTH BICYCLE SAFETY



[illegible]

Bicycles are associated with more childhood injuries than any other consumer product except the automobile.¹

HOW DOES IT IMPACT THE U.S.?

- Between 2001 and 2007, 131 children and teens died each year from bicycle-related injuries in the United States.²
- In 2009, 272,377 children under the age of 18 sustained a bicycle-related injury.³
- Bicycle-related head injuries, most notably traumatic brain injuries (TBIs), are expensive because these injuries can endure and may require treatment for a lifetime.⁴ In one year, the U.S. incurred more than \$799 million in direct medical costs as a result of bicycle-related emergency department visits and hospitalizations for children under the age of 18.⁵

HOW DOES IT IMPACT OHIO?

- More than five Ohioans under the age of 18 died each year from bicycle-related TBIs from 1999 to 2007.⁶
- From 2002 to 2009, 7,629 young Ohioans were treated in emergency departments and 723 were hospitalized for bicycle-related TBIs.⁷
- Emergency department visits and hospitalizations for youth bicycle-related TBIs cost Ohioans more than \$28 million dollars in direct medical costs between 2002 and 2009.⁸

HOW DO WE ADDRESS THIS PROBLEM?

- Bicycle helmets are 85- to 88-percent effective in mitigating head and brain injuries, making the use of helmets the single most effective way to reduce head injuries and fatalities resulting from bicycle crashes. Universal bicycle helmet use by children ages 4 to 15 would prevent 39,000 to 45,000 head injuries, and 18,000 to 55,000 scalp and facial injuries annually.⁹
- In a recent survey, only 46.7 percent of Ohioans indicated that the oldest child in the household always or nearly always wore a helmet when bicycling, while 43.1 percent indicated that the oldest child seldom or never did.¹⁰
- Helmets significantly reduce the costs associated with bicycle-related head injuries. The purchase of a \$10 bicycle helmet saves approximately \$50 in direct medical costs. In addition, every bicycle helmet saves health insurers \$57 and auto insurers \$17.¹¹
- Bicycle helmet legislation is effective at increasing helmet use among cyclists, particularly in younger age groups, as well as decreasing head injury rates.^{12 13} In California, a bicycle helmet law, which led to an increase in helmet use, resulted in an 18.2 percent reduction in the proportion of TBIs among young bicyclists.¹⁴
- To date, 21 states, the District of Columbia, and at least 200 local governments (including 24 in Ohio) have enacted bicycle helmet laws. Most laws cover bicyclists under the age of 16.¹⁵

ADDITIONAL RESOURCES

Ohio Injury Prevention Partnership, Child Injury Action Group:

www.healthyohioprogram.org/vipp/ciag/ciag.aspx

Ohio Department of Health: www.healthyohioprogram.org/vipp/child/childinjury.aspx

National Center for Injury Prevention and Control, CDC:

www.cdc.gov/homeandrecreationalafety/bikeinjuries.html

National Highway Traffic Safety Administration: www.nhtsa.gov/Bicycles

Bicycle Helmet Safety Institute: www.bhsi.org/index.htm

REFERENCES

1 National SAFE KIDS Campaign (NSKC). Bicycle Injury Fact Sheet. Washington (DC): NSKC, 2004.

2 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

3 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

4 National Highway Traffic Safety Administration. 2008 Traffic Safety Facts. <http://www.nhtsa.gov/people/injury/TSFLaws/PDFs/810886.pdf>

5 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

6 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

7 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program

8 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program

9 National Highway Traffic Safety Administration. 2008 Traffic Safety Facts. www.nhtsa.gov/people/injury/TSFLaws/PDFs/810886.pdf

10 Ohio Behavioral Risk Factor Surveillance System, 2008

11 Children's Safety Network. Bicycle Helmets save Medical Costs for Children. October 2005. http://www.childrenssafetynetwork.org/publications_resources/PDF/bike/bicycle_helmets_childhood_injury_cost_prevention.pdf

12 Karkhanavich M, Kalenga J-C, Hagel BE, & Rowe BH. Effectiveness of bicycle helmet legislation to increase helmet use: a systematic review. *Injury Prevention*. 2006; 12(2): 76-82.

13 Macpherson A & Spinks A. Bicycle helmet legislation for the uptake of helmet use and the prevention of head injuries. *Cochrane Database of Systematic Reviews*. 2007; (2):CD005401.

14 Lee, BH-Y, Schofer, JL, & Koppelman, FS. Bicycle safety helmet legislation and bicycle-related non-fatal injuries in California. *Accident Analysis and Prevention*. 2005; 37(1): 93-102.

15 Bicycle Helmet Safety Institute. Helmet Laws for Bicycle Riders. <http://www.bhsi.org/mandator.htm>. Accessed Aug. 22, 2011.

CONCUSSION IN YOUTH SPORTS



[illegible]

CONCUSSION IN YOUTH SPORTS

A concussion is a type of traumatic brain injury (TBI) caused by a bump, blow, or jolt to the head or body. The injury can range from mild to severe and can disrupt the way the brain normally works. Brain injury is the leading cause of sports-related death in children.¹

HOW DOES IT IMPACT THE U.S.?

- Each year, U.S. emergency departments treat an estimated 135,000 sports- and recreation-related TBIs, including concussions, among children ages 5 to 18.²
- In one year, hospitalizations and emergency department visits for TBIs cost the U.S. more than \$2.6 billion in direct medical costs.³
- Among children and youth ages 5 to 18 years, the five leading sports or recreational activities that account for concussions include: bicycling, football, basketball, playground activities and soccer.⁴
- During the last decade (2001-2009), emergency department visits for sports- and recreation-related TBIs, including concussions, increased by 60 percent among children and adolescents.⁵

HOW DOES IT IMPACT OHIO?

- On average, nearly 4,000 Ohio youth were treated in emergency departments for sports- and recreation-related TBIs each year between 2002 and 2009.⁶
- In Ohio, emergency department visits for sports-related TBIs increased 142 percent from 2002 to 2009.⁷
- Between 2002 and 2009, sports-related TBIs cost Ohioans more than \$25.8 million in emergency department treatment charges and \$4.1 million in hospitalization costs.⁸

HOW DO WE ADDRESS THIS PROBLEM?

- An athlete who returns to play before they are fully healed risks a greater chance of sustaining a second concussion. Repeat or later concussions can cause permanent brain damage, paralysis, and even death. Children and teens are more likely to get a concussion and take longer to recover than adults.⁹
- The Centers for Disease Control and Prevention (CDC), the National Football League (NFL) and the National Collegiate Athletic Association (NCAA) recommend the adoption of policies designed to prevent and properly treat concussions among youth athletes containing the following three elements: 1) parents, coaches and athletes must be educated about the dangers of concussions prior to the start of the season; 2) athletes suspected of having a concussion must be removed from a game or practice and not be permitted to return to play and; 3) a licensed health care professional must clear an athlete to return to play in the subsequent days or weeks. As of October 2011, 31 states have enacted laws containing these three provisions.¹⁰
- Mandatory coach training is essential, as coaches are on the front lines of youth athletics and, in the absence of athletic trainers, make decisions about whether a child can continue to play after a potential injury. Coaches as well as parents, athletes, and officials need to know how concussions can occur, recognize all the signs and symptoms and understand the long-term consequences of repeated concussions. Free online trainings on concussion management are available from the Centers for Disease Control and Prevention and the National Federation of State High School Associations.

ADDITIONAL RESOURCES

Ohio Injury Prevention Partnership, Child Injury Action Group:

www.healthyohioprogram.org/vipp/ciag/ciag.aspx

Ohio Department of Health: www.healthyohioprogram.org/vipp/child/tbi.aspx

National Center for Injury Prevention and Control, CDC: www.cdc.gov/concussion

National Federation of State High School Associations: www.nfhs.org

Brain Injury Association of Ohio: www.biaoh.org

REFERENCES

1 Safe Kids USA. Sport and Recreation Safety Fact Sheet. September 2007. <http://www.safekids.org/assets/docs/ourwork/research/sports.pdf>.

2 Centers for Disease Control and Prevention. Nonfatal Traumatic Brain Injuries from Sports and Recreation Activities - United States, 2001-2005. Morbidity and Mortality Weekly Report. 2007; 56(29):733-737.

3 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html

4 Centers for Disease Control and Prevention. Nonfatal Traumatic Brain Injuries from Sports and Recreation Activities - United States, 2001-2005. Morbidity and Mortality Weekly Report. 2007; 56(29):733-737.

5 Centers for Disease Control and Prevention. Nonfatal Traumatic Brain Injuries Related to Sports and Recreation Activities Among Persons Aged ≤19 Years — United States, 2001—2009. Morbidity and Mortality Weekly Report. 2011; 60(39):1337-1342

6 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program

7 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program

8 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program

9 Centers for Disease Control and Prevention. Concussion in Sports. <http://www.cdc.gov/concussion/sports/index.html>. Accessed Aug 22, 2011.

10 National Football League. Concussion Legislation by State. <http://nflhealthandsafety.com/zackery-lystedt-law/states/>. Accessed Nov 7, 2011.

FALLS AMONG OLDER ADULTS



[illegible]

FALLS AMONG OLDER ADULTS

Falls and fall-related injuries seriously affect older adults' quality of life and present a substantial burden to the health care system. The need to address this issue will continue to grow as the number of Americans age 65 and older is expected to double in the next 25 years due to increased life expectancy and aging of the baby boomer population.

HOW DOES IT IMPACT THE U.S.?

- One in three adults age 65 and older falls each year. Of those who fall, 20 to 30 percent suffer moderate to severe injuries that make it hard for them to get around or live independently, and increase their risk of early death.^{1 2 3}
- Falls are the leading cause of injury death for older Americans. In 2007, 18,334 people 65 and older died from a fall.⁴
- In 2009, emergency departments treated 2.2 million nonfatal fall injuries among older adults; more than 582,000 of these patients had to be hospitalized.⁵
- In 2000, the total direct medical costs of all fall injuries for people 65 and older exceeded \$19 billion. By 2020, the annual direct and indirect cost of fall injuries is expected to reach \$54.9 billion.⁶

HOW DOES IT IMPACT OHIO?

- Falls are the leading cause of injury-related emergency department visits, hospitalizations and deaths for Ohioans age 65 and older. On average, 2.3 older Ohioans suffered fatal falls each day in 2009.^{7 8} There were also an average of 1.9 fall-related hospitalizations per hour, a fall-related emergency department visit every eight minutes and a fall every 2.5 minutes.^{9 10}
- Older Ohioans accounted for 14 percent of the Ohio population in 2009, but represented 82 percent of the fatal falls.
- From 2000 to 2009, Ohioans age 65 and older experienced a 125 percent increase in the number of fatal falls.¹¹
- Annual medical costs for fall-related hospitalizations in Ohio total \$298.5 million or \$26 for every Ohio resident.¹²

HOW DO WE ADDRESS THIS PROBLEM?

- Falls are not a normal part of aging. Proven strategies exist to reduce the risk of falls among older adults. Such interventions include: home modifications to reduce environmental hazards, regular vision screenings, vitamin D supplements, medication management including reducing the total number of prescriptions, raising low blood pressure, and exercise for balance, gait and strength training such as Tai Chi or physical therapy.^{13 14}
- Some states including Virginia, Georgia and Pennsylvania have enacted changes to their tax code to promote safe and accessible homes for older adults. The Virginia Livable Homes Tax Credit provides state tax credits for building, purchasing, or modifying homes that incorporate accessibility and visitability features.¹⁵
- The Ohio Department of Health and the Ohio Department of Aging fund local activities such as A Matter of Balance, a fall risk reduction program for older adults; however, funding is limited and no dedicated funding source currently exists to maintain these programs on a long-term basis.

ADDITIONAL RESOURCES

Ohio Injury Prevention Partnership, Ohio Older Adults Falls Prevention Coalition:

www.healthyohioprogram.org/vipp/oafpc/oafpc.aspx

Ohio Department of Health: www.healthyohioprogram.org/vipp/falls/fallsolder.aspx

National Center for Injury Prevention and Control, CDC:

www.cdc.gov/HomeandRecreationalSafety/Falls/index.html

National Council on Aging: www.ncoa.org/improve-health/falls-prevention/

REFERENCES

- 1 Hausdorff JM, Rios DA, Edelber HK. Gait variability and fall risk in community-living older adults: a 1-year prospective study. *Archives of Physical Medicine and Rehabilitation* 2001;82(8):1050–6.
- 2 Hornbrook MC, Stevens VJ, Wingfield DJ, Hollis JF, Greenlick MR, Ory MG. Preventing falls among community-dwelling older persons: results from a randomized trial. *The Gerontologist* 1994;34(1):16–23.
- 3 Alexander BH, Rivara FP, Wolf ME. The cost and frequency of hospitalization for fall-related injuries in older adults. *American Journal of Public Health* 1992;82(7):1020–3.
- 4 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html
- 5 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html
- 6 Stevens JA, Corso PS, Finkelstein EA, Miller TR. The costs of fatal and nonfatal falls among older adults. *Injury Prevention* 2006;12:290–5.
- 7 Ohio Department of Health, Office of Vital Statistics.
- 8 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program.
- 9 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program.
- 10 Ohio Behavioral Risk Factor Surveillance Survey, 2006
- 11 Ohio Department of Health, Office of Vital Statistics.
- 12 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program.
- 13 The American Geriatrics Society. AGS/BGS Clinical Practice Guideline: Prevention of Falls in Older Persons [2010]. http://www.americangeriatrics.org/health_care_professionals/clinical_practice/clinical_guidelines_recommendations/2010/
- 14 Stevens JA, Sogolow ED. Preventing Falls: What Works. A CDC Compendium of Effective Community-Based Interventions from Around the World. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2008. http://www.cdc.gov/HomeandRecreationalSafety/images/CDCCompendium_030508-a.pdf
- 15 Virginia Department of Housing and Community Development. Livable Home Tax Credit Program. http://www.dhcd.virginia.gov/HousingPreservationRehabilitation/Tax_credit_program.htm. Accessed: Sept. 14, 2011.

PRESCRIPTION DRUG OVERDOSE



[illegible]

PRESCRIPTION DRUG OVERDOSE

Due to the alarming increase of prescription drug abuse, drug overdose deaths now outnumber traffic crash fatalities nationwide and in Ohio.¹ Prescription opioids (pain relievers) such as OxyContin® and hydrocodone (Vicodin®) are involved in more drug overdose deaths than heroin and cocaine combined.²

HOW DOES IT IMPACT THE U.S.?

- Prescription drug overdoses killed nearly 15,000 people in the US in 2008. This is more than three times the number of people killed by these drugs in 1999.³
- Nearly half a million emergency department visits in 2009 were due to people misusing or abusing prescription painkillers.⁴
- Enough prescription opioids were prescribed in 2010 to medicate every American adult around-the-clock for a month.⁵

HOW DOES IT IMPACT OHIO?

- In 2009, an average of four Ohioans died each day due to a drug overdose.⁶
- From 1999 to 2009, Ohio's death rate due to drug overdose increased 335 percent. The increase in deaths has been driven largely by prescription opioids.⁷
- Prescription opioids were involved in at least four out of 10 (39 percent) fatal drug overdoses in Ohio in 2009, more than heroin and cocaine combined.⁸
- Fatal and non-fatal drug poisonings cost Ohioans \$3.6 billion annually or \$303 per Ohio resident.⁹ On average, overdose-related hospitalizations in Ohio cost an average of \$10,488 per stay.¹⁰

HOW DO WE ADDRESS THIS PROBLEM?

- Naloxone is a medication that is administered by emergency medical professionals to reverse respiratory depression caused by an opioid overdose.¹¹ Several states have removed legal and regulatory barriers to allow for the implementation of Naloxone Prescription Programs (NPPs), which provide overdose training and take-home doses of Naloxone to those who are deemed high-risk for an overdose.¹² Since 1996, more than 53,000 laypersons have been trained by NPPs resulting in more than 10,000 overdose reversals using Naloxone.¹³ Naloxone has no potential for misuse or abuse and studies show that side effects are extremely rare.¹⁴
- The optimal response to an overdose is to seek medical attention immediately. However, there remains reluctance on the part of bystanders to seek immediate medical attention for fear of police harassment and/or prosecution for drug possession.^{15 16} To address this issue, several states have enacted laws that provide limited immunity from prosecution for drug possession to individuals who contact emergency medical services and those experiencing an overdose.¹⁷
- Screening, Brief Intervention and Referral to Treatment (SBIRT) is an effective, cost-saving approach to the delivery of early intervention and treatment services for persons with substance use disorders, as well as those who are at risk of developing these disorders.^{18 19} In order to reimburse for SBIRT, states must activate billing codes to allow for Medicaid to pay for SBIRT services. Currently, Ohio Medicaid does not reimburse for drug and alcohol abuse screenings. A survey conducted by the National Association of State Medicaid Directors in 2009 revealed that 15 states have activated SBIRT billing codes in their respective Medicaid programs.

ADDITIONAL RESOURCES

Ohio Injury Prevention Partnership, Prescription Drug Abuse Action Group:

www.healthyohioprogram.org/vipp/pdaag/pdaag.aspx

Ohio Department of Health, Drug Poisoning:

www.healthyohioprogram.org/vipp/drug/dpoison.aspx

Prescription for Prevention: www.P4POhio.org

National Center for Injury Prevention and Control, CDC:

www.cdc.gov/HomeandRecreationalSafety/Poisoning/index.html

REFERENCES

- 1 Kochanek K, Xu J, Murphy S, Miniño A, Kung HC. Deaths: Preliminary Data for 2009. National Vital Statistics Reports 2011; 59(4).
- 2 Centers for Disease Control and Prevention. Unintentional Drug Poisoning in the United States. July 2010. http://www.cdc.gov/HomeandRecreationalSafety/Poisoning/brief_full_page.htm
- 3 Centers for Disease Control and Prevention. Vital Signs: Prescription Painkiller Overdoses in the US. November 2011. <http://www.cdc.gov/Vitalsigns/pdf/2011-11-vitalsigns.pdf>
- 4 Centers for Disease Control and Prevention. Vital Signs: Prescription Painkiller Overdoses in the US. November 2011. <http://www.cdc.gov/Vitalsigns/pdf/2011-11-vitalsigns.pdf>
- 5 Centers for Disease Control and Prevention. Vital Signs: Prescription Painkiller Overdoses in the US. November 2011. <http://www.cdc.gov/Vitalsigns/pdf/2011-11-vitalsigns.pdf>
- 6 Ohio Department of Health, Office of Vital Statistics
- 7 Ohio Department of Health, Office of Vital Statistics
- 8 Ohio Department of Health, Office of Vital Statistics
- 9 Ohio Department of Health. The Burden of Poisoning in Ohio. October 2010. www.healthyohioprogram.org/ASSETS/OE9B51A79D3E4654BDOEO1779E14667E/Burden.pdf
- 10 Ohio Department of Health. The Burden of Poisoning in Ohio. October 2010. www.healthyohioprogram.org/ASSETS/OE9B51A79D3E4654BDOEO1779E14667E/Burden.pdf
- 11 Beletsky L, Burris S, Kral A. Closing Death's Door: Action Steps to Facilitate Emergency Opioid Drug Overdose Reversal in the United States. The Center for Health Law, Politics and Policy, Temple University Beasley School of Law 2009. <http://www.ihra.net/>
- 12 Burris S, Beletsky L, Castagna C, Coyle C, Crowe C, McLaughlin JM. Stopping an Invisible Epidemic: Legal Issues in the Provision of Naloxone to Prevent Opioid Overdose. Drexel Law Review 2009. Vol. 1: 273-340.
- 13 Unpublished Survey -Harm Reduction Coalition, Eliza Wheeler, November 2010
- 14 Buajordet I, Naess AC, Jacobsen D, Brors O. Adverse events after Naloxone treatment of episodes of suspected acute opioid overdose. European Journal of Emergency Medicine 2004; 11(1): 19-23.
- 15 Bohnert A, Tracy M, Galea S. Circumstances and witness characteristics associated with overdose fatality. Ann Emerg Med. 2009; 54(4): 618-624.
- 16 Melissa T, Pipera TM, Ompada D, Bucciarellia A, Coffina PO, Vlahova D, Galea S. Circumstances of witnessed drug overdose in New York City: implications for intervention. Drug and Alcohol Dependence 2005; 79(2): 181-190.
- 17 Drug Policy Alliance. 911 Good Samaritan Laws: Preventing Overdose Deaths, Saving Lives. August 2011. <http://www.drugpolicy.org/resource/911-good-samaritan-laws-preventing-overdose-deaths-saving-lives>.
- 18 Madras BK, Compton WM, Avula D, Stegbauer T, Stein JB, Clark WH. Screening, brief interventions, referral to treatment (SBIRT) for illicit drug and alcohol use at multiple healthcare sites: Comparison at intake and six months. Drug Alcohol Dependence 2009; 99(1-3): 280-295.
- 19 Fleming MF, Mundt MP, French MT, Manwell LB, Stauffacher EA, Barry KL. Benefit-Cost Analysis of Brief Physician Advice With Problem Drinkers in Primary Care Settings. Medical Care 2000; 38(1): 7-18.

TEEN DRIVING SAFETY



[illegible]

In Ohio and across the country, motor vehicle crashes kill more teens than any other cause of death.

HOW DOES IT IMPACT THE U.S.?

- Motor vehicle crashes are the leading cause of death for U.S. teens, accounting for more than one in three deaths in this age group. In 2009, eight teens died each day from a traffic crash.^{1 2}
- In 2008, more than 350,000 teens were treated in emergency departments for injuries suffered in motor vehicle crashes, amounting to an average of 40 ED visits per hour.³
- In one year alone, crash-related injuries and deaths among teens ages 15 to 19 cost more than \$14 billion in medical care and productivity losses.⁴

HOW DOES IT IMPACT OHIO?

- In Ohio, motor vehicle crashes kill more teens than any other cause of death.
- In 2010, 114 Ohioans ages 16 to 20 were killed and more than 16,000 were injured in motor vehicle crashes.⁵
- In one year, motor vehicle crash-related injuries and deaths among young Ohioans ages 16 to 20 cost more than \$1.9 billion in direct medical care expenses or more than \$164 for every Ohio resident.⁶

HOW DO WE ADDRESS THIS PROBLEM?

- Strengthening of the Graduated Drivers Licensing (GDL) system to include extended learner periods, nighttime restrictions, and passenger restrictions are proven interventions to reduce teen crash rates.^{7 8}
- The single most effective GDL provision appears to be the extension of the learner's period when this extension delays the time at which unsupervised driving is permitted.⁹ A six-month delay (16 to 16½) of licensure has shown to reduce fatal crash rates by 7 percent; a one-year delay (16 to 17) lowered the risk by 13 percent.¹⁰
- From 2006 to 2010, more than half (57.6 percent) of fatal crashes in Ohio involving teenage drivers had one or more passengers in the vehicle.¹¹ A review of national data found that the risk of fatal injury for a 16- or 17-year-old driver significantly increases with the number of passengers in the vehicle.¹² Ohio law does not limit the number of passengers a teen driver is allowed to transport at any given time.
- Enactment of a primary seat belt law for Ohio teens should be a priority when addressing teen driver safety. Primary seat belt laws allow police officers to pull over and ticket drivers solely for a safety belt violation and are associated with increased seat belt use among teens and lower occupant fatality rates.^{13 14 15} Primary enforcement laws for teen drivers are essential because Ohio teens are less likely to wear their seat belts putting them at greater risk for injury and death. Of those killed in a crash in 2010, only 29.4 percent of teens were wearing a seat belt compared to the state average of 38.6 percent.¹⁶ States with secondary enforcement laws, such as Ohio, could increase belt use by as much as 10 percentage points and improve public safety considerably by upgrading to primary enforcement.¹⁷ At a minimum, 18 Ohio lives would be saved each year.¹⁸

ADDITIONAL RESOURCES

Ohio Injury Prevention Partnership, Child Injury Action Group:

www.healthyohioprogram.org/vipp/ciag/ciag.aspx

National Center for Injury Prevention and Control, CDC: www.cdc.gov/motorvehiclesafety/teen_drivers

National Highway Traffic Safety Administration: www.nhtsa.gov/Teen-Drivers

Ohio Department of Public Safety, Office of Traffic Safety: www.ohiohighwaysafetyoffice.ohio.gov

National Safety Council: www.nsc.org/SAFETY_ROAD/TEENDRIVING/Pages/teen_driving.aspx

REFERENCES

1 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

2 Centers for Disease Control and Prevention. Policy Impact: Teen Driver Safety. <http://www.cdc.gov/concussion/sports/index.html>. Accessed Aug 24, 2011.

3 Centers for Disease Control and Prevention. Policy Impact: Teen Driver Safety. <http://www.cdc.gov/concussion/sports/index.html>. Accessed Aug 24, 2011.

4 Naumann RB, Dellinger AM, Zaloshnja E, Lawrence BA, Miller TR. Incidence and Total Lifetime Costs of Motor Vehicle-Related Fatal and Nonfatal Injury by Road User Type, United States, 2005. *Traffic Injury Prevention* 2010; 11(4):353-360.

5 Ohio Department of Public Safety. Ohio Crash Statistics 2010. <https://ext.dps.state.oh.us/crashreports/crashreports.aspx>.

6 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

7 Preusser DF, Tison J. GDL then and now. *Journal of Safety Research* 2007; 38(2):159-63.

8 Chen LH, Baker SP, Braver ER, Li G. Carrying passengers as a risk factor for crashes fatal to 16- and 17- year old drivers. *JAMA* 2000; 283:1578-1582.

9 Williams, AF (2007). Contribution of the components of graduated licensing to crash reductions. *Journal of Safety Research*, 38(2), 177-184.

10 Williams AF, Shults RA. Graduated Driver Licensing Research, 2007-Present: A Review and Commentary. *Journal of Safety Research* 2010; 41: 77-84.

11 Ohio Department of Public Safety, Office of Traffic Safety. Ohio Crash Statistics 2006-2010.

12 Chen LH, Baker SP, Braver ER, Li G. Carrying passengers as a risk factor for crashes fatal to 16- and 17- year old drivers. *JAMA* 2000; 283:1578-1582.

13 McCartt A, Northrup VS. Factors related to seat belt use among fatally injured teenage drivers. *Journal of Safety Research* 2004; 35(1):29-38

14 Liu C, Lindsey T, Chen CL, Utter D. States With Primary Enforcement Laws Have Lower Fatality Rates. NHTSA 2008; <http://www.nrd.nhtsa.dot.gov/Pubs/810557.PDF>

15 Fell JC, Baker TK, McKnight AS, Brainard K, Langston E, Rider R, Levy D, Grube J. Increasing Teen Safety Belt Use: A Program and Literature Review. NHTSA 2005; www.nhtsa.gov/staticfiles/ntj/pdf/809899.pdf.

16 Ohio Department of Public Safety, Office of Traffic Safety. Ohio Crash Statistics 2006-2010.

17 Houston DJ, Richardson LE Jr. Safety belt use and the switch to primary enforcement, 1991-2003. *American Journal of Public Health*. 2006 Nov;96(11):1949-54.

18 Conner, K. Smith, GA. Xiang, H. The Impact of a Standard Enforcement Safety Belt Law on Fatalities and Hospital Charges in Ohio: An Analysis using 2003 Ohio CODES Data. Center for Injury Research and Policy, Columbus, Ohio, March 2007.



INFANT SAFE SLEEP



[illegible]

Infant deaths due to suffocation result when the child is in a place or position where he or she is unable to breathe. The majority of these suffocations happen to infants while they are in unsafe sleeping environments.¹

HOW DOES IT IMPACT THE U.S.?

- From 1997 to 2007, an average of 618 infants² died each year as a result of unintentional suffocation.³
- More than 84,000 infants sustained injuries as a result of unintentional suffocation between 2001 and 2009.⁴
- In 2005, infant suffocation injuries and deaths cost the U.S. more than \$800 million dollars in medical costs and lost productivity.⁵

HOW DOES IT IMPACT OHIO?

- Suffocation is the leading cause of injury death for infants in Ohio. In 2008, an average of three Ohio infants suffered a sleep-related fatality every week.⁶
- According to Ohio Child Fatality Review data, sleep-related deaths accounted for 15 percent (166) of the 1,104 total reviews for infant deaths in 2008, more than any single cause of death except prematurity. Sixty-six percent (109) of the sleep-related deaths occurred in locations considered unsafe, such as in adult beds and on couches. Sixty-two percent (103) occurred to infants who were sharing a sleeping surface (bed sharing) with someone else at the time of death.⁷
- In one year, infant sleep-related fatalities cost Ohioans more than \$51 million in medical care and productivity loss.⁸

HOW DO WE ADDRESS THIS PROBLEM?

- Most infant suffocation occurs in the sleeping environment. Infants should be placed on their backs to sleep in bare cribs that meet safety standards of the Consumer Product Safety Commission (CPSC) and the Juvenile Products Manufacturers Association (JPMA).⁹
- Babies should not sleep on beds, sofas, car seats (overnight), recliners, chairs, soft surfaces, bouncy chairs, or baby swings.¹⁰
- Education is essential to reducing the number of sleep-related infant fatalities. Safe sleep education laws aimed at providing educational materials to new parents and child care providers have been implemented in other states and similar laws have been adopted in Ohio to educate parents on other infant safety issues. For example, Claire's Law (SB 144, 127th GA) requires the development and distribution of educational materials regarding Shaken Baby Syndrome to expectant and new parents.
- Infant product manufacturers have a responsibility to promote safe products and environments to parents. Other policy efforts to prevent infant sleep suffocation are aimed at preventing the sale of unsafe consumer products, such as new and second-hand cribs that do not meet the CPSC/JPMA safety requirements, and preventing the marketing of unsafe sleep environments to parents.

ADDITIONAL RESOURCES

Ohio Injury Prevention Partnership, Child Injury Action Group:

www.healthyohioprogram.org/vipp/ciag/ciag.aspx

Ohio Department of Health, Child Fatality Review:

www.odh.ohio.gov/odhprograms/cfhs/cfr/cfr1.aspx

Safe Kids USA: www.safekids.org

Consumer Product Safety Commission: www.cpsc.gov

American Academy of Pediatrics: www.healthychildren.org

REFERENCES

1 National MCH Center for Child Death Review. Suffocation Fact Sheet. <http://www.childdeathreview.org/causesSUF.htm>. Accessed October 11, 2011.

2 Ages 0 -1

3 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html

4 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html

5 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html

6 2008 Ohio Child Fatality Review Data

7 2008 Ohio Child Fatality Review Data

8 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html

9 Safe Kids USA. Suffocation Prevention Tips. www.safekids.org/safety-basics/safety-resources-by-risk-area/choking-suffocation-and-strangulation/suffocation-prevention-tips.html. Accessed September 2, 2011.

10 Safe Kids USA. Suffocation Prevention Tips. www.safekids.org/safety-basics/safety-resources-by-risk-area/choking-suffocation-and-strangulation/suffocation-prevention-tips.html. Accessed September 2, 2011.

CHILD PASSENGER SAFETY



[illegible]

Nearly half of U.S. children 14 and under who died in automobile crashes were completely unrestrained.¹ Properly installed car seats and booster seats can save countless young lives.

HOW DOES IT IMPACT THE U.S.?

- Motor vehicle crashes are the leading cause of death for children ages 3 to 14.²
- From 1999 to 2007, 3,882 children ages 7 years and younger died as occupants in motor vehicle crashes, and approximately 770,000 were injured.³
- In one year, motor vehicle-related fatalities and injuries of children under the age of 8 resulted in more than \$586 million in direct medical costs.⁴

HOW DOES IT IMPACT OHIO?

- From 2006 to 2009, motor vehicle crashes remained the leading cause of injury death for Ohio children ages 5 to 9 and the third-leading cause for ages 1 to 4.⁵
- From 1999 to 2007, 58 Ohioans under the age of 8 were killed as occupants in traffic crashes.⁶
- In 2010, 8,091 young passengers were injured in motor vehicle crashes in Ohio.⁷
- A five-year review of child fatalities related to motor vehicle crashes in Ohio (2004-2008) determined that only 29 percent of fatally-injured youth occupants were properly restrained.⁸

HOW DO WE ADDRESS THIS PROBLEM?

- Child restraints (car seats and booster seats) are the most effective strategy for preventing injury and death to children involved in car crashes. From 1975 to 2009, approximately 9,310 lives have been saved by the use of child restraints. However, only 50 percent of children ages 4 to 7 are appropriately restrained in child safety seats.⁹
- Child restraints are also cost effective. Every \$46 child safety seat saves \$330 in insurance and tax payments, including \$160 in auto insurance costs, \$100 in health costs, and \$70 in taxes.¹⁰
- Primary enforcement laws, which allow police officers to pull over and ticket solely for a child passenger safety violation, are effective at increasing restraint use.¹¹ Ohio is only one of four states where proper booster seat use is considered a secondary offense, which means that a police officer cannot stop and ticket a driver for the sole offense of not having a child properly restrained.¹² Lack of a primary provision is cited as one of the top barriers to the enforcement of booster seat and other child restraint laws, as it creates uncertainty among law enforcement.¹³
- Increasing the minimum child restraint fine would provide additional resources to state programs that provide education and distribute child safety seats to low-income families in Ohio.
- Ohio law exempts child care providers from having to secure a child in a booster seat when transported in a regulated vehicle that is used by a licensed child care center. Removing this exemption could protect thousands more young Ohioans, as booster seats have been shown to lower the risk of injury to children in crashes by 59 percent, compared with the use of vehicle safety belts.¹⁴

ADDITIONAL RESOURCES

Ohio Injury Prevention Partnership, Child Injury Action Group:

www.healthyohioprogram.org/vipp/ciag/ciag.aspx

Ohio Department of Health, Child Passenger Safety Program:

www.healthyohioprogram.org/vipp/cps/cps.aspx

Centers for Disease Control and Prevention:

www.cdc.gov/Motorvehiclesafety/Child_Passenger_Safety/index.html

National Highway Traffic Safety Administration: www.nhtsa.gov/Safety/CPS

REFERENCES

1 Safe Kids USA. Child Passenger Safety. <http://www.safekids.org/our-work/programs/buckle-up/child-passenger-safety.html>. Accessed October 11, 2011.

2 National Highway Traffic Safety Administration. Traffic Safety Facts 2008 Data: Children. <http://www-nrd.nhtsa.dot.gov/Pubs/811157.pdf>

3 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html

4 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html

5 Ohio Department of Health Office of Vital Statistics

6 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System [WISQARS]. www.cdc.gov/injury/wisqars/index.html

7 Ohio Department of Public Safety. Ohio Crash Statistics 2010. <https://ext.dps.state.oh.us/crashreports/crashreports.aspx>.

8 2008 Ohio Child Fatality Review Data

9 National Highway Traffic Safety Administration. Enforcement of Booster Seat Laws: Examples from Delaware, New Jersey, Pennsylvania, and Washington. April 2010.

10 Children's Safety Network. Child Safety Seats: How Large are the Benefits and Who Should Pay? October 2005. http://www.childrenssafetynetwork.org/publications_resources/PDF/cps/child_safety_seats_childhood_injury_cost_prevention.pdf

11 Shults R, Elder RW, Sleet D, Thompson R, Nichols J. Primary enforcement seat belt laws are effective even in the face of rising belt use rates. *Accident Analysis & Prevention* 2004; 36(3): Pages 491-493.

12 National Conference of State Legislatures. Traffic Safety and Public Health: State Legislative Action. April 2009. <http://www.ncsl.org/documents/transportation/08trafficsafety.pdf>

13 National Highway Traffic Safety Administration. Enforcement of Booster Seat Laws: Examples from Delaware, New Jersey, Pennsylvania, and Washington. April 2010.

14 Winston FK, Journal of the American Medical Association. Partners for Child Passenger Safety (PCPS), The Children's Hospital of Philadelphia, June 4, 2003.

SUICIDE PREVENTION



[illegible]

Suicide is a serious public health problem that can have lasting harmful effects on individuals, families, and communities. People may consider suicide when they are hopeless and cannot see any other solution to their problems. Often it is related to serious depression, alcohol or substance abuse, or a major stressful event.¹ While the causes of suicide are complex and determined by multiple factors, the goal of suicide prevention is to reduce risk factors and increase protective factors.

HOW DOES IT IMPACT THE U.S.?

- In 2007, suicide was the 10th leading cause of death in the U.S., accounting for 34,598 fatalities and costing Americans approximately \$100 million in direct medical costs.²
- An estimated 11 nonfatal suicide attempts occur per every suicide death. Men and older adults are more likely to have fatal attempts than are women and youth. More than 395,000 attempted suicides were reported in 2007.³
- Firearms, suffocation, and poisonings/drug overdose are the most common methods of suicide. However, men and women differ in the method used. From 2002 to 2006, the greatest percentage of suicides among males occurred by firearms (57.7 percent) while the greatest percentage of suicides among females occurred by poisoning (38.8 percent).⁴

HOW DOES IT IMPACT OHIO?

- 1,341 Ohioans took their own lives in 2009 and at least 14,000 attempted suicide.^{5 6}
- In one year, suicides cost Ohio more than \$1 billion dollars in direct medical costs and lost productivity or \$86 per Ohio resident.⁷
- Suicide is the second leading cause of death for Ohioans age 10 to 34.⁸
- On average, more than half (51 percent) of suicides in Ohio are firearm-related, while 22 percent result from suffocation/hanging and 19 percent from poisoning/overdose.⁹

HOW DO WE ADDRESS THIS PROBLEM?

- For U.S. youth between the ages of 10 and 24, suicide is the third leading cause of death. It results in approximately 4,400 lives lost each year. Recognizing that educators and other school personnel are in a prime position to identify the signs of suicide and help prevent it, 19 states either mandate or encourage suicide prevention training and screening programs in schools. Currently, Ohio does not have any such requirement.¹⁰
- Reducing the odds that an attempter will use highly lethal means is an important part of a comprehensive approach to suicide prevention. Ohio is one of only seven states that does not call for reducing access to lethal means as part of its statewide suicide prevention plan.¹¹
- Suicide risk increases significantly with the presence of a firearm in the home.¹² Policies that encourage proper firearm storage, including the use of gun locks, have been shown to reduce gun-related suicides, particularly among youth.^{13 14}

ADDITIONAL RESOURCES

Ohio Suicide Prevention Foundation: www.ohiospf.org

Ohio Department of Mental Health: <http://mentalhealth.ohio.gov>

Harvard Injury Control Research Center: www.hsph.harvard.edu/means-matter

National Center for Injury Prevention and Control, CDC:
www.cdc.gov/violenceprevention/suicide

American Foundation for Suicide Prevention: www.afsp.org

REFERENCES

1 U.S. National Library of Medicine. Suicide. <http://www.nlm.nih.gov/medlineplus/suicide.html>. Accessed October 11, 2011.

2 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

3 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

4 <http://www.cdc.gov/ViolencePrevention/suicide/statistics/aag.html#4>

5 Ohio Department of Health, Office of Vital Statistics

6 Ohio Hospital Association, Data Analyzed by the Ohio Department of Health's Violence and Injury Prevention Program

7 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

8 Ohio Department of Health, Office of Vital Statistics

9 Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS). www.cdc.gov/injury/wisqars/index.html

10 American Foundation for Suicide Prevention. State Laws on Suicide Prevention Training for School Personnel. August 2011. http://www.afsp.org/?fuseaction=home.download&folder_file_id=40667830-C606-D205-75030AA725056F3A.

11 State Survey Results. Harvard University School of Public Health. <http://www.hsph.harvard.edu/means-matter/basic-suicide-facts/state-information/index.html#results>. Accessed September 12, 2011.

12 Miller M, Hemenway D. Guns and Suicide in the United States. *The New England Journal of Medicine* 2008; 359(10): 989-991.

13 Shenassa E, Rogers M, Spalding K, Roberts M. Safer storage of firearms at home and risk of suicide: a study of protective factors in a nationally representative sample. *Journal of Epidemiology and Community Health* 2004; 58:841-848.

14 Grossman DC, Mueller BA, Riedy C. Gun storage practices and risk of youth suicide and unintentional firearm injuries. *Journal of American Medical Association*. 2005; 293(6):707-14.

CHILD MALTREATMENT



[illegible]

Child maltreatment includes all types of abuse and neglect of a child under the age of 18 by a parent, caregiver, or another person in a custodial role.¹ Children who are abused or neglected are at higher risk for health problems as adults. These problems include alcoholism, depression, drug abuse, eating disorders, obesity, high-risk sexual behaviors, smoking, suicide, and certain chronic diseases leading to great societal costs and decreased quality of life for these survivors.²

HOW DOES IT IMPACT THE U.S.?

- Approximately 702,000 children were identified as abused or neglected in the United States during 2009. This is about 1,900 children each day across the U.S.³
- An estimated 1,770 U.S. children died from abuse and neglect in 2009.⁴
- One study estimated that one in five U.S. children experience some form of child maltreatment: approximately 1 percent were victims of sexual assault; 4 percent were victims of child neglect; 9 percent were victims of physical abuse; and 12 percent were victims of emotional abuse.⁵
- In 2007, child maltreatment resulted in more than \$33 billion in direct costs in the U.S. (i.e. hospitalizations, child welfare services, mental health care and law enforcement).⁶

HOW DOES IT IMPACT OHIO?

- Ohio's maltreatment fatality rates have been increasing. From 1998 to 2009, Ohio's rate has increased 53 percent.⁷
- In 2009, Ohio public children services agencies investigated 79 child deaths resulting from maltreatment. This equates to a young Ohioan dying from abuse or neglect every 5 days.⁸
- During calendar year 2009, investigations by public children services agencies in Ohio revealed that 31,270 children were identified as victims of maltreatment. This is the equivalent of 86 children per day.⁹
- Of the child maltreatment cases reported in Ohio in 2009, nearly half (48 percent) were neglected, 37.5 percent suffered physical abuse, 19.4 percent endured sexual abuse, 6.5 percent were subject to psychological maltreatment and 1.5 percent were medically neglected.¹⁰
- In one year, child maltreatment cost the state of Ohio more than \$632 million in direct medical care, mental health care, and public program (police, fire, social work) costs.¹¹

HOW DO WE ADDRESS THIS PROBLEM?

- Prevention efforts should ultimately reduce risk factors and increase protective factors, such as a combination of individual, relational, community, and societal factors.¹²
- Greater investments are needed in evidence-based programs that stop abuse before it occurs, such as early childhood home visitation by professionals (e.g. nurses, social workers, etc.) who provide assistance for children in the first two to three years of life and their parents/guardians. Such programs should identify high-risk families and encourage interventions that focus on strengthening parenting skills, increasing knowledge and understanding of child development, increasing awareness of and access to resources, reducing isolation and developing positive coping skills.¹³
- Child maltreatment prevention services should be emphasized during the first few months of an infant's life when the risk for homicide is at its highest.¹⁴

ADDITIONAL RESOURCES

Ohio Injury Prevention Partnership, Child Injury Action Group:

www.healthyohioprogram.org/vipp/ciag/ciag.aspx

Ohio Help Me Grow Program: www.ohiohelpmegrow.org

Ohio Children's Trust Fund: <http://jfs.ohio.gov/octf>

National Center for Injury Prevention and Control, CDC:

www.cdc.gov/ViolencePrevention/childmaltreatment

US Department of Health and Human Services, Administration for Children and Families:

www.acf.hhs.gov/index.html

REFERENCES

1 Centers for Disease Control and Prevention. Understanding Child Maltreatment Fact Sheet 2010. <http://www.cdc.gov/violenceprevention/pdf/CM-FactSheet-a.pdf>

2 Edwards, VJ, Anda, RF, Dube, SR, Dong, M, Chapman, DF, Felitti, VJ. The wide-ranging health consequences of adverse childhood experiences. In Kathleen Kendall-Tackett and Sarah Giacomoni (eds.) *Victimization of Children and Youth: Patterns of Abuse, Response Strategies*, Kingston, NJ: Civic Research Institute; 2005.

3 U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Children's Bureau. Child Maltreatment 2009. http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can.

4 U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Children's Bureau. Child Maltreatment 2009. http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can.

5 Centers for Disease Control and Prevention. Child Maltreatment 2010 Facts at a Glance. <http://www.cdc.gov/violenceprevention/pdf/CM-DataSheet-a.pdf>

6 Wang CT, Holton J. Total Estimated Cost of Child Abuse and Neglect in the United States. Prevent Child Abuse America 2007. http://member.preventchildabuse.org/site/DocServer/cost_analysis.pdf?docID=144

7 U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Children's Bureau. Child Maltreatment 2009. http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can.

8 U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Children's Bureau. Child Maltreatment 2009. http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can.

9 U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Children's Bureau. Child Maltreatment 2009. http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can.

10 U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. Child Maltreatment 2009. http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can.

11 Children's Safety Network, Cost of Child Abuse and Neglect in Ohio, 2007, http://www.childrenssafetynetwork.org/publications_resources/PDF/childmaltreatment/CAN07OH.pdf

12 Centers for Disease Control and Prevention. Child Maltreatment: Risk and Protective Factors. <http://www.cdc.gov/ViolencePrevention/childmaltreatment/riskprotectivefactors.html>. Accessed: September 13, 2011.

13 CDC Guide to Community Preventive Services. Early childhood home visitation to prevent violence. www.thecommunityguide.org/violence/home/homevisitation.html. Accessed September 13, 2011.

14 Report from the Ohio Commission on the Prevention of Injury 2003. Child Maltreatment Chapter. 2002. <http://www.publicsafety.ohio.gov/links/child%20maltreatment.pdf>

ATV SAFETY



[illegible]

An ATV (all-terrain vehicle) is an off-road, motorized vehicle having three or four low pressure tires, a straddle seat for the operator, and handlebars for steering control.¹ ATV-related injuries commonly occur due to rollovers, collisions with stationary objects and falling from the vehicle.²

HOW DOES IT IMPACT THE U.S.?

- In 2009, approximately 131,900 people were treated in U.S. emergency departments for ATV-related injuries.³
- Between 2000 and 2009, more than 1,300 children younger than 16 years died as a result of ATV-related injuries.⁴
- ATVs are associated with a significant and increasing number of hospitalizations for children. Total pediatric hospitalizations for ATV injuries have increased 150 percent from an estimated 1,618 in 1997 to 4,039 in 2006.⁵

HOW DOES IT IMPACT OHIO?

- Ohio ranks in the top 15 states nationally in the number of deaths caused by ATVs.⁶
- Between 2007 and 2009, 65 Ohioans died as a result of ATV-related injuries.⁷
- Since 1982, more than 75 children in Ohio under the age of 16 have died as a result of ATV use.⁸
- Each year, there are more than 10,000 hospital visits for injuries related to ATV use in Ohio.⁹

HOW DO WE ADDRESS THIS PROBLEM?

- Compared to helmeted riders, riders who operate an ATV without helmets are more likely to receive significant injuries to the head, face and neck.¹⁰ Helmet use by ATV riders can reduce the risk of death by 42 percent and the risk of non-fatal head injuries by 64 percent.¹¹ In 2006, only one out of four (26 percent) Ohio ATV users reported always wearing a helmet when they rode.¹²
- The American Academy of Orthopaedic Surgeons (AAOS), the Orthopaedic Trauma Association (OTA), and the Pediatric Orthopaedic Society of North America (POSNA) recommend several policies to reduce ATV-related injuries and fatalities, including prohibiting the use of ATVs by children under 12, requiring helmet and proper eye protection use (on public and private land), prohibiting passengers from riding on ATVs, requiring safety education certification, and prohibiting the use of ATVs between sundown and sunrise.¹³
- The increasing size and speed of today's ATVs are also likely contributing to more serious injuries. In a recent study, all of the children who were treated for ATV injuries had been driving adult sized-ATVs.¹⁴ The AAOS also recommends that ATVs with a 90cc or greater engine size should not be used by children under the age of 16, as young riders do not have the adequate physical strength or size to control such vehicles, nor do they have the cognitive abilities or judgment necessary to make safe decisions in handling these powerful machines.
- A June 2006 poll of registered Ohio voters found strongest support for restricting use of ATVs by children (81 percent), requiring mandatory safety classes (81 percent), prohibiting passengers (78 percent) and requiring helmets (77 percent).¹⁵

ADDITIONAL RESOURCES

Consumer Product Safety Commission: www.atvsafety.gov/index.html

Concerned Families for ATV Safety: www.atvsafetynet.org/index.html

National Safety Council: www.nsc.org

American Academy of Orthopaedic Surgeons: www.aaos.org/about/papers/position/1101.asp

The Center for Injury Research and Policy: www.injuryresearch.net/atv.aspx

REFERENCES

1 U.S. Consumer Product Safety Commission. 2008 Annual report on ATV-related deaths and injuries. <http://www.cpsc.gov/library/foia/foia10/os/atv2008.pdf>.

2 National SAFE KIDS Campaign (NSKC). ATV Injury Fact Sheet. Washington (DC): NSKC, 2004. http://www.preventinjury.org/PDFs/ATV_INJURY.pdf.

3 Consumer Product Safety Commission. ATV Safety, National Statistics. www.atvsafety.gov/stats.html. Accessed Aug 31, 2011.

4 Consumer Product Safety Commission. ATV Safety, National Statistics. www.atvsafety.gov/stats.html. Accessed Aug 31, 2011.

5 Bowman SM and Aitken ME. Still unsafe, still in use: Ongoing epidemic of all-terrain vehicle injury hospitalizations among children. *Journal of Trauma* 2010; 69(6):1344-9.

6 Consumer Product Safety Commission. Deaths Associated With ATVs by State. <http://www.atvsafety.gov/state/statstats.html>. Accessed Aug 31, 2011.

7 Consumer Product Safety Commission. ATV Safety, Ohio. www.atvsafety.gov/state/ohio.html. Accessed Aug 31, 2011.

8 Consumer Product Safety Commission. ATV Safety, Ohio. www.atvsafety.gov/state/ohio.html. Accessed Aug 31, 2011.

9 Center for Injury Research and Policy of The Research Institute at Nationwide Children's Hospital. Ohio ATV Safety. June 2006. www.injuryresearch.net/atv.aspx.

10 Bowman SM, Aitken ME, Helmkamp JC, Maham SA, Graham CJ. Impact of helmets on injuries to riders of all-terrain vehicles. *Injury Prevention* 2009; 15(1): 3-7.

11 Rodgers, G. The effectiveness of helmets in reducing all-terrain vehicle injuries and deaths. *Accident Analysis & Prevention* 1990; 22(1): 47-58.

12 The Center for Injury Research and Policy. Ohio ATV Safety. <http://injuryresearch.net/atv.aspx>.

13 American Academy of Orthopaedic Surgeons. Position Statement: All-Terrain Vehicles. <http://www.aaos.org/about/papers/position/1101.asp>. Accessed Sept. 13, 2011.

14 Jennissen C, Gerene MC, Denning G, Brown C, Maamar-Tayeb AO, All-Terrain Vehicle (ATV) Related Injuries: Mechanisms and Contributing Factors. American Academy of Pediatrics Conference Abstract. Presented: October 17, 2011.

15 The Center for Injury Research and Policy. Ohio ATV Safety. <http://injuryresearch.net/atv.aspx>.

This Page Intentionally Left Blank

For more information on the Ohio Injury Prevention Partnership, please visit www.healthyohioprogram.org/vipp/oipp/oipp.aspx.

Suggested citation: Ohio Injury Prevention Partnership, Preventing Injuries in Ohio: A Resource for State Policy Makers. 2012 Edition. Columbus, OH; 2012.

This publication was supported by the Cooperative Agreement Award Number #1U17CE002038-01 (Core Injury Grant Program) and the Preventive Health and Health Services Block Grant from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC.

Leading causes of injury deaths¹ by intent²; inpatient hospitalizations³ and ED visits³ by age-group, Ohio, 2008-2010

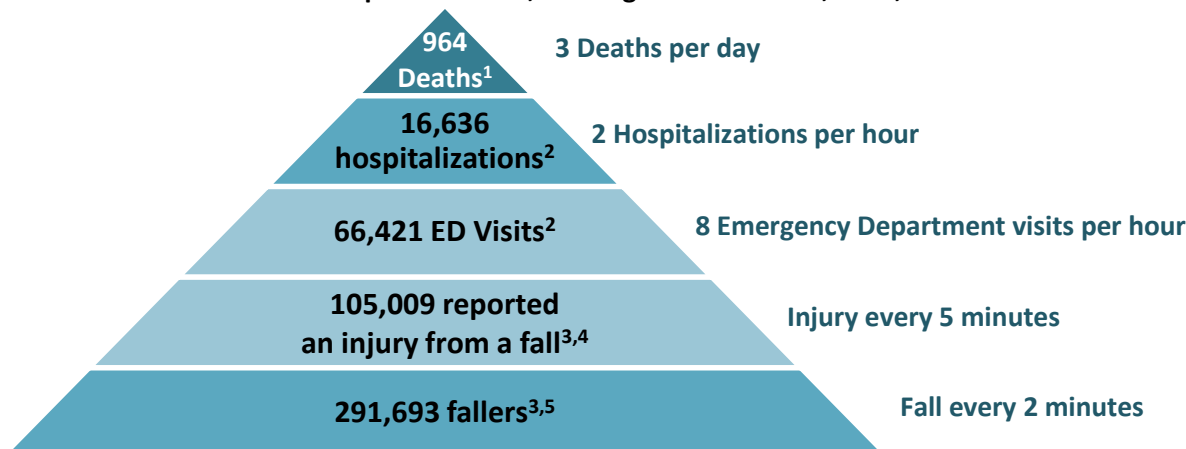
Age Group	Deaths ¹ by Mechanism (Unintentional, Intentional and Undetermined Intent)	Deaths ¹ by Intent ² (Unintentional unless Homicide/Suicide)	Inpatient Hospitalizations ³	Emergency Department Visits ³
It 1	<ol style="list-style-type: none"> 1. Suffocation (176) 2. Other specified (22) 3. Not specified (18) 4. MV Traff (17) 	<ol style="list-style-type: none"> 1. Suffocation (164) 2. Homicide (43) 3. Undetermined (18) 4. MV Traffic (15) 	<ol style="list-style-type: none"> 1. Falls (206) 2. Assault (191) 3. Fire/burn (71) 4. Other specified and poisoning (43 each) 	<ol style="list-style-type: none"> 1. Falls (11,352) 2. Struck by/against (2,652) 3. MV Traffic (1,721) 4. Other specified (1,273)
1-4	<ol style="list-style-type: none"> 1. Drowning (42) 2. Fire/burn (36) 3. MV Traffic (33) 4. Other specified (18) 	<ol style="list-style-type: none"> 1. Homicide (56) 2. Drowning (39) 3. MV Traffic (33) 4. Fire/burn (27) 	<ol style="list-style-type: none"> 1. Falls (625) 2. Poisoning (539) 3. Fire/burn (287) 4. Other specified (156) 	<ol style="list-style-type: none"> 1. Falls (77,975) 2. Struck by/agnst (31,241) 3. Other Specified (16,351) 4. Ntl Environment (15,711)
5-9	<ol style="list-style-type: none"> 1. MV Traffic (28) 2. Fire/Burn (16) 3. Drowning (13) 4. Firearm (12) 	<ol style="list-style-type: none"> 1. MV Traffic (28) 2. Homicide (17) 3. Fire/burn (16) 4. Drowning (13) 	<ol style="list-style-type: none"> 1. Falls (674) 2. MV Traffic (275) 3. Pedal Cycle (175) 4. Struck by/against (131) 	<ol style="list-style-type: none"> 1. Falls (59,595) 2. Struck by/agnst (38,290) 3. Ntl Environment (14,085) 4. Cut/pierce (13,184)
10-14	<ol style="list-style-type: none"> 1. MV Traffic (46) 2. Suffocation (39) 3. Drowning (18) 4. Firearm (15) 	<ol style="list-style-type: none"> 1. MV Traffic (46) 2. Suicide (35) 3. Drowning (18) 4. Homicide (15) 	<ol style="list-style-type: none"> 1. Falls (561) 2. MV Traffic (321) 3. Struck by/against (283) 4. Self-harm (273) 	<ol style="list-style-type: none"> 1. Struck by/angst (68,364) 2. Falls (64,416) 3. Overexertion (26,062) 4. Cut/pierce (15,705)
15-19	<ol style="list-style-type: none"> 1. MV Traffic (326) 2. Firearms (235) 3. Suffocation (113) 4. Poisoning (89) 	<ol style="list-style-type: none"> 1. MV Traffic (326) 2. Suicide (217) 3. Homicide (155) 4. Poisoning (73) 	<ol style="list-style-type: none"> 1. Self-harm (1,921) 2. MV Traffic (1,469) 3. Assault (816) 4. Falls (591) 	<ol style="list-style-type: none"> 1. Struck by/angst (65,976) 2. Falls (52,439) 3. MV Traffic (39,633) 4. Overexertion (37,018)
20-24	<ol style="list-style-type: none"> 1. Firearms (414) 2. MV Traffic (365) 3. Poisoning (342) 4. Suffocation (136) 	<ol style="list-style-type: none"> 1. MV Traffic (365) 2. Suicide (316) 3. Poisoning (301) 4. Homicide (296) 	<ol style="list-style-type: none"> 1. Self-harm (1,891) 2. MV Traffic (1,648) 3. Assault (1,393) 4. Falls (684) 	<ol style="list-style-type: none"> 1. Falls (55,998) 2. MV Traffic (43,332) 3. Struck by/agst (40,876) 4. Overexertion (40,462)
25-34	<ol style="list-style-type: none"> 1. Poisoning (1,145) 2. Firearm (668) 3. MV Traffic (524) 4. Suffocation (284) 	<ol style="list-style-type: none"> 1. Poisoning (1,017) 2. Suicide (667) 3. MV Traffic (486) 4. Homicide (271) 	<ol style="list-style-type: none"> 1. Self-harm (3,537) 2. MV Traffic (2,326) 3. Assault (1,875) 4. Falls (1,665) 	<ol style="list-style-type: none"> 1. Falls (111,034) 2. Overexertion (86,778) 3. Struck by/angst (65,054) 4. MV Traffic (63,363)
35-44	<ol style="list-style-type: none"> 1. Poisoning (1,409) 2. Firearms (538) 3. MV Traffic (486) 4. Suffocation (264) 	<ol style="list-style-type: none"> 1. Poisoning (1,173) 2. Suicide (800) 3. MV Traffic (702) 4. Homicide (419) 	<ol style="list-style-type: none"> 1. Self-harm (3,772) 2. Falls (2,641) 3. MV Traffic (2,208) 4. Assault (1,280) 	<ol style="list-style-type: none"> 1. Falls (101,490) 2. Overexertion (68,302) 3. MV Traffic (47,134) 4. Struck by/against (46,653)
45-54	<ol style="list-style-type: none"> 1. Poisoning (1,757) 2. MV Traffic (579) 3. Firearms (574) 4. Suffocation (290) 	<ol style="list-style-type: none"> 1. Poisoning (1,451) 2. Suicide (955) 3. MV Traffic (579) 4. Homicide (229) 	<ol style="list-style-type: none"> 1. Falls (5,496) 2. Self-Harm (3,469) 3. MV Traffic (2,358) 4. Poisoning (1,758) 	<ol style="list-style-type: none"> 1. Falls (111,481) 2. Overexertion (68,794) 3. MV Traffic (40,918) 4. Struck by/against (36,319)
55-64	<ol style="list-style-type: none"> 1. Poisoning (706) 2. MV Traffic (431) 3. Firearms (404) 4. Fall (283) 	<ol style="list-style-type: none"> 1. Suicide (610) 2. Poisoning (525) 3. MV Traffic (431) 4. Falls (271) 	<ol style="list-style-type: none"> 1. Falls (7,570) 2. MV Traffic (1,578) 3. Self-harm (1,248) 4. Poisoning (1,202) 	<ol style="list-style-type: none"> 1. Falls (89,277) 2. MV Traffic (23,224) 3. Overexertion (23,124) 4. Struck by/against (18,595)
65-74	<ol style="list-style-type: none"> 1. Falls (395) 2. MV Traffic (260) 3. Firearms (243) 4. Suffocation (143) 	<ol style="list-style-type: none"> 1. Falls (394) 2. Suicide (311) 3. MV Traffic (260) 4. Suffocation (106) 	<ol style="list-style-type: none"> 1. Falls (10,106) 2. MV Traffic (900) 3. Poisoning (712) 4. Self-harm (316) 	<ol style="list-style-type: none"> 1. Falls (61,720) 2. MV Traffic (10,280) 3. Overexertion (9,581) 4. Struck by/agnst (8,984)
75-84	<ol style="list-style-type: none"> 1. Falls (995) 2. MV Traffic (234) 3. Not specified (221) 4. Suffocation (194) 	<ol style="list-style-type: none"> 1. Falls (995) 2. MV Traffic (234) 3. Not specified (212) 4. Suicide (193) 	<ol style="list-style-type: none"> 1. Falls (19,472) 2. MV Traffic (824) 3. Poisoning (548) 4. Not specified (328) 	<ol style="list-style-type: none"> 1. Falls (72,253) 2. Struck by/against (6,452) 3. MV Traffic (5,652) 4. Overexertion (5,512)
85+	<ol style="list-style-type: none"> 1. Falls (1,315) 2. Not specified (407) 3. Suffocation (227) 4. MV Traffic (106) 	<ol style="list-style-type: none"> 1. Falls (1,313) 2. Not specified (398) 3. Suffocation (220) 4. MV Traffic (106) 	<ol style="list-style-type: none"> 1. Falls (20,982) 2. MV Traffic (355) 3. Not specified (287) 4. Poisoning (242) 	<ol style="list-style-type: none"> 1. Falls (57,823) 2. Struck by/against (3,637) 3. Overexertion (2,058) 4. Cut/pierce (1,774)
Totals *	<ol style="list-style-type: none"> 1. Poisoning (5,727) 2. MV Traffic (3,433) 3. Firearms (3,374) 4. Falls (3,348) 	<ol style="list-style-type: none"> 1. Poisoning (4,716) 2. Suicide (4,192) 3. MV Traffic (3,433) 4. Falls (3,277) 	<ol style="list-style-type: none"> 1. Falls (71,273) 2. Self-harm (16,645) 3. MV Traffic (14,413) 4. Poisoning (8,516) 	<ol style="list-style-type: none"> 1. Falls (920,454) 2. Struck by/against (433,095) 3. Overexertion (365,877) 4. MV Traffic (300,593)

¹ Source: Ohio Dept. of Health, Office of Vital Statistics ² Intent: The state of mind of persons involved in an injury episode which forms the basis for categorizing an injury as unintentional (traditionally termed accidental), as homicide/assault, as suicide/self-inflicted or as unable to be determined ³ Source: Ohio Hospital Association

FALL-RELATED INJURY AMONG OLDER ADULTS IN OHIO

Falls are particularly harmful to older adults. Falls and fall-related injury seriously affect older adults' quality of life and present a substantial burden to the Ohio health-care system. They surpass all other mechanisms of injury as a cause of ED visits, hospitalization and death. The following data provide clear justification of the need for fall prevention efforts.

Figure 1. Number of fall-related deaths,¹ Hospitalizations,² ED visits,² and self-reported injured fallers^{3,4} And self-reported fallers,^{3,5} for ages 65 and older, Ohio, 2010



¹Source: ODH Office of Vital Statistics, 2010 data ²Source: Ohio Hospital Association, 2010 data ³Source: BRFSS Survey, 2010

⁴Self-reported fallers (estimated) whose fall in preceding 3 months resulted in a doctor's visit or restricted activities for at least one day ⁵BRFSS respondents who reported experiencing a fall in the preceding 3 months

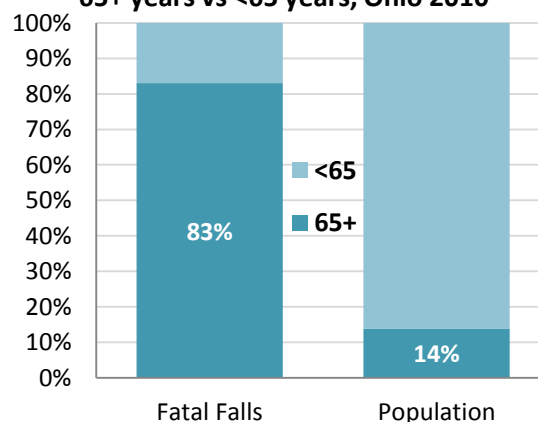
Fatal and medically-treated falls represent only a proportion of all falls among older adults. Falls have significant consequences on quality of life.

- As reported in the 2010 Behavioral Risk Factor Surveillance Survey (BRFSS) results, 17.3% of Ohio respondents aged 65 and older indicated that they fell during the previous three months, projecting to a total of approximately 291,693 persons who suffered at least one fall. More than one-third of those who fell (34%), or an estimated 105,009 older Ohioans, reported sustaining an injury that resulted in a doctor visit or restricted activity (*Figure 1*).
- The psychological consequences of any fall, whether injury-causing or not, can be severe, resulting in fear and decreased quality of life from self-imposed restriction of activities, social isolation and depressive symptoms. These "near-miss" falls can increase risk for future falls if they are not adequately assessed and managed by a health care professional.

Older adults are disproportionately affected by fall-related injury.

- Falls are the leading cause of injury-related ED visits, hospitalizations and deaths for Ohioans aged 65 and older.^{1,2} Fall-related ED visit and hospitalization rates for Ohioans 65 years and older are higher than rates for all other injuries combined.¹
- Ohioans 65 and older accounted for approximately 83% of fatal falls in 2010; while they represent only 14% of the population (*Figure 2*.)
- Risk for suffering serious injury after a fall increases dramatically with advancing age (*Figure 7*). Females 85 years and older account for half of fatal falls, while they account for only 3% of the female population.¹

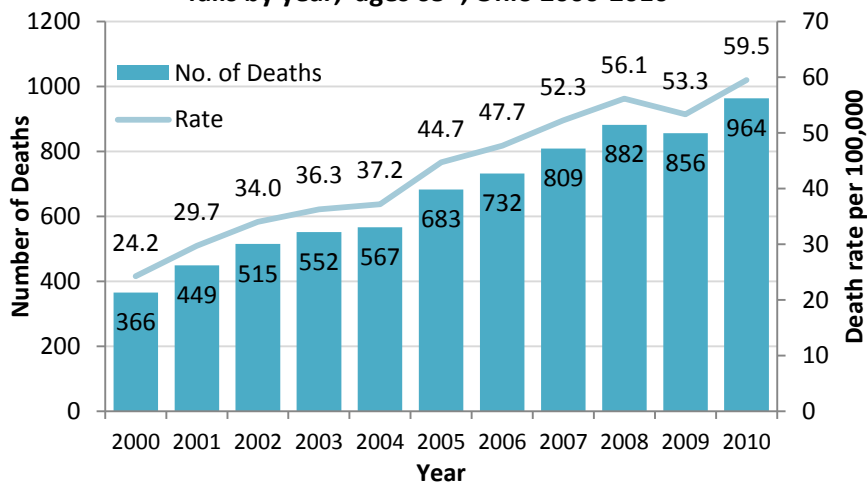
Figure 2. Distribution of fatal falls compared to population by age group, 65+ years vs <65 years, Ohio 2010¹



FALL-RELATED INJURY AMONG OLDER ADULTS IN OHIO

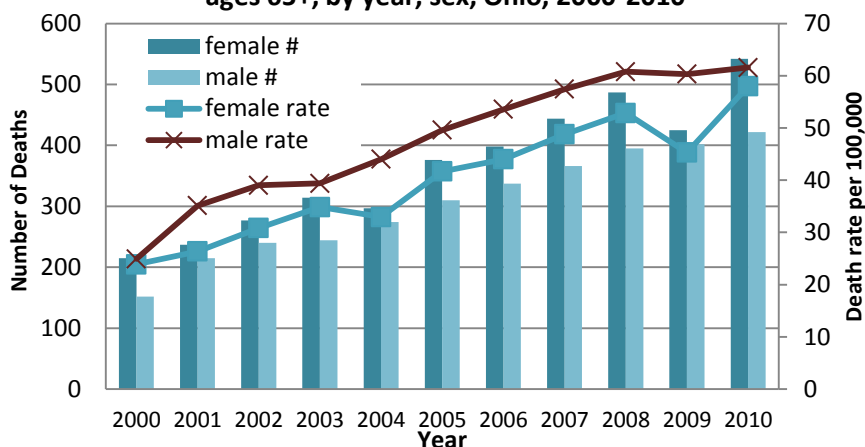
- Falls among older adults have reached epidemic proportions and rates continue to rise.
- From 2000 to 2010, Ohioans aged 65 and older experienced a 163% increase in the number of fatal falls and 145% increase in the fall death rate (Figure 3).
- On average, 2.6 older Ohioans suffered fatal falls each day in 2010 (Figure 3).

Figure 3. Annual number and rate per 100,000 of fatal falls by year, ages 65+, Ohio 2000-2010¹



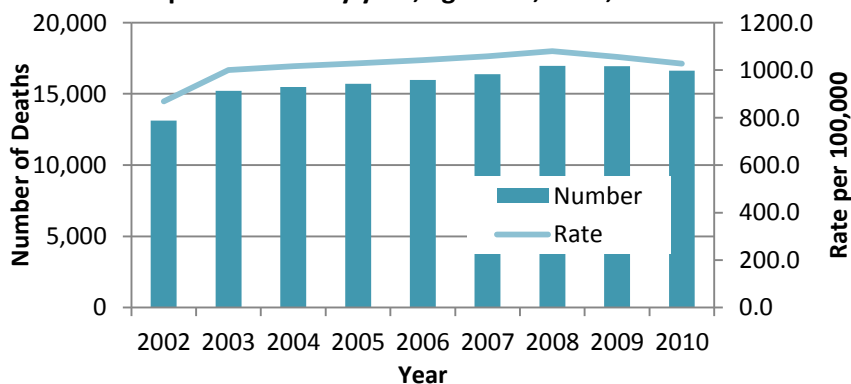
- Older males are at greater risk for suffering a fatal fall, even though there are a greater number of fatal falls among older females (Figure 4).
- Older females have higher non-fatal fall-related injury rates than males (Figure 7).

Figure 4. Number and rate per 100,000 of fatal falls, ages 65+, by year, sex, Ohio, 2000-2010¹



- In 2010, there were 4.1 fall-related ED visits for every 100 Ohio older adults (*data not shown*) and 10 fall-related hospitalizations for every 1,000 Ohio older adults (Figure 5).
- Fall-related hospitalizations and hospitalization rates increased 27% and 18% respectively from 2002 to 2010 (Figure 5).

Figure 5. Number and rate per 100,000 of fall-related hospitalizations by year, ages 65+, Ohio, 2002-2010²



¹Source: Ohio Department of Health, Office of Vital Statistics

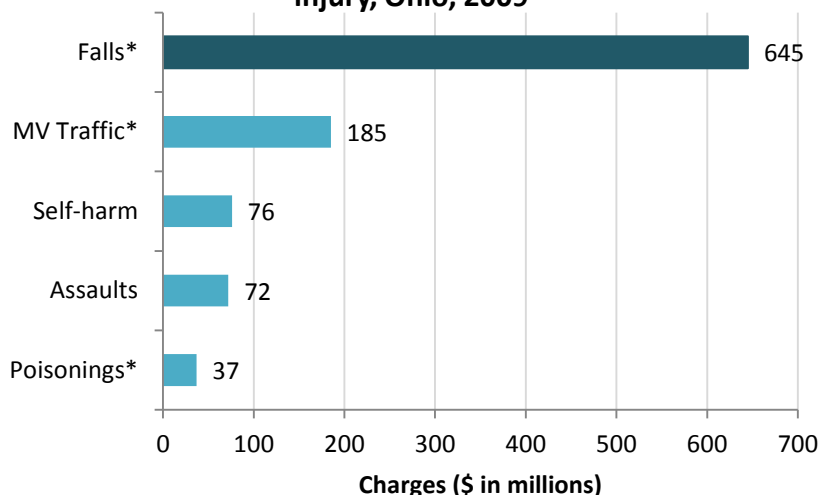
²Source: Ohio Hospital Association

COSTS ASSOCIATED WITH FALL-RELATED INJURY AMONG OLDER OHIOANS

Falls are Costly!

- In 2009 in Ohio, direct treatment charges for fall-related hospitalizations totaled \$645 million. These charges represent nearly two-thirds (63%) of the \$1 billion in charges for the five leading causes of injury combined (*Figure 4.*)
- Direct medical costs represent only a fraction (8%) of the total cost of falls among older adults in Ohio - **\$4.2 billion** in 2003 (*Table 1*).
- 63% of hip fractures and 26% of traumatic brain injuries (TBIs) in 2009 in Ohio resulted from falls (data not shown).¹

Figure 6. Total charges (in millions) for inpatient treatment of leading causes of injury, by type of injury, Ohio, 2009¹



¹Source: Ohio Hospital Association

Table 1. Average Annual Cost of Non-fatal, Hospital-admitted Falls Among Older Adults, Ages 65+ Ohio, 2003¹

	65+ yrs Total	Percent of All	Percent of Ohio population
Incidence of Fall-related Hospital Admissions	19,137²	71%	14%
Medical	\$ 327 million	67%	
Work-Loss	\$ 116 million	22%	
Quality-of-Life	\$ 3.7 billion	72%	
Total Costs	\$ 4.2 billion	68%	

¹Source: Children's Safety Network Economics & Data Analysis Resource Center, ²incidence based on HCUP survey data

The likelihood of falling and the severity of fall-related injury increases with age, and therefore the risk for hospitalization and death.

- Average age increases when comparing fall-related ED visits (38 years), inpatient hospitalizations (70 years) and deaths (76 years). Younger Ohioans are more likely to be treated in an ER for fall-related injuries and not to require an overnight stay in the hospital.¹
- Average length of stay in days also increases with age.¹
- More than 90 percent of fall-related hip fractures occur among those 65 years and older, and approximately 40 percent of fall-related inpatient hospitalizations among those 65 and older involved a hip fracture.¹
- Ohio's 65+ population is projected to increase by 100 people per day for the next 14 years.

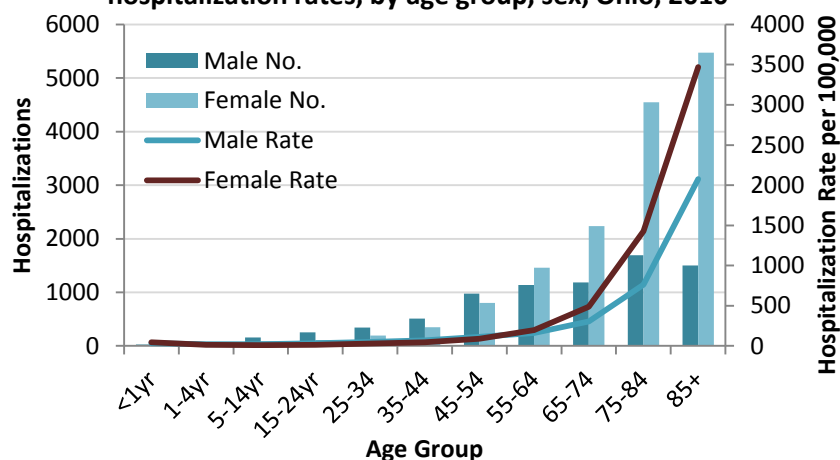
¹Source: Ohio Hospital Association

FALL-RELATED INJURY AMONG OLDER OHIOANS

Older females have higher risk for non-fatal fall-related injury.

- In 2010 hospitalization rates ranged from lows of 11.4 per 100,000 for females aged 5-14 to highs of 3,469 per 100,000 for females 85 and older (*Figure 7*).
- From ages 65 and older, female risk for fall-related injury skyrockets, with the disparity between male and female rates widening with advancing age. In numbers of fall-related hospitalizations, there were 1.9 women treated for every man among 65-74-year-olds and there was a 3.6 to 1 female/male ratio for those aged 85 years and older (*Figure 7*).

Figure 7. Average annual fall-related inpatient hospitalization rates, by age group, sex, Ohio, 2010¹

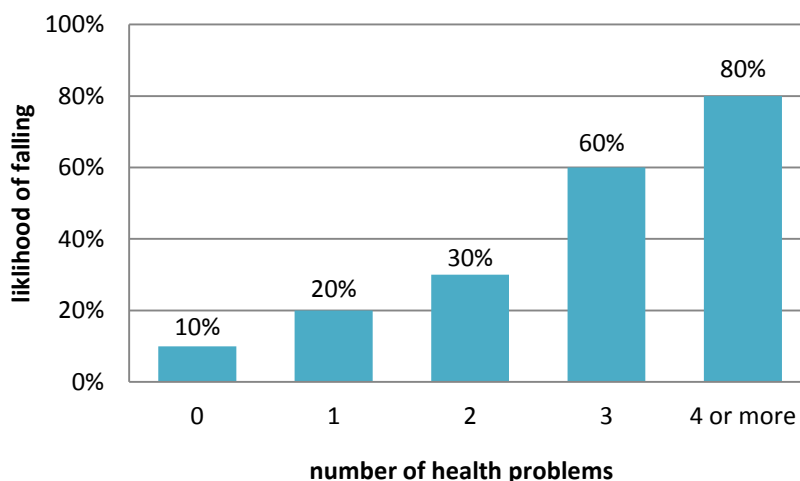


¹Source: Ohio Hospital Association

Older adults with poor health status and those who are isolated are at greater risk.

- The number of health problems and the risk of falling increase proportionately (*Figure 8*).
- BRFSS respondents with diabetes, stroke as well as those using special equipment and having a sedentary lifestyle had a higher prevalence of falls in the past three months than those without (*Ohio BRFSS Survey 2010*).
- Social isolation is a risk factor for fatal falls. Married elders are significantly less likely to die from a fall than the unmarried (*ODH Office of Vital Statistics*).

Figure 8. Number of health problems and risk for falling among adults age 65 and older¹



¹Source: Tinetti et al., 1988

Additional resources for prevention of falls among older adults are needed.

Due to the large and growing burden of fall-related injury in Ohio, especially among older Ohioans over 65 years, additional resources are needed at both the state and local level to implement evidence-based prevention initiatives.

Falls are not a normal part of aging. There are simple steps that older adults can take to reduce their risk for a fall. Additional resources including checklists and brochures are available from the CDC at:

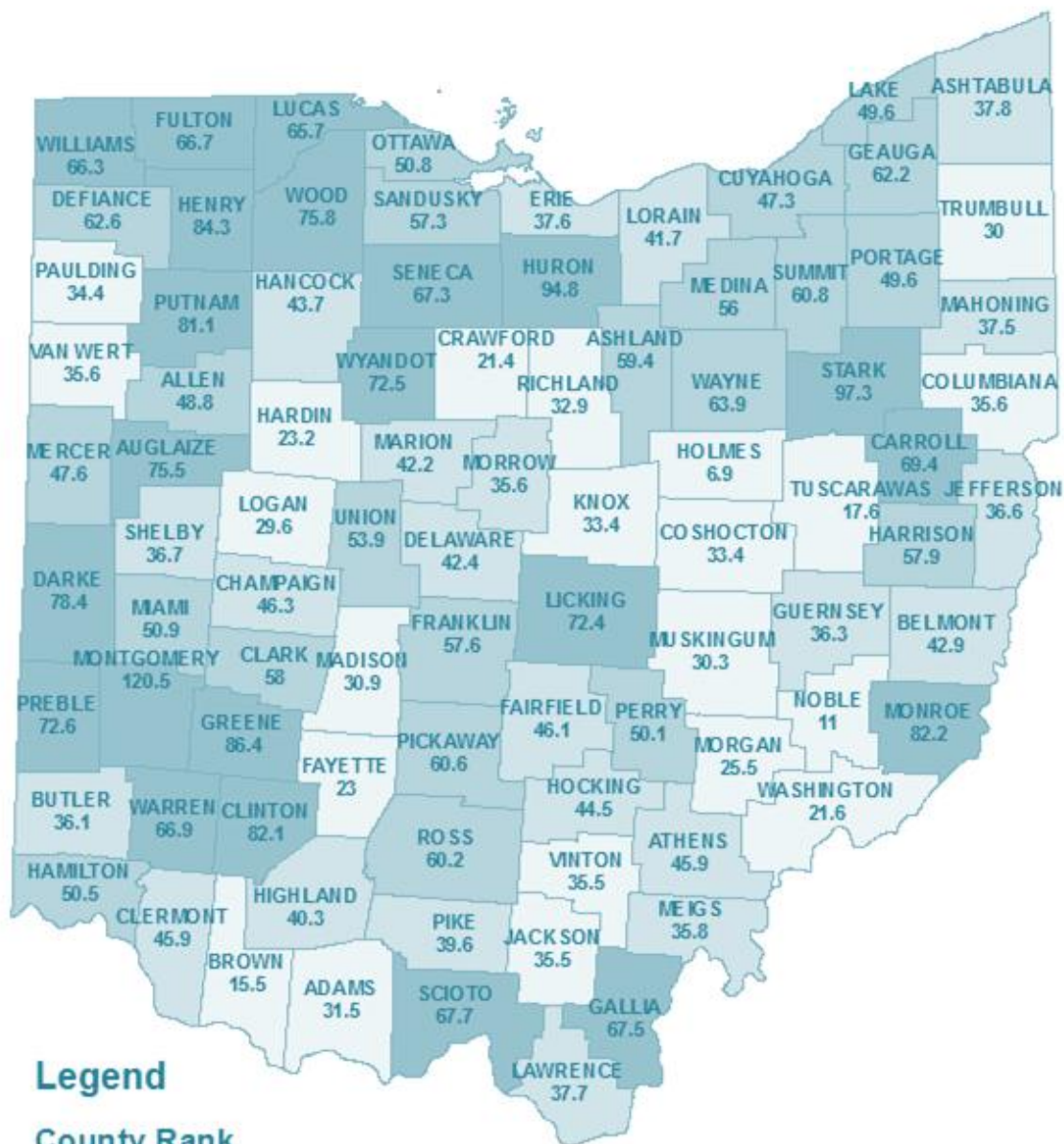
<http://www.cdc.gov/ncipc/duip/preventadultfalls.htm>

Produced by Ohio Department of Health, Office of Healthy Ohio, Violence and Injury Prevention Program

<http://www.odh.ohio.gov/odhprograms/hpr/injprev/ovipp.aspx>

FALL-RELATED INJURY AMONG OLDER ADULTS IN OHIO

Fall fatality rates among ages 65+ by county, Ohio, 2008-2010



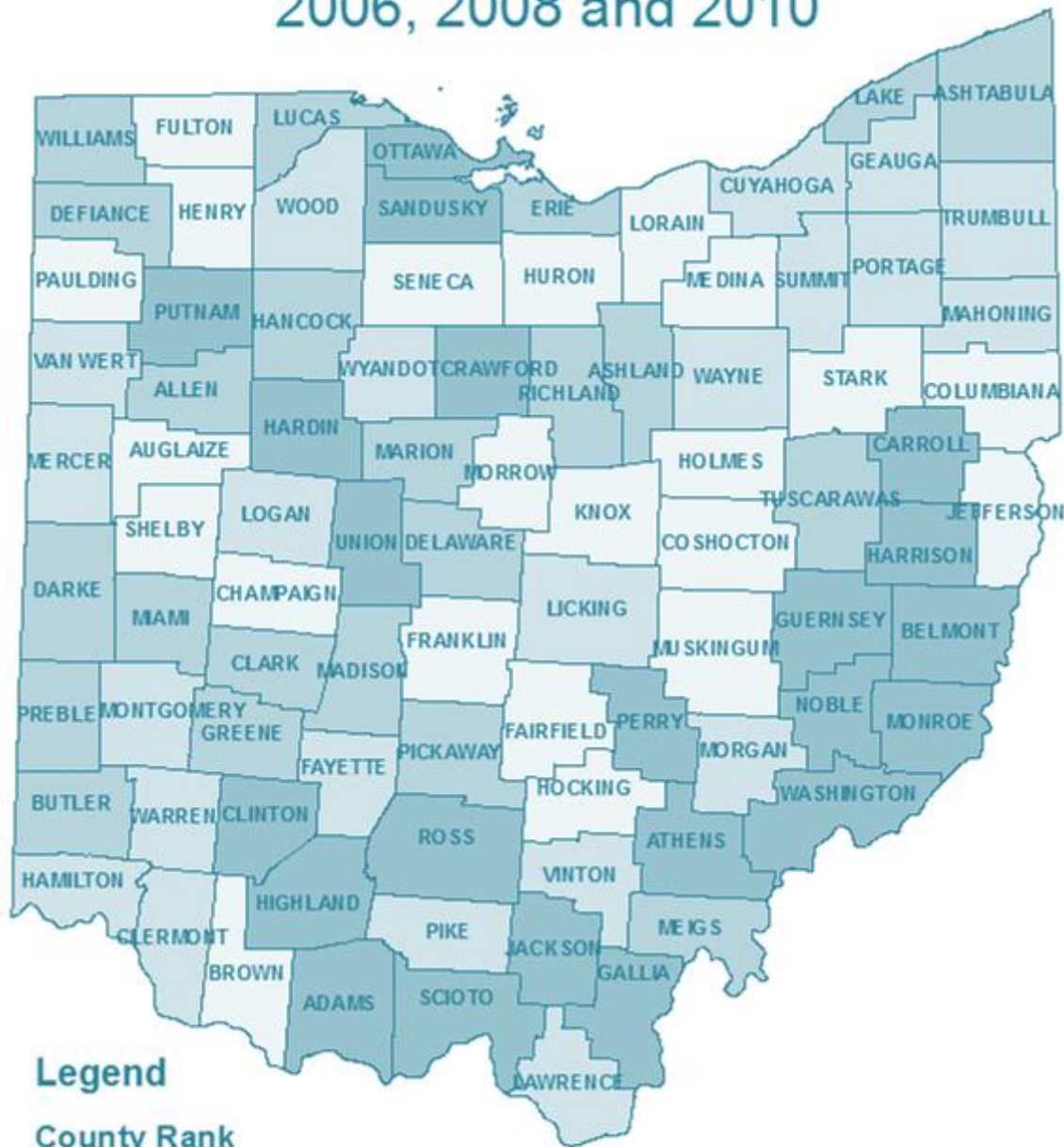
Legend

County Rank

- Lowest Quartile
- 2nd Lowest Quartile
- 2nd Highest Quartile
- Highest Quartile

FALL-RELATED INJURY AMONG OLDER ADULTS IN OHIO

Self reported falls in last 3 months among adults (45+), by county, Ohio BRFSS, 2006, 2008 and 2010



Legend

County Rank

Lowest Quartile

2nd Lowest Quartile

2nd Highest Quartile

■ Highest Quartile



TRAFFIC SAFETY FACTS

Research Note

DOT HS 811 552

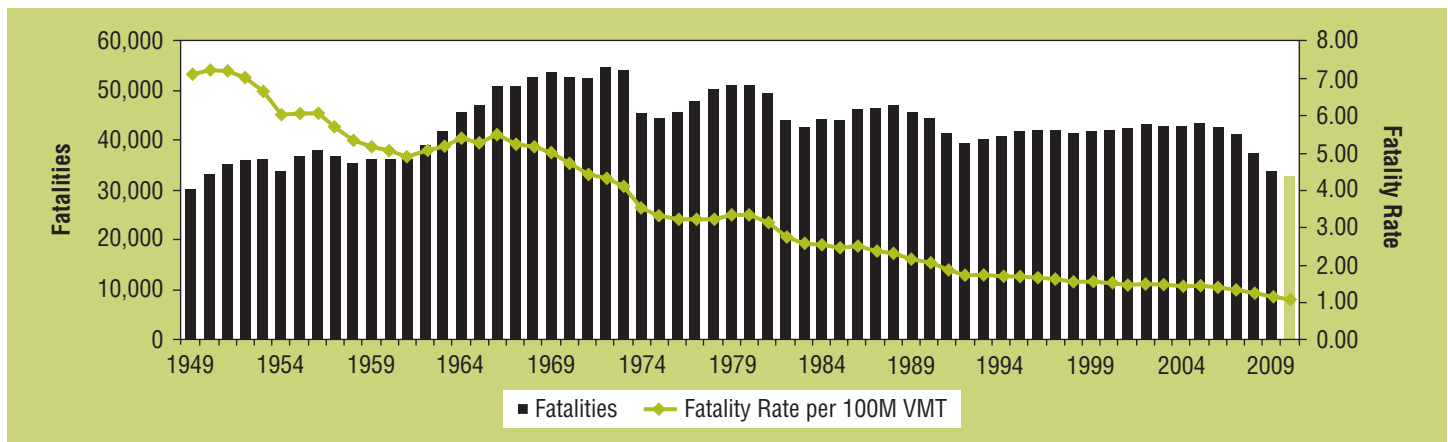
Revised February 2012

2010 Motor Vehicle Crashes: Overview

In 2010, 32,885 people died in motor vehicle traffic crashes in the United States—the lowest number of fatalities since 1949 (30,246 fatalities in 1949) (see Figure 1). This was a 2.9-percent decline in the number of people killed, from 33,883 in 2009, according to NHTSA's 2010 Fatality Analysis Reporting System (FARS). In 2010, an estimated 2.24 million people were

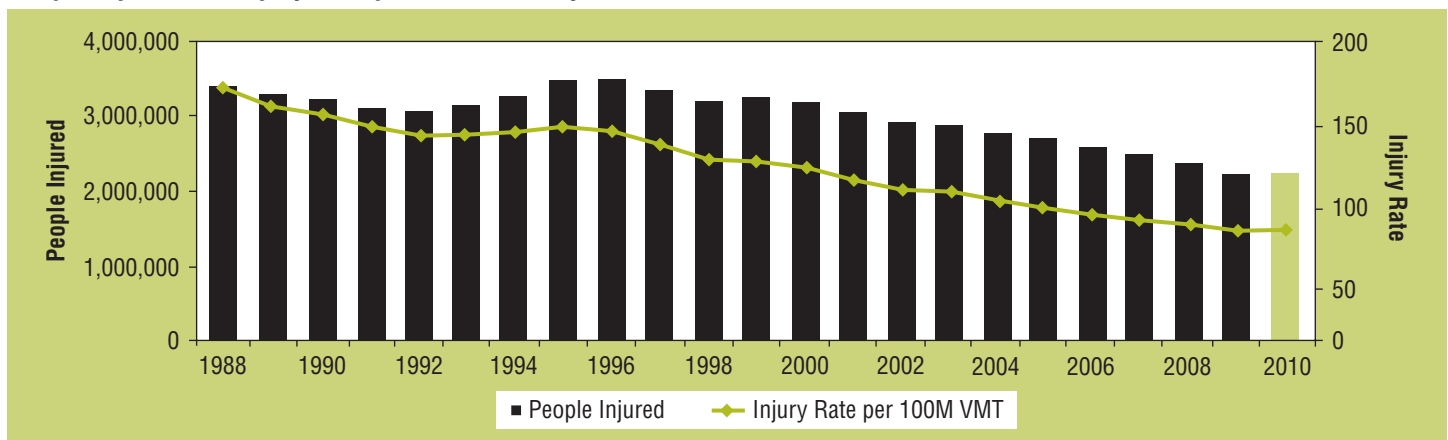
injured in motor vehicle traffic crashes, compared to 2.22 million in 2009 according to NHTSA's National Automotive Sampling System (NASS) General Estimates System (GES). This slight increase (1.0% increase) in the estimated number of people injured is not statistically significant from the number of people injured in crashes in 2009.

Figure 1
Fatalities and Fatality Rate per 100M VMT by Year



1949–1974: National Center for Health Statistics, HEW, and State Accident Summaries (Adjusted to 30-Day Traffic Deaths by NHTSA)
FARS 1975–2009 (Final) 2010 Annual Report File (ARF); Vehicle Miles Traveled (VMT): Federal Highway Administration.

Figure 2
People Injured and Injury Rate per 100M VMT by Year



NASS GES 1988–2010; Vehicle Miles Traveled (VMT): Federal Highway Administration.

Fatality and Injury Rates

The fatality rate per 100 million vehicle miles traveled (VMT) fell to a historic low of 1.10 in 2010 (Table 1). The overall injury rate remained the same from 2009 to 2010. The 2010 rates are based on VMT estimates from the Federal Highway Administration's (FHWA) August 2011 Traffic Volume Trends (TVT). Overall 2010 VMT increased by 1.6 percent from 2009 VMT—from 2,953,501 million to 2,999,974 million. VMT data will be updated when FHWA releases the 2010 Annual Highway Statistics.

Table 1
Fatality and Injury Rates per 100 Million VMT

	2009	2010	Change	% Change
Fatality Rate	1.15	1.10	-0.05	-4.3%
Injury Rate	75	75	0	0.0%

Source: FARS, GES, and FHWA VMT (August 2011 TVT)

Occupants and Nonoccupants

The large decrease in fatalities among passenger vehicle occupants was partially negated by increases in fatalities of other occupants and pedestrians, as shown in Table 2 below. There were 1,260 fewer passenger vehicle occupant fatalities in 2010 than in 2009, with very similar distribution of the decrease between passenger cars and light trucks. After experiencing a large (26%) decrease in fatalities from 2008 to 2009, large-truck occupants increased the greatest percentage in 2010 (up 6% from 2009). Motorcyclist fatalities increased slightly in 2010 to 4,502 accounting for 14 percent of total fatalities for the year. This increase in motorcycle fatalities for the

year picks up the overall increasing trend over the last 13 years that saw a one-year decline in 2009. The greatest increases in the estimated number of injured people from 2009 to 2010 are among passenger car occupants and pedestrians. The greatest decrease in the estimated number of injured people is among motorcyclists, with an 8.9-percent decrease (decline of 8,000 people).

Alcohol-Impaired-Driving Fatalities

Alcohol-impaired-driving fatalities (fatalities in crashes involving a driver or motorcycle rider (operator) with a blood alcohol concentration (BAC) of .08 grams per deciliter (g/dL) or greater) declined by 4.9 percent in 2010 (Table 3) accounting for 31 percent of overall fatalities. The number of alcohol-impaired drivers in fatal crashes declined for most vehicle types with the largest decline was among drivers of pickup trucks (8.1%). Although the percentage increase in the number of

Table 3
Total and Alcohol-Impaired (AI) Driving Fatalities*

	2009	2010	Change	% Change
Total Fatalities	33,883	32,885	-998	-2.9%
AI Driving Fatalities	10,759	10,228	-531	-4.9%
Alcohol-Impaired Drivers in Fatal Crashes by Vehicle Type				
Passenger Car	4,186	4,082	-104	-2.5%
Light Truck – Van	291	292	+1	+0.3%
Light Truck – Utility	1,583	1,527	-56	-3.5%
Light Truck – Pickup	2,258	2,075	-183	-8.1%
Motorcycles	1,325	1,285	-40	-3.0%
Large Trucks	54	61	+7	+13%

Source: FARS 2009 (Final), 2010 (ARF)

*See definition in text.

Table 2
Occupants and Nonoccupants Killed and Injured in Traffic Crashes

Description	Killed				Injured			
	2009	2010	Change	% Change	2009	2010	Change	% Change
Total*	33,883	32,885	-998	-2.9%	2,217,000	2,239,000	+22,000	+1.0%
Occupants								
Passenger Vehicles	23,447	22,187	-1,260	-5.4%	1,976,000	1,986,000	+10,000	+0.5%
Passenger Cars	13,135	12,435	-700	-5.3%	1,216,000	1,253,000	+37,000	+3.0%
Light Trucks	10,312	9,752	-560	-5.4%	759,000	733,000	-26,000	-3.4%
Large Trucks	499	529	+30	+6.0%	17,000	20,000	+3,000	+18%
Motorcycles	4,469	4,502	+33	+0.7%	90,000	82,000	-8,000	-8.9%
Nonoccupants								
Pedestrians	4,109	4,280	+171	+4.2%	59,000	70,000	+11,000	+19%
Pedalcyclists	628	618	-10	-1.6%	51,000	52,000	+1,000	2.0%
Other/Unknown	151	182	+31	—	7,000	8,000	+1,000	—

Source: Fatalities - FARS 2009 (Final), 2010 (ARF), Injured - NASS GES 2009, 2010 Annual Files

*Total includes occupants of buses and other/unknown occupants not shown in table.

Changes in injury estimates shown in **bold** are statistically significant.

alcohol-impaired large-truck drivers is high (13%) the actual number of alcohol-impaired large-truck drivers is a very small percentage of the overall drivers involved in alcohol-impaired crashes.

Crash Type

The number of motor vehicle crashes, by crash type and severity, is presented in Table 4. The total number of police-reported traffic crashes declined from 2009 to 2010, as both fatal and non-fatal crashes declined. While non-fatal crashes declined, the number of injury crashes increased 1.6 percent from 2009 to 2010. The estimated changes in each type of crash were not statistically significant. Because FARS data is a census of fatal crashes no significance testing is required.

Table 4
Number of Crashes, by Crash Type

Crash Type	2009	2010	Change	% Change
Fatal Crashes	30,862	30,196	-666	-2.2%
Non-Fatal Crashes	5,474,000	5,389,000	-85,000	-1.6%
Injury Crashes	1,517,000	1,542,000	+25,000	+1.6%
Property-Damage Only	3,957,000	3,847,000	-110,000	-2.8%
Total Crashes	5,505,000	5,419,000	-86,000	-1.6%

Source: FARS 2009 (Final), 2010 (ARF)

Restraint Use and Time of Day

Among fatally injured passenger vehicle occupants, more than half (51%) of those killed in 2010 were unrestrained (Table 5). Of those occupants killed during the night 61 percent were unrestrained, compared to 42 percent during the day. Most of the change in passenger vehicle occupant fatalities occurred in nighttime

Table 5
Passenger Vehicle Occupant Fatalities, by Restraint Use and Time of Day

Type	2009		2010		Change	% Change
	#	%	#	%		
Fatalities	23,447	100	22,187	100	-1,260	-5.4%
Restraint Used	10,993	47	10,761	49	-232	-2.1%
Restraint Not Used	12,454	53	11,426	51	-1,028	-8.3%
Day	11,636	50	11,371	51	-265	-2.3%
Restraint Used	6,508	56	6,543	58	+35	+0.5%
Restraint Not Used	5,128	44	4,828	42	-300	-5.9%
Night	11,630	50	10,647	48	-983	-8.5%
Restraint Used	4,393	38	4,124	39	-269	-6.1%
Restraint Not Used	7,237	62	6,523	61	-714	-9.9%

Source: FARS 2009 (Final), 2010 (ARF);

Day: 6 a.m. to 5:59 p.m.; Night: 6 p.m. to 5:59 a.m.; Total fatalities include those at unknown time of day; unknown restraint use has been distributed proportionally across known use.

crashes—983 of the 1,260 (78%). Among the 983 decline in nighttime fatalities a large proportion (73%) was among unrestrained passenger vehicle occupants.

Fatal Crashes Involving Large Trucks

There was an 8.7-percent increase in the number of people killed in crashes involving large trucks. Fatalities in large-truck crashes increased in all categories—large-truck occupants, occupants of other vehicles and non-occupants. The greatest percentage increase can be seen in the number of large-truck occupants killed in multivehicle crashes, 16 percent. This is in contrast to a 9.1-percent increase in fatalities of other vehicle occupants involved in those multivehicle crashes.

Table 6
People Killed in Large-Truck Crashes

Type	2009	2010	Change	% Change
Truck Occupants	499	529	+30	+6.0%
Single-Vehicle	333	337	+4	+1.2%
Multivehicle	166	192	+26	+16%
Other Vehicle Occupants	2,558	2,790	+232	+9.1%
Nonoccupants	323	356	+33	+10%
Total	3,380	3,675	+295	+8.7%

Source: FARS 2009 (Final), 2010 (ARF)

Crash Location

Fatalities in rural crashes declined by 6.7 percent (Table 7); those in urban crashes increased slightly by 0.3 percent. Roadway departure crashes declined by 3.9 percent and intersection crashes declined by 7.1 percent. Following are the definitions used for roadway departure and intersection crashes as defined by FHWA.

Table 7
People Killed in Motor Vehicle Traffic Crashes, by Roadway Function Class, Roadway Departure, and Relation to Junction

	2009	2010	Change	% Change
Total	33,883	32,885	-998	-2.9%
Roadway Function Class				
Rural	19,323	18,026	-1,297	-6.7%
Urban	14,501	14,546	+45	+0.3%
Roadway Departure*				
Roadway Departure	18,052	17,389	-663	-3.7%
Relation to Junction				
Intersection*	7,278	6,758	-520	-7.1%

Source: FARS 2009 (Final), 2010 (ARF)

*See definitions in text.

Roadway Departure crash: A non-intersection crash in which a vehicle crosses an edge line, a centerline, or leaves the traveled way. Includes intersections at interchange areas.

Types of crashes fitting the definition: Non-intersection fatal crashes in which the first event for at least one of the involved vehicles: ran-off-road (right or left); crossed the centerline or median; went airborne; or hit a fixed object.

Intersection: Non-interchange — intersection or intersection-related.

Other Highlights

- When looking at the time of day of crashes, 86 percent of the total decline in fatalities could be seen in nighttime crashes (day: 6 a.m. to 5:59 p.m.; night: 6 p.m. to 5:59 a.m.). Of the 998 fewer fatalities in 2010, there were 857 fewer fatalities in nighttime crashes.
- Just over three-quarters (78% in crashes with known day of week) of the overall decline in fatalities came from a decline in weekend (6 p.m. Friday through 5:59 a.m. Monday) crash fatalities—a decline of 769 weekend fatalities.
- With respect to motorcyclist fatalities, fatalities among motorcyclists 50 and older increased by 119, whereas fatalities among motorcyclists under 50 declined by 84.
- Age discrepancies can be seen in overall fatalities as well. Fatalities of people 55 and older increased by 409, whereas fatalities of people under 55 decreased by 1,391.
- In 2010, there were 117 fewer children under the age 16 killed in motor vehicles crashes, a 7.6-percent decline from 2009. The majority of those fatalities were from a reduction in child occupant fatalities (107 fewer in 2010 than 2009).
- Broadening the view to the most recent five years to look at the trend in young drivers, fatalities from crashes with young drivers (16 to 20 years old) have declined at a faster rate than overall fatalities between 2006 and 2010. There has been a 39-percent decrease in fatalities in young driver-involved crashes compared to a 23-percent decrease in overall fatalities during the 2006 to 2010 time period.

State by State Distribution of Fatalities

Table 8 compares the total number of fatalities for 2009 and 2010, the change in the number of total fatalities, and the percentage change for each State, the District of Columbia, and Puerto Rico. Thirty-one States, the District of Columbia, and Puerto Rico had reductions in the number of fatalities. Four States had reductions of over 100 fatalities, led by California with 375 fewer fatalities in 2010 than in 2009. Florida (-115), Louisiana (-114), and Texas (-106) were the other States with more than 100 fewer fatalities in 2010. Five States saw increases of more than 50 overall fatalities from 2009 to 2010. Connecticut had the greatest increase in the number of fatalities, going up 95 fatalities or 42 percent. Michigan (70), Pennsylvania (68), Indiana (61), and Ohio (58) were the other States that had increases in overall fatalities of more than 50.

Additional State-level data is available at NCSA's State Traffic Safety Information Web site <http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/USA%20WEB%20REPORT.HTM>

NHTSA's Fatality Analysis Reporting System is a census of all crashes of motor vehicles traveling on public roadways in which a person died within 30 days of the crash. Data for the National Automotive Sampling System General Estimates System comes from a nationally representative sample of police-reported motor vehicle crashes of all types, from property-damage-only to fatal.

The information in this Research Note represents an overview of the 2010 FARS and GES files. Additional information and details will be available at a later date.

Table 8
Total Fatalities, 2009 and 2010, by State

State	2009 Total Fatalities	2010 Total Fatalities	2009 to 2010 Changes in Total Fatalities	
			Change	% Change
Alabama	848	862	+14	+1.7%
Alaska	64	56	-8	-13%
Arizona	806	762	-44	-5.5%
Arkansas	596	563	-33	-5.5%
California	3,090	2,715	-375	-12%
Colorado	465	448	-17	-3.7%
Connecticut	224	319	+95	+42%
Delaware	116	101	-15	-13%
Dist of Columbia	29	24	-5	-17%
Florida	2,560	2,445	-115	-4.5%
Georgia	1,292	1,244	-48	-3.7%
Hawaii	109	113	+4	+3.7%
Idaho	226	209	-17	-7.5%
Illinois	911	927	+16	+1.8%
Indiana	693	754	+61	+8.8%
Iowa	371	390	+19	+5.1%
Kansas	386	431	+45	+12%
Kentucky	791	760	-31	-3.9%
Louisiana	824	710	-114	-14%
Maine	159	161	+2	+1.3%
Maryland	549	493	-56	-10%
Massachusetts	340	314	-26	-7.6%
Michigan	872	942	+70	+8.0%
Minnesota	421	411	-10	-2.4%
Mississippi	700	641	-59	-8.4%
Missouri	878	819	-59	-6.7%
Montana	221	189	-32	-14%
Nebraska	223	190	-33	-15%
Nevada	243	257	+14	+5.8%
New Hampshire	110	128	+18	+16%
New Jersey	584	556	-28	-4.8%
New Mexico	361	346	-15	-4.2%
New York	1,158	1,200	+42	+3.6%
North Carolina	1,313	1,319	+6	+0.5%
North Dakota	140	105	-35	-25%
Ohio	1,022	1,080	+58	+5.7%
Oklahoma	737	668	-69	-9.4%
Oregon	377	317	-60	-16%
Pennsylvania	1,256	1,324	+68	+5.4%
Rhode Island	83	66	-17	-20%
South Carolina	894	810	-84	-9.4%
South Dakota	131	140	+9	+6.9%
Tennessee	986	1,031	+45	+4.6%
Texas	3,104	2,998	-106	-3.4%
Utah	244	236	-8	-3.3%
Vermont	74	71	-3	-4.1%
Virginia	758	740	-18	-2.4%
Washington	492	458	-34	-6.9%
West Virginia	357	315	-42	-12%
Wisconsin	561	572	+11	+2.0%
Wyoming	134	155	+21	+16%
National	33,883	32,885	-998	-2.9%
Puerto Rico	365	340	-25	-6.8%

Source: FARS 2009 (Final), 2010 Annual Report File (ARF)

Appendix A

The National Automotive Sampling System (NASS) General Estimates System (GES) data file was made available to the public in December 2011. Shortly after posting the file, a coding error was discovered that led to subsequent investigation to identify other potential coding errors in the system. Additional coding errors were found and have been corrected. There were 8 data elements (vehicle trailing, vehicle configuration, body type, cargo body type, jackknife, vehicle model, vehicle model year, and vehicle identification number) corrected

for 842 vehicles out of 81,406 vehicles on the 2010 NASS GES file.

This change in coding has resulted in slight changes in some estimates from GES, thus the revision to this Research Note from the December 2011 publication. The table below shows changes in Table 2 from the Research Note. The table contains the data as it appeared in the December 2011 publication and as it appears in this February 2012 publication. This data also appears in some of the text throughout the document.

	People Injured, December 2011 Research Note			People Injured, February 2012 Research Note		
	Injured	Change from '09	% Change	Injured	Change from '09	% Change
Total	2,243,000	+26,000	+1.2%	2,239,000	+22,000	+1.0%
Passenger Vehicles	1,990,000	+14,000	+0.7%	1,986,000	+10,000	+0.5%
Passenger Cars	1,258,000	+42,000	+3.5%	1,253,000	+37,000	+3.0%
Light Trucks	732,000	-27,000	-3.6%	733,000	-26,000	-3.4%
Large Trucks	19,000	+2,000	+12%	20,000	+3,000	+18%
Motorcycles	82,000	-8,000	-8.9%	82,000	-8,000	-8.9%
Pedestrians	70,000	+11,000	+19%	70,000	+11,000	+19%
Pedalcyclists	51,000	+1,000	+2.0%	52,000	+1,000	+2.0%
Other/Unknown	8,000	+1,000	—	8,000	+1,000	—

The following table shows revisions to Table 4 of the Research Note. Again, it contains data as it appeared in the December 2011 publication and the revised data

included in this February 2012 publication. The whole table is not included, only those figures that changed.

	People Injured, December 2011 Research Note			People Injured, February 2012 Research Note		
	Injured	Change from '09	% Change	Injured	Change from '09	% Change
Injury Crashes	1,546,000	+29,000	+1.9%	1,542,000	-25,000	+1.6%
Property-Damage Only	3,843,000	-114,000	-2.9%	3,847,000	-110,000	-2.8%

In addition to the revisions to GES, the roadway departure crash figures were updated to reflect revisions to FHWA's criteria. In the December 2011 Research Note, fatalities associated with roadway departure in 2010 was

17,346. The revised figure for fatalities in 2010 is 17,389. Table 7 in this document shows the revised fatality figure, change figure, and percentage-change figure.

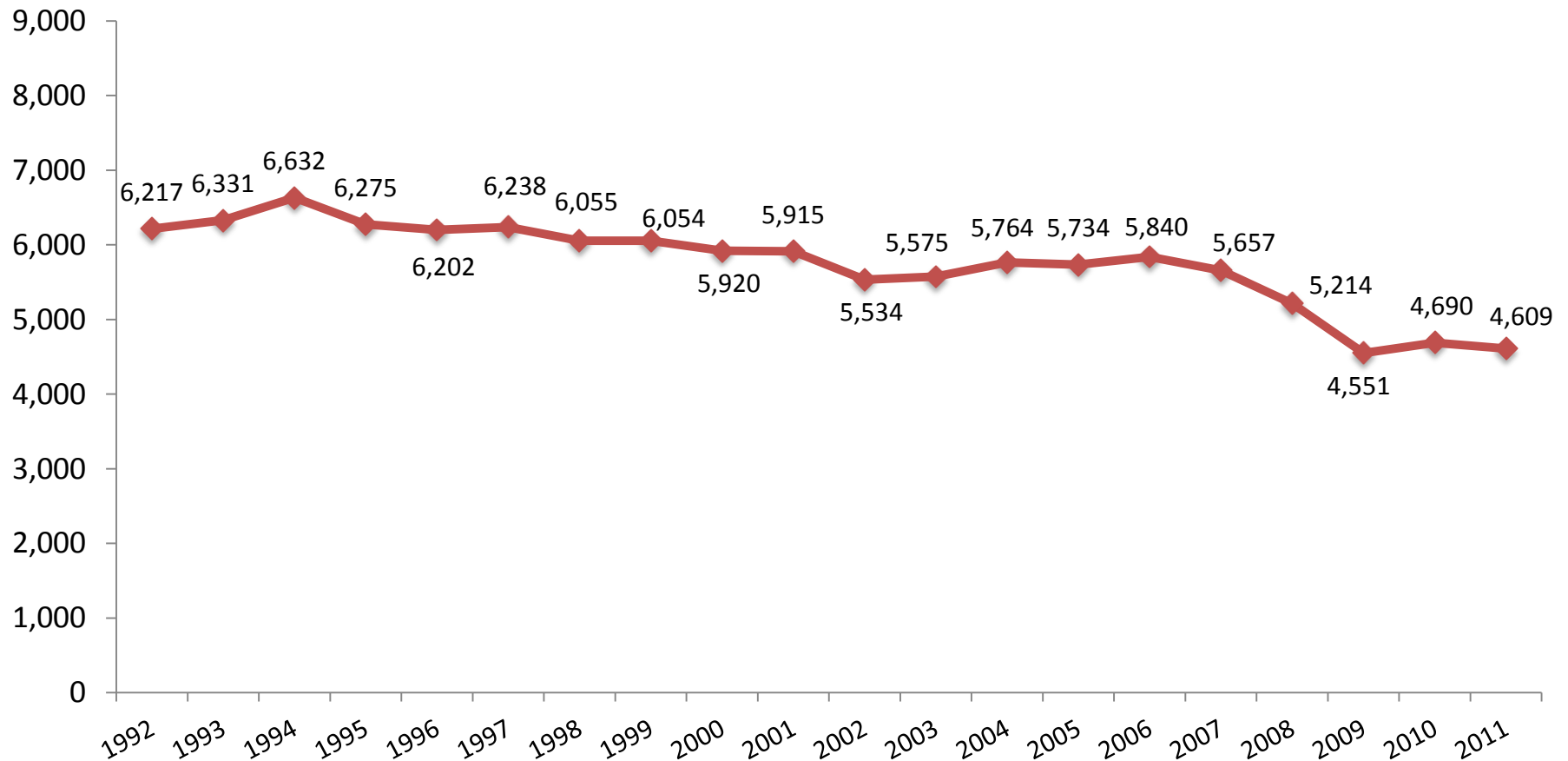


U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

This research note and other general information on highway traffic safety may be accessed by Internet users at: www-nrd.nhtsa.dot.gov/CATS/index.aspx

Number of fatal work injuries, 1992–2011*

Number of fatal work injuries



The 2011 preliminary total of 4,609 fatal work injuries represents a slight decrease from the final count of 4,690 fatal work injuries reported for 2010.

*Data for 2011 are preliminary. Data for prior years are revised and final.
NOTE: Data from 2001 exclude fatal work injuries resulting from the September 11 terrorist attacks.
SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Rate of fatal work injuries, 2006–2011*

Fatal work injury rate
(per 100,000 full-time equivalent workers)



The preliminary rate of fatal work injuries in 2011 was 3.5 fatal work injuries per 100,000 full-time equivalent workers, down from the 2010 final rate of 3.6.

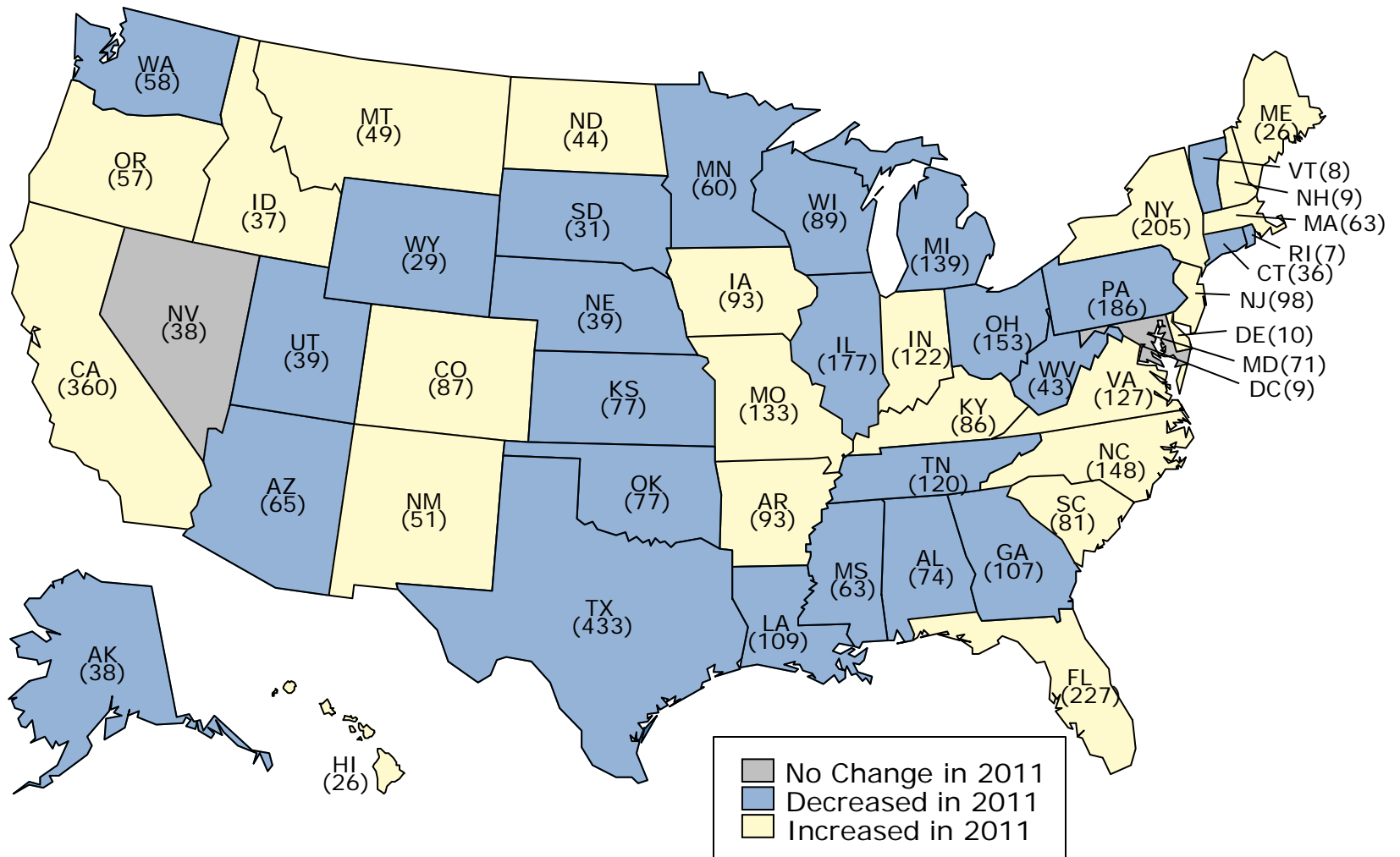
*Data for 2011 are preliminary. Data for prior years are revised and final.

Rate = (Fatal work injuries/Total hours worked by all workers) x 200,000,000 where 200,000,000 = base for 100,000 full-time equivalent workers (FTEs) working 40 hours per week, 50 weeks per year. The total hours worked figures are annual average estimates of total at work multiplied by average hours for civilians, 16 years of age and older, from the Current Population Survey (CPS).

In 2008, CFI implemented a new methodology, using hours worked for fatal work injury rate calculations rather than employment. For additional information on the fatal work injury rate methodology changes please see <http://www.bls.gov/iif/oshnotice10.htm>.

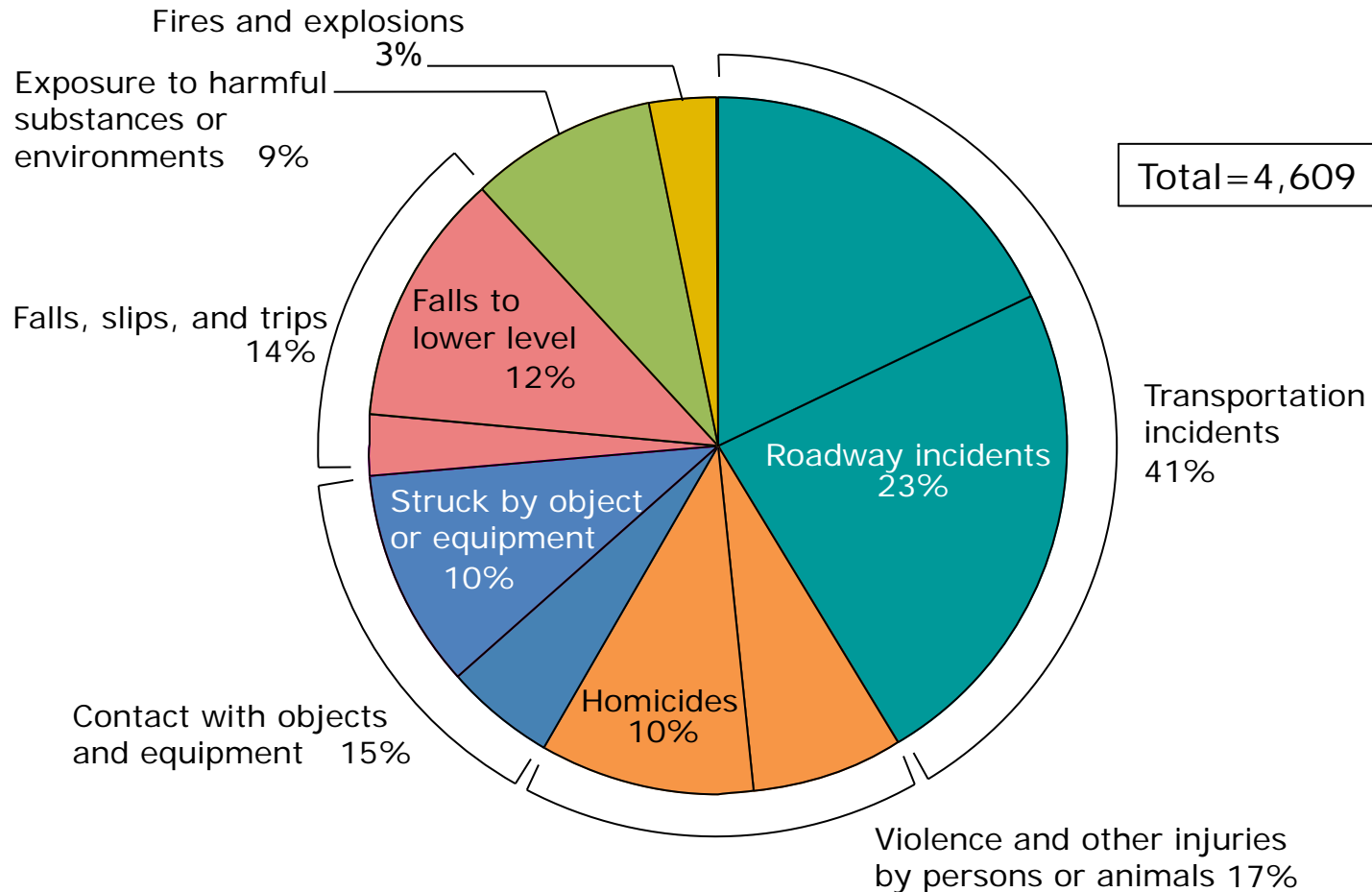
SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, Current Population Survey, Census of Fatal Occupational Injuries, and U.S. Census Bureau, 2012.

Number of fatal work injuries, by state, 2011*



Twenty-three states had more fatal injuries in 2011 than in 2010. Twenty-five states and the District of Columbia had fewer fatal workplace injuries in 2011 compared to 2010. Two states saw no change between the two years.

Fatal occupational injuries by major event, 2011*



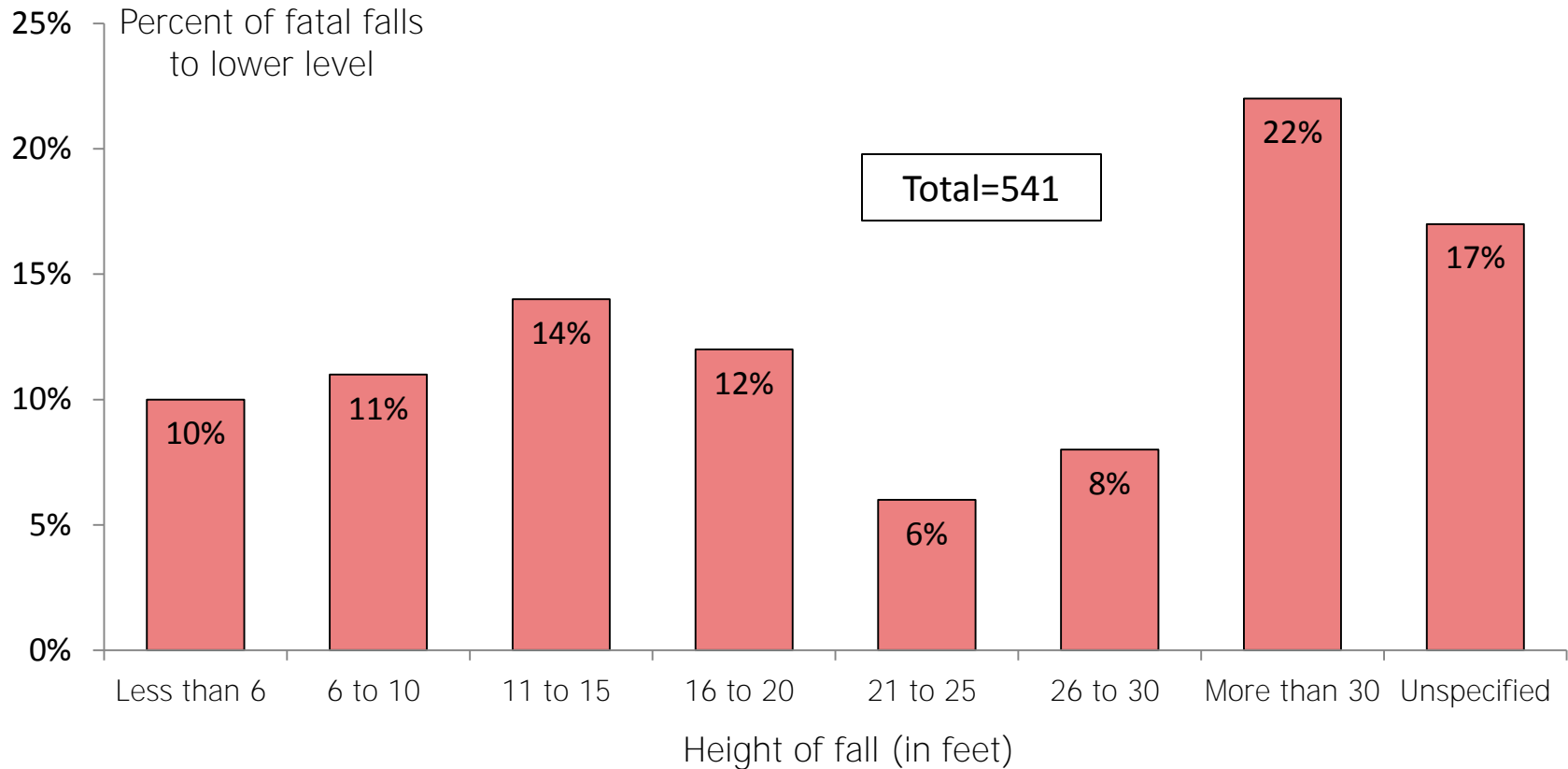
More fatal work injuries resulted from transportation incidents than from any other event. Roadway incidents alone accounted for nearly one out of every four fatal work injuries in 2011.

*Data for 2011 are preliminary.

NOTE: Event data for 2011 are not comparable to prior years due to the implementation of the revised Occupational Injury and Illness Classification System (OIICS) 2.01. See http://www.bls.gov/iif/osh_notice11.htm. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Bureau of Labor Statistics. U.S. Department of Labor. 2012.

Fatal falls to lower level by height of fall, 2011*



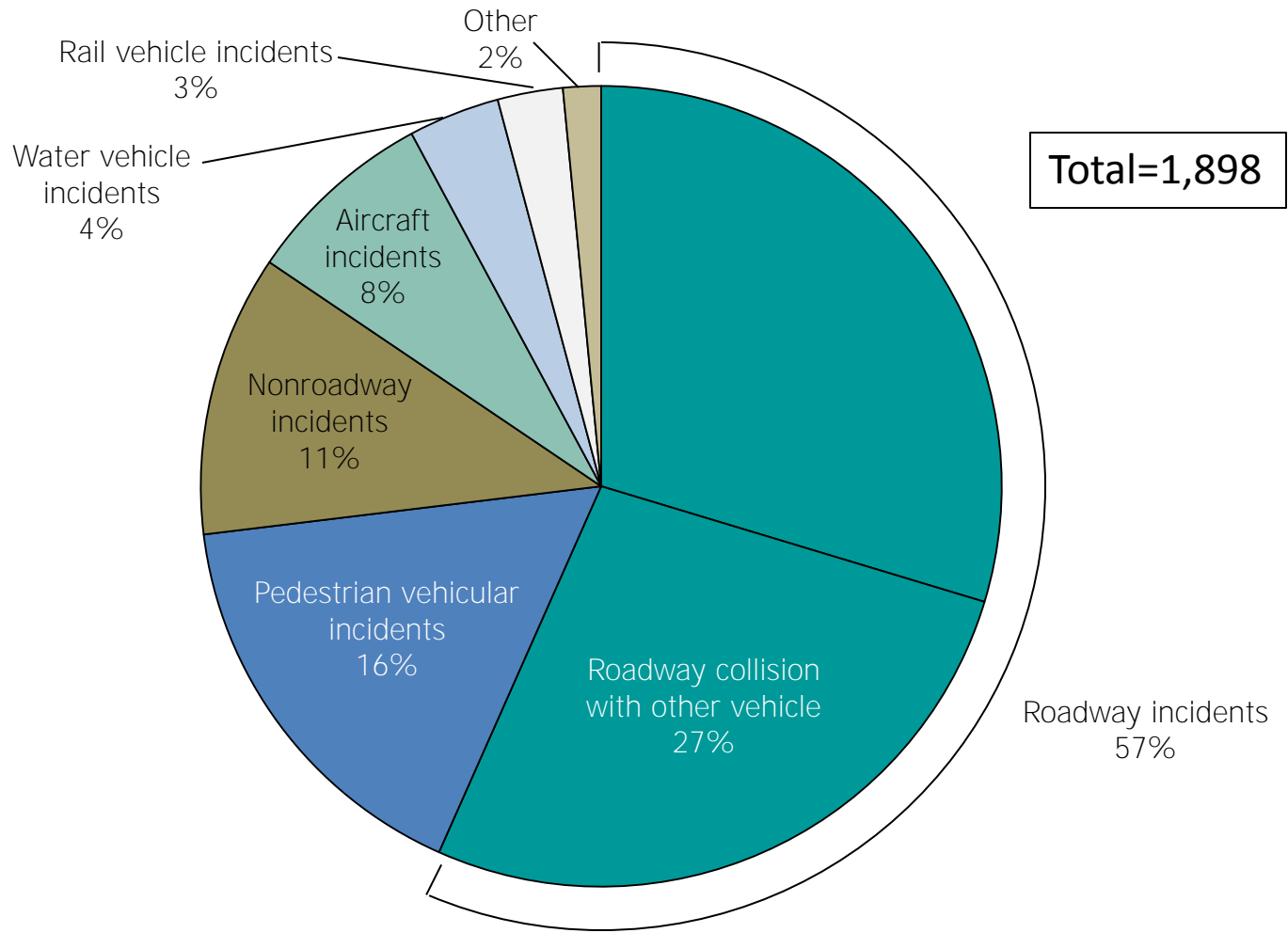
In 2011, falls to lower level accounted for 541 fatal work injuries. Of those cases where height of fall was known, 57 percent involved falls of 20 feet or less.

*Data for 2011 are preliminary.

NOTE: Event data for 2011 are not comparable to prior years due to the implementation of the revised Occupational Injury and Illness Classification System (OIICS) 2.01. See http://www.bls.gov/iif/osh_notice11.htm. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Fatal transportation incidents by type, 2011*



Roadway incidents accounted for the greatest number of work-related transportation fatalities. Of these, 512 deaths resulted from a roadway collision with another vehicle. Pedestrian vehicular incidents constituted the second greatest number transportation-related fatal injuries.

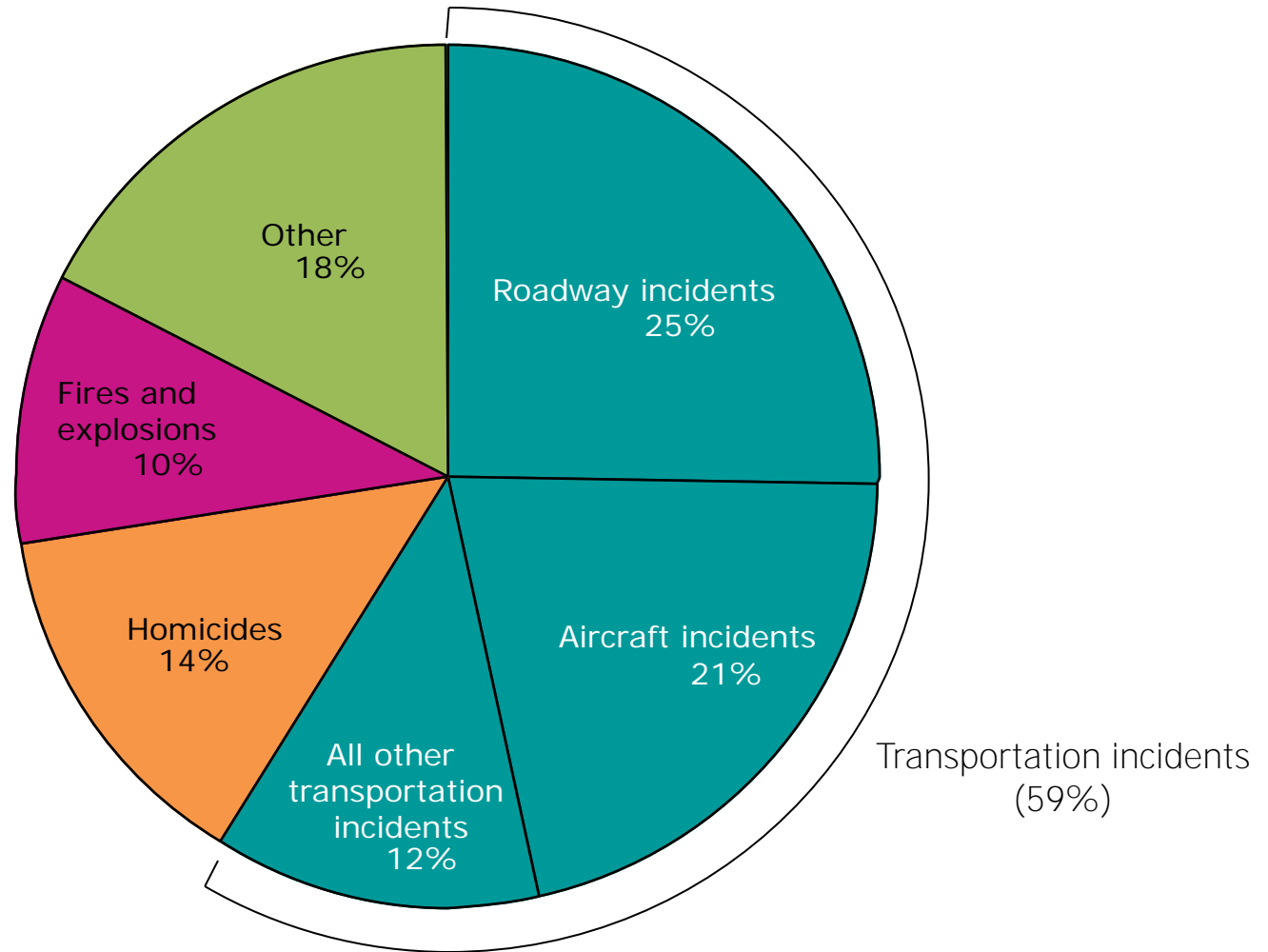
*Data for 2011 are preliminary.

NOTE: Event data for 2011 are not comparable to prior years due to the implementation of the revised Occupational Injury and Illness Classification System (OIICS) 2.01. See http://www.bls.gov/iif/osh_notice11.htm. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

How workers died in multiple-fatality incidents, 2011*

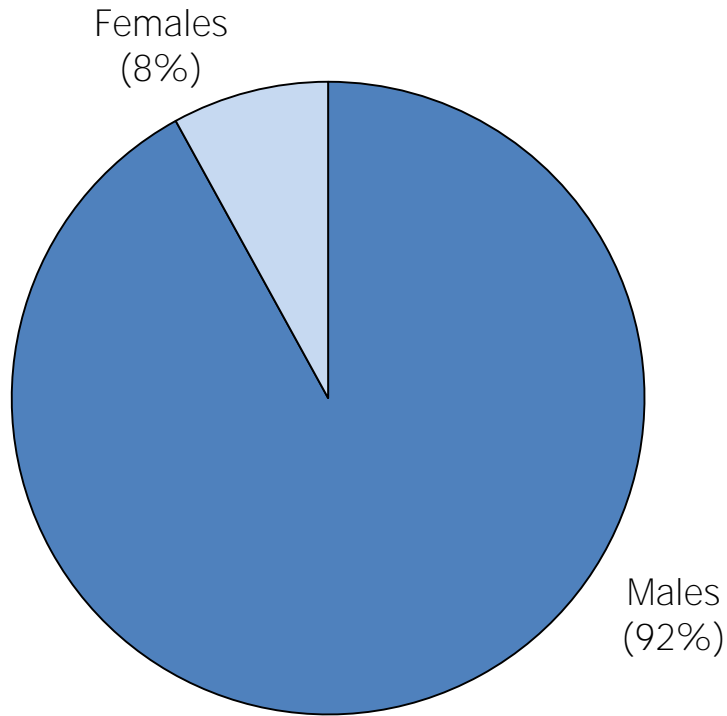
Total workers = 354



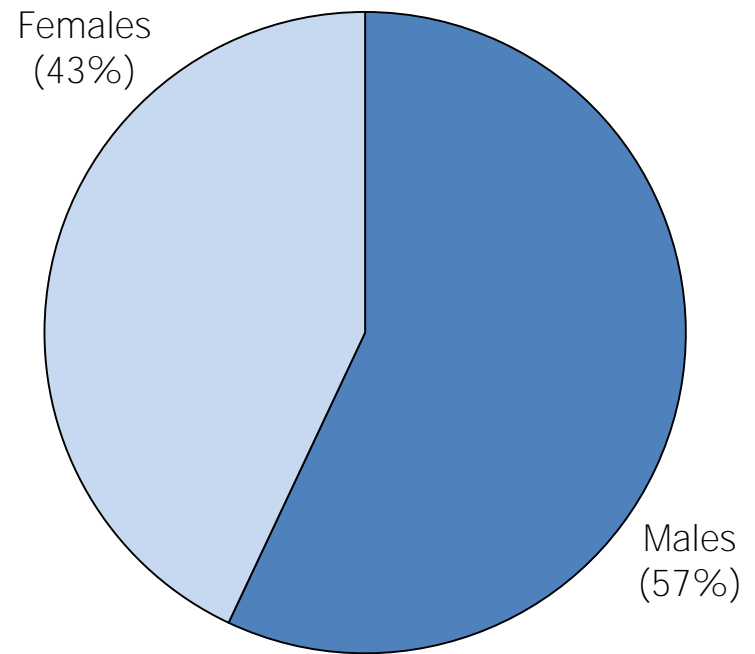
Transportation incidents accounted for nearly three out of five workers killed in multiple-fatality events. Homicides accounted for the second greatest number of workers lost in multiple-fatality incidents.

*Data for 2011 are preliminary.
NOTE: Event data for 2011 are not comparable to prior years due to the implementation of the revised Occupational Injury and Illness Classification System (OIICS) 2.01. See http://www.bls.gov/iif/osh_notice11.htm. Percentages may not add to 100 due to rounding.
SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Fatal work injuries and hours worked, by gender of worker, 2011*



Fatal work injuries = 4,609



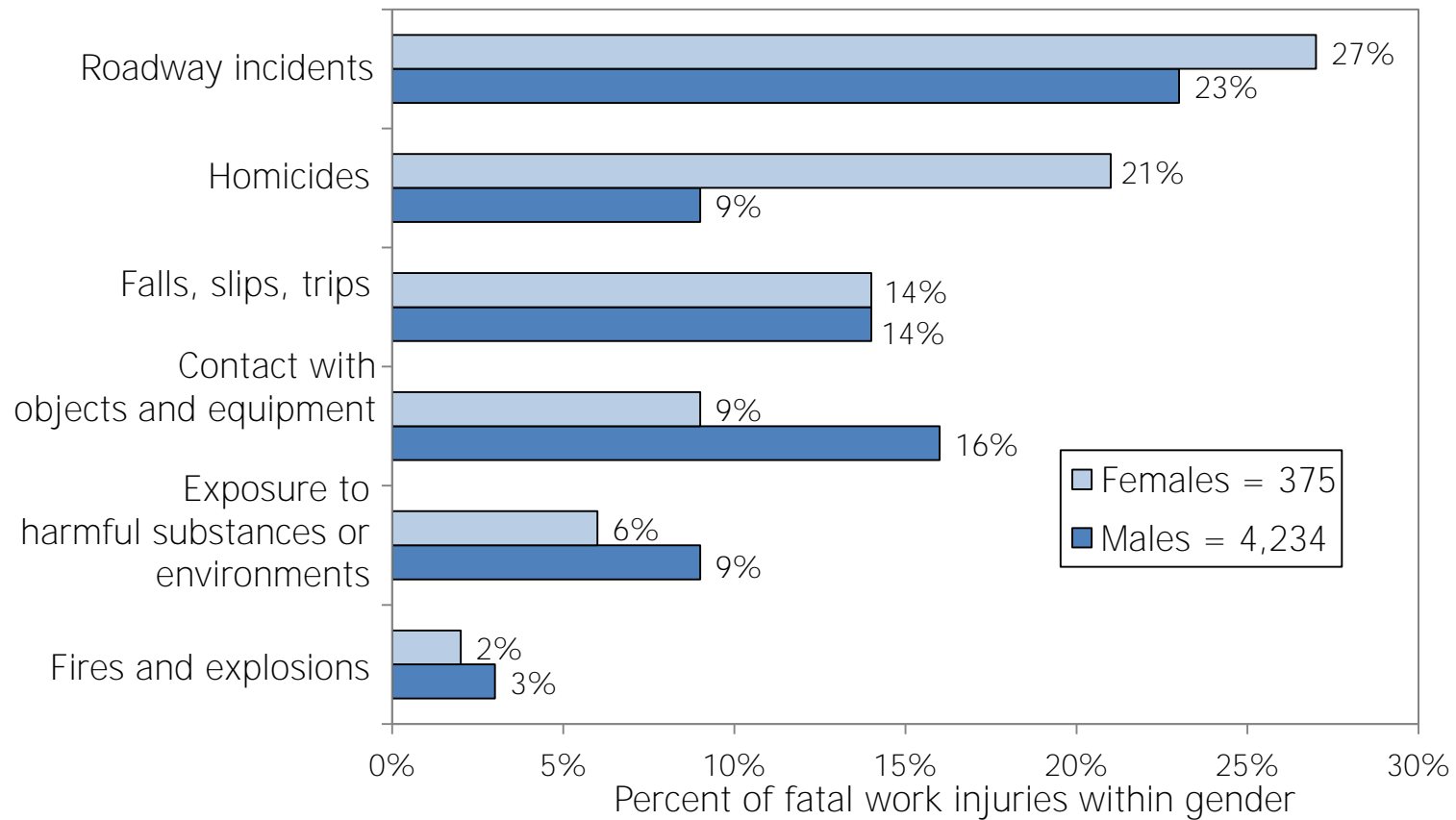
Hours worked = 258,293,285,000

A disproportionate share of fatal work injuries involved men relative to their hours worked in 2011.

*Fatal injury data for 2011 are preliminary.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey, and Census of Fatal Occupational Injuries, 2012.

Distribution of fatal injury events, by gender of worker, 2011*



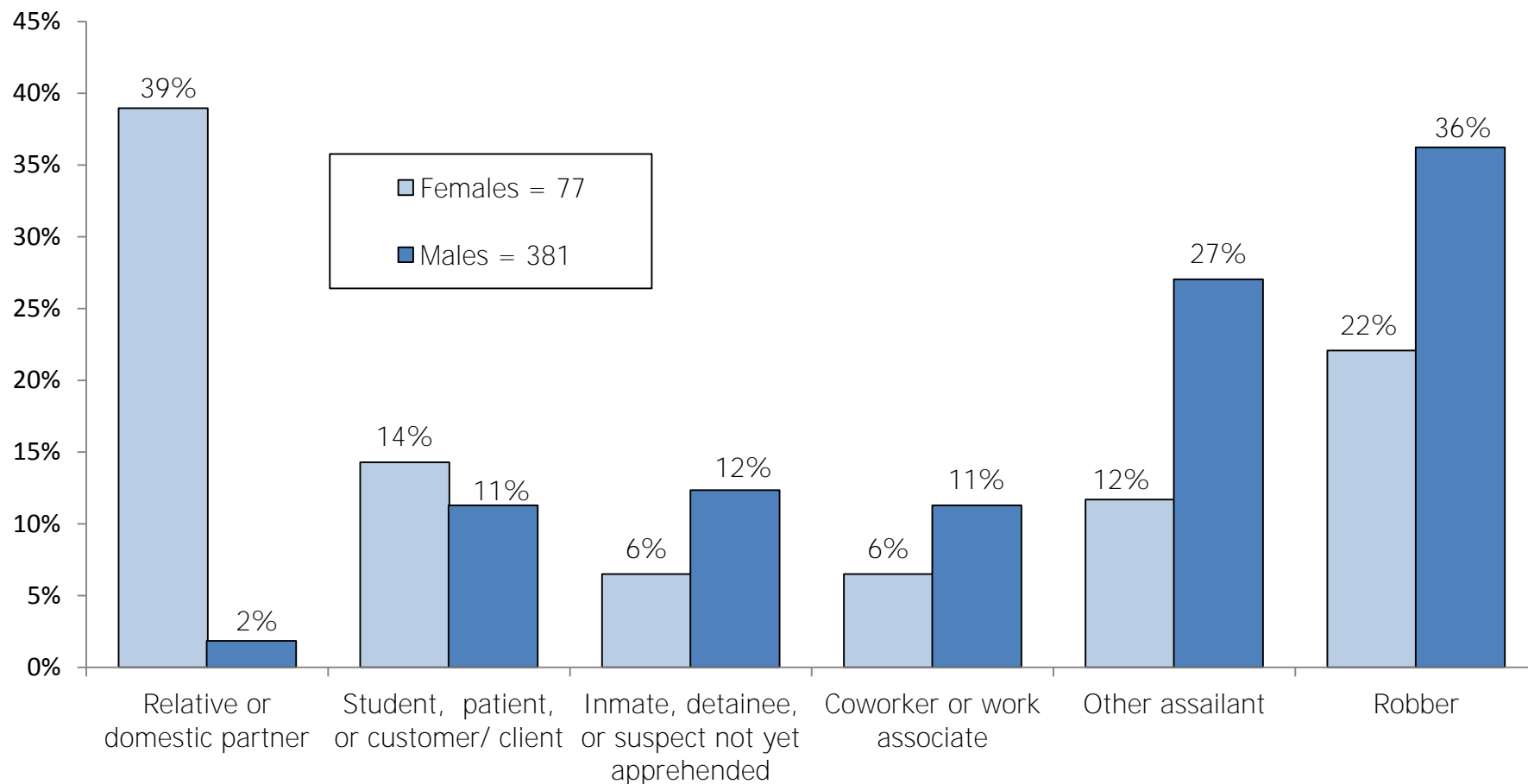
A higher percentage of fatal work injuries involving women resulted from roadway incidents and homicides as compared to men. A higher percentage of fatal work injuries involving men resulted from contact with objects and equipment and exposure to harmful substances or environments.

*Data for 2011 are preliminary.

NOTE: Event data for 2011 are not comparable to prior years due to the implementation of the revised Occupational Injury and Illness Classification System (OIICS) 2.01. See http://www.bls.gov/iif/osh_notice11.htm. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Work-related homicides by gender of decedent and assailant type, 2011*



For women, assailants were most likely to be relatives. Of these, nearly all were spouses or domestic partners. Robbers were the most common type of work-related homicide assailant for men and the second-most common for women.

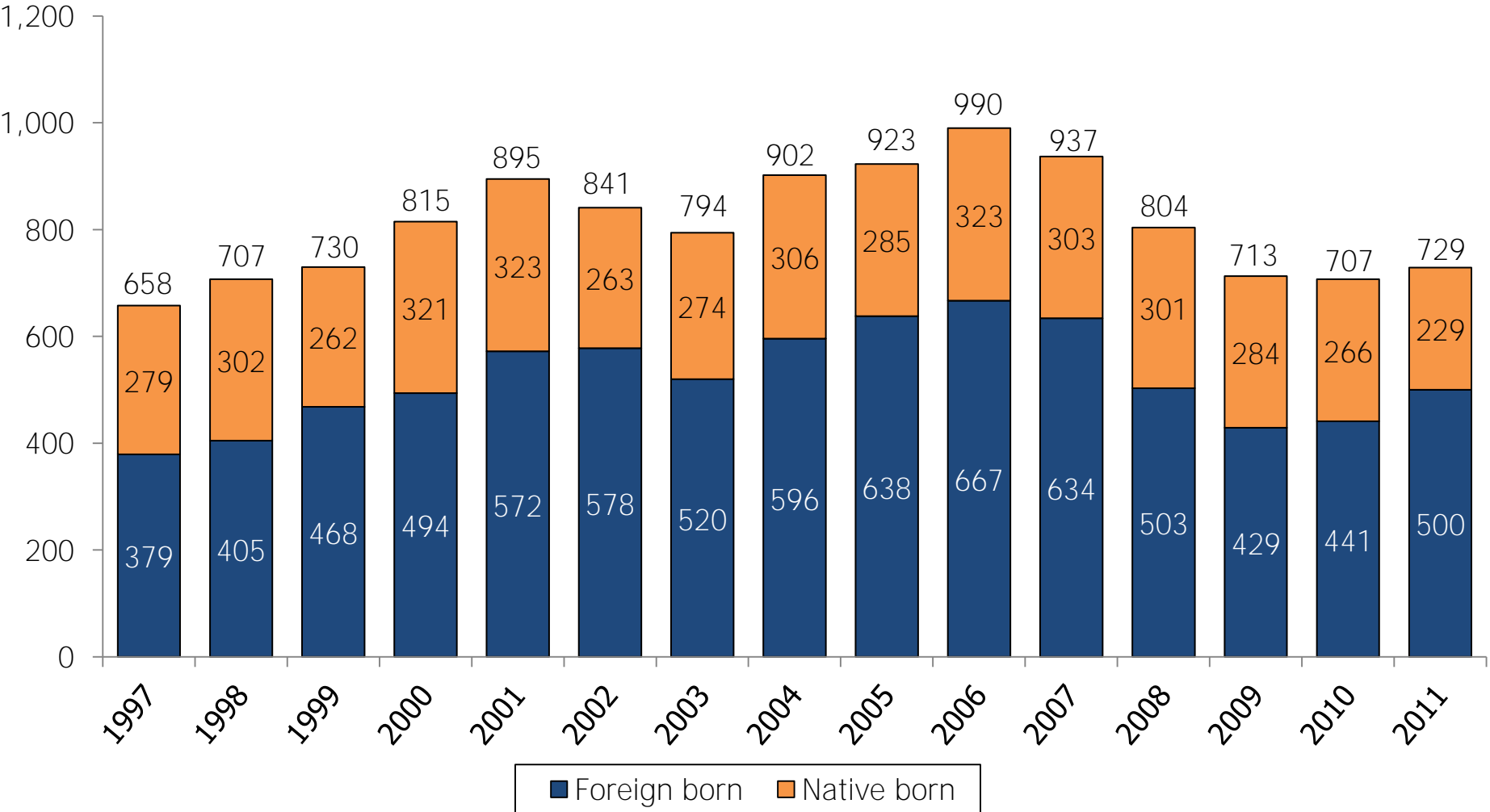
*Data for 2011 are preliminary.

NOTE: Event data for 2011 are not comparable to prior years due to the implementation of the revised Occupational Injury and Illness Classification System (OIICS) 2.01. See http://www.bls.gov/iif/osh_notice11.htm. Percentages may not add to 100 due to rounding.

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Number of fatal work injuries involving Hispanic or Latino workers, 1997-2011*

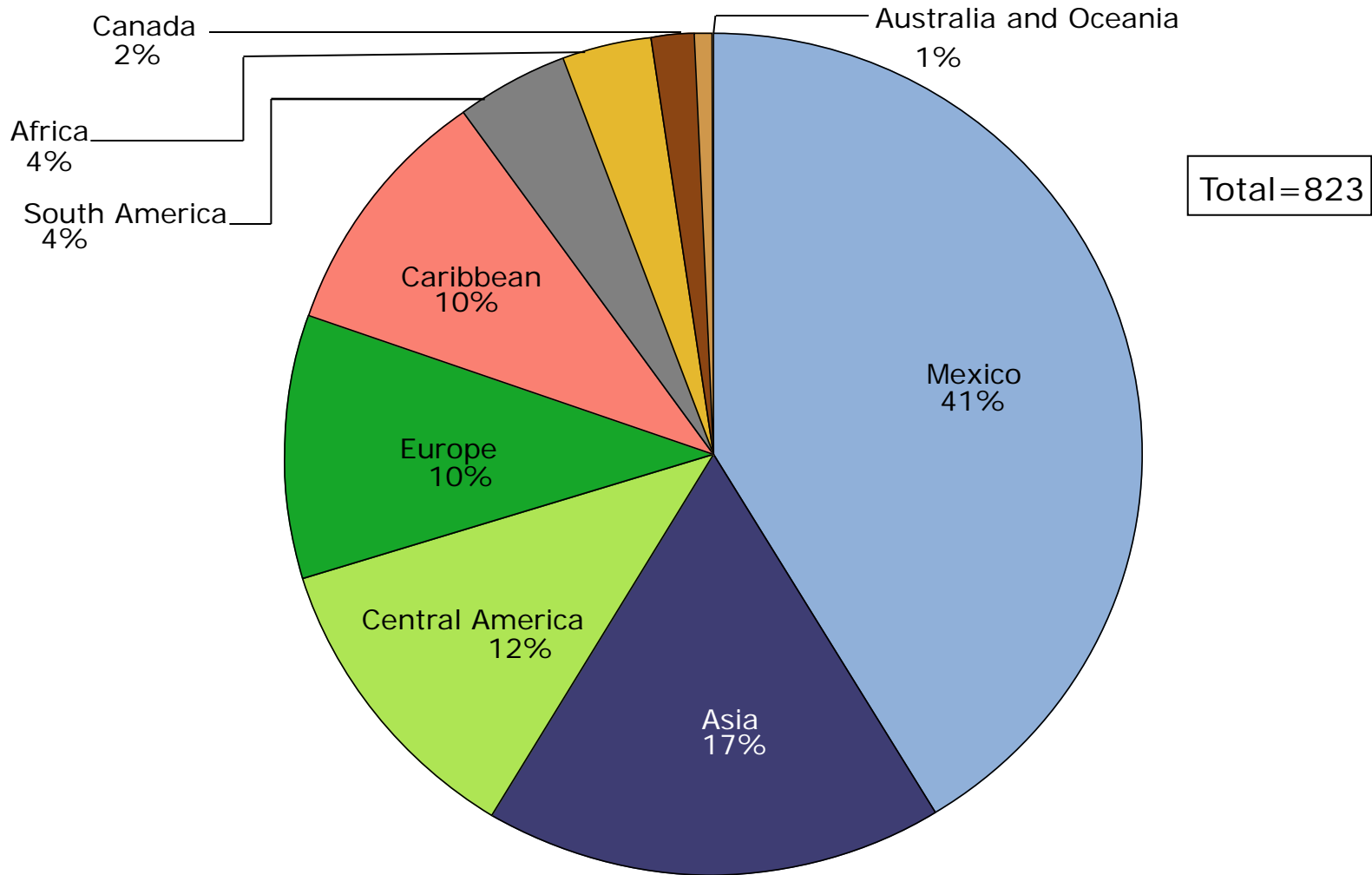
Number of fatal work injuries



Fatal work injuries involving Hispanic or Latino workers increased in 2011 after four consecutive years of decline. Sixty-nine percent of fatally-injured Hispanic or Latino workers in 2011 were born outside of the United States.

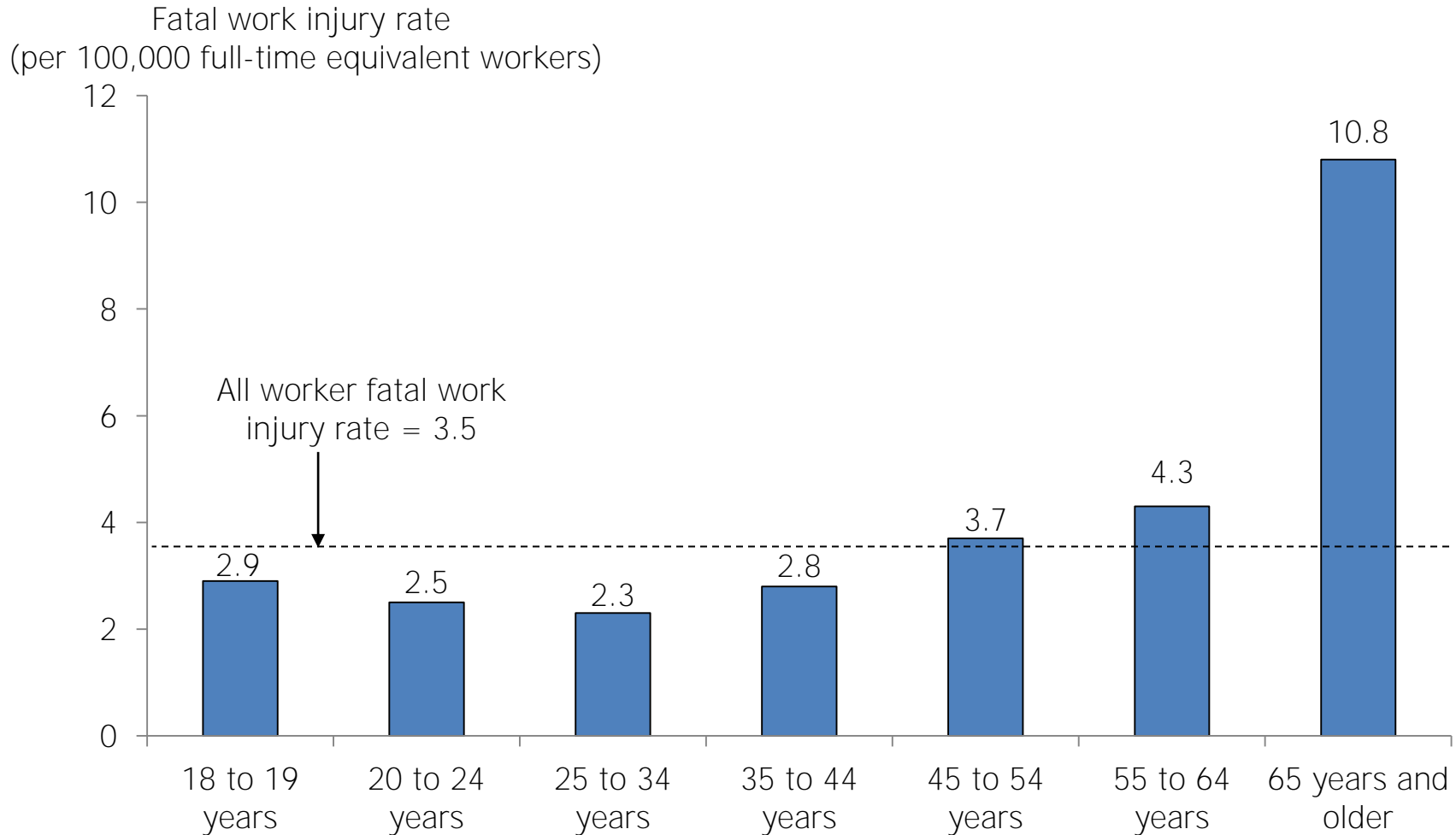
*Data for 2011 are preliminary. Data for prior years are revised and final.
NOTE: Data from 2001 exclude fatal work injuries resulting from the September 11 terrorist attacks.
SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Fatal injuries involving foreign-born workers, by country or region of birth, 2011*



Workers born in Mexico accounted for the largest portion (41 percent) of foreign-born workers who died from work-related injuries in the United States in 2011.

Fatal work injury rates, by age group, 2011*



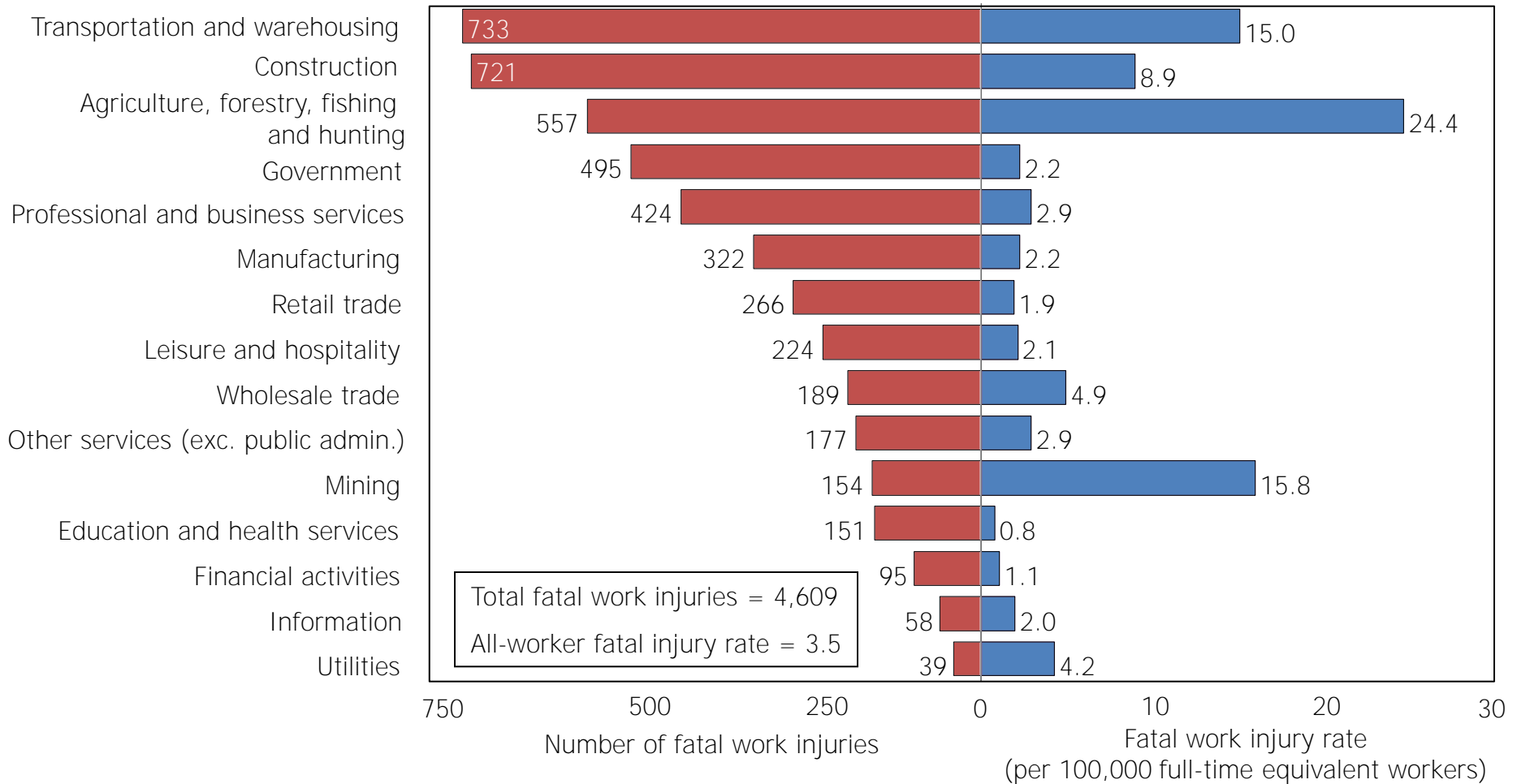
Fatal work injury rates for workers 45 years of age and older were higher than the overall U.S. rate, and the rate for workers 65 years of age and older was more than 3 times the rate for all workers.

*Data for 2011 are preliminary.

NOTE: Fatal injury rates exclude workers under the age of 16 years, volunteers, and resident military. For additional information on the fatal work injury rate methodology changes please see <http://www.bls.gov/iif/oshnotice10.htm>.

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Number and rate of fatal occupational injuries, by industry sector, 2011*



Transportation and warehousing surpassed construction in having the highest number of fatal injuries in 2011. The agriculture, forestry, fishing, and hunting sector had the highest fatal work injury rate.

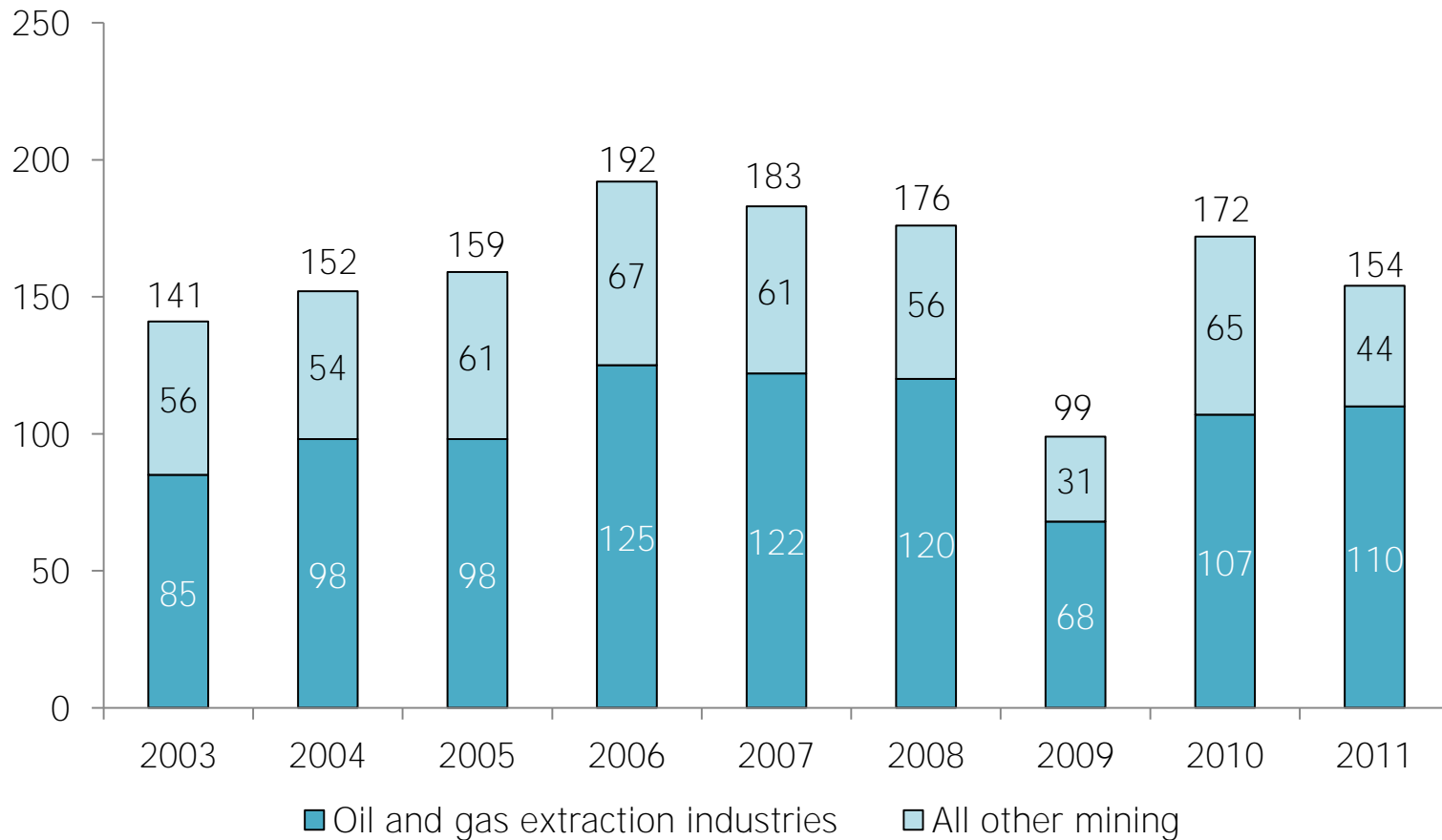
*Data for 2011 are preliminary.

NOTE: All industries shown are private with the exception of government, which includes fatal injuries to workers employed by governmental organizations regardless of industry. Fatal injury rates exclude workers under the age of 16 years, volunteers, and resident military. The number of fatal work injuries represents total published fatal injuries before the exclusions. For additional information on the fatal work injury rate methodology changes please see <http://www.bls.gov/iif/oshnotice10.htm>.

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Fatal occupational injuries in the private sector mining industry, 2003–2011*

Number of fatal work injuries



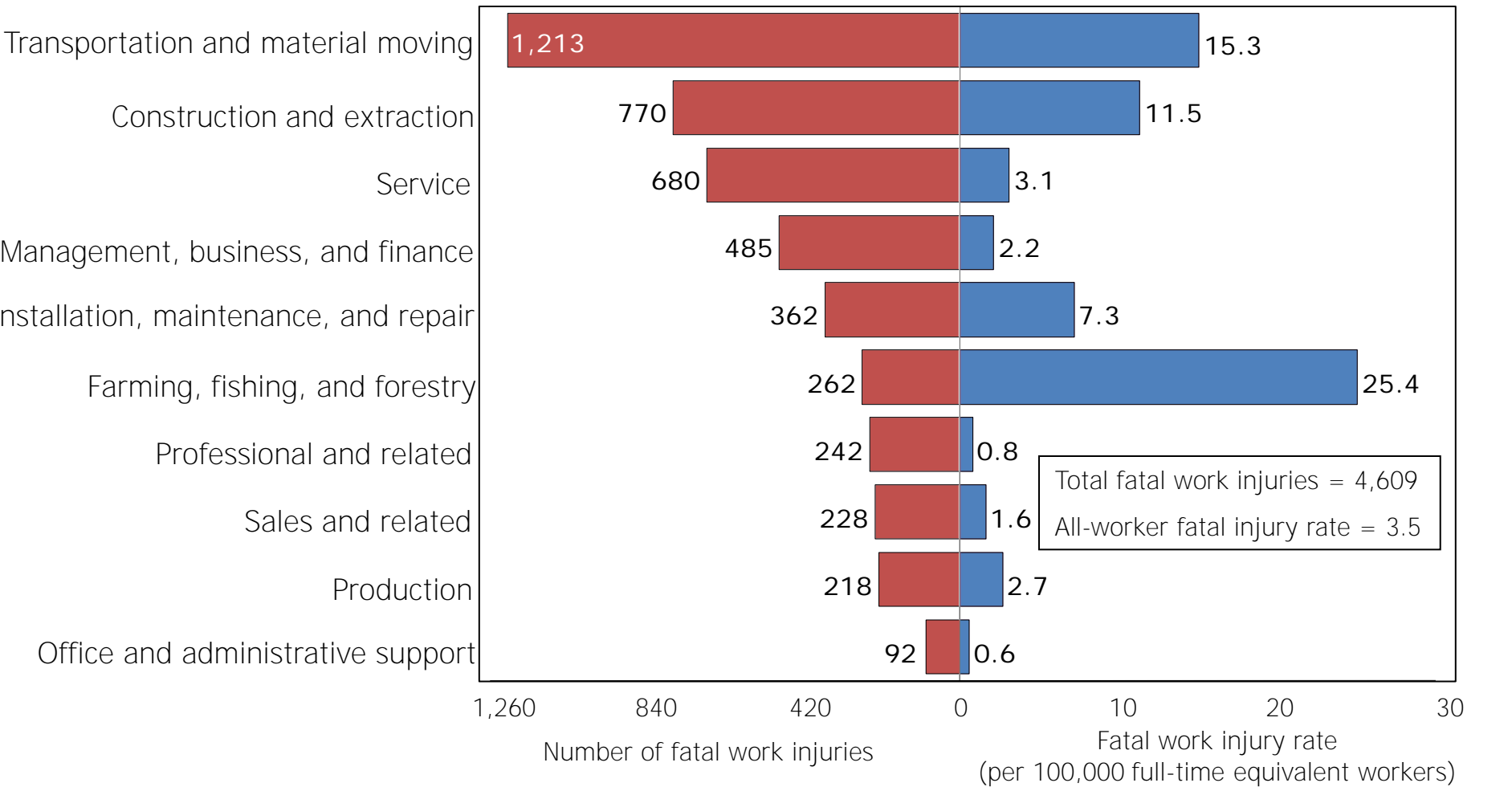
Fatal work injuries in the private mining industry decreased by 10 percent in 2011 after increasing the previous year from a series low in 2009. Fatalities in the oil and gas industry accounted for 71 percent of the fatal work injuries in the mining sector in 2011.

*Data for 2011 are preliminary. Data for prior years are revised and final.

NOTE: Oil and gas extraction industries include oil and gas extraction (NAICS 21111), drilling oil and gas wells (NAICS 213111), and support activities for oil and gas operations (NAICS 213112).

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

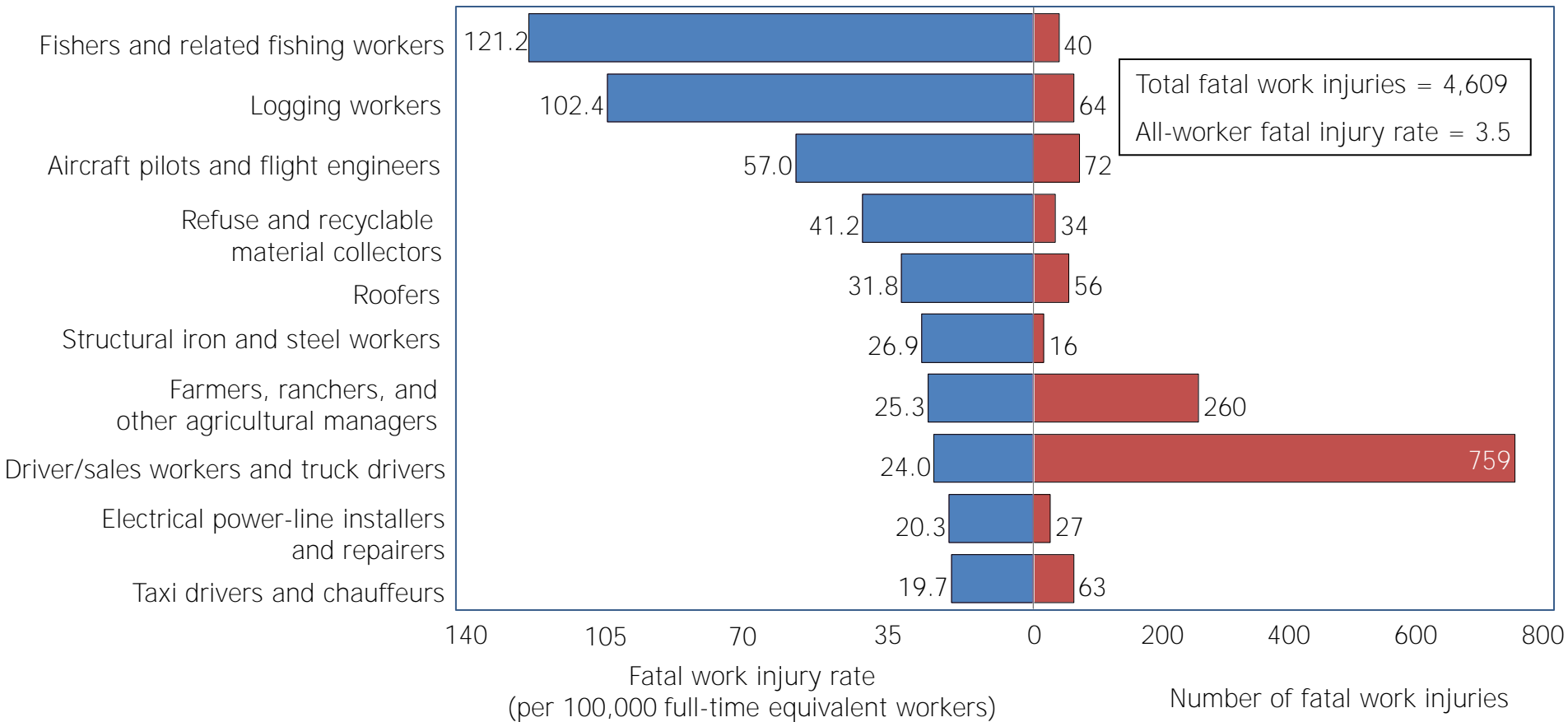
Number and rate of fatal occupational injuries, by major civilian occupation group, 2011*



Although transportation and material moving occupations had the highest number of fatal work injuries in 2011, the major occupational group with the highest fatal work injury rate was farming, fishing, and forestry occupations.

*Data for 2011 are preliminary.
NOTE: Fatal injury rates exclude workers under the age of 16 years, volunteers, and resident military. The number of fatal work injuries represents total published fatal injuries before the exclusions. For additional information on the fatal work injury rate methodology changes please see <http://www.bls.gov/iif/oshnotice10.htm>.
SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

Occupations with high fatal work injury rates, 2011*



Fatal work injury rates were highest for fishers, logging workers, and aircraft pilots and flight engineers in 2011.

*Data for 2011 are preliminary.

NOTE: Fatal injury rates exclude workers under the age of 16 years, volunteers, and resident military. The number of fatal work injuries represents total published fatal injuries before the exclusions. For additional information on the fatal work injury rate methodology changes please see <http://www.bls.gov/iif/oshnotice10.htm>.

SOURCE: U.S. Bureau of Labor Statistics, U.S. Department of Labor, 2012.

CHILD MALTREATMENT IN OHIO, 2009

	Child Maltreatment Fatality Rates per 100,000 children ages birth to 18	Child Maltreatment Rates per 1,000 children ages birth to 18
Ohio 2009**	2.92	13.2
National 2009**	2.34	10.3
HP 2010 GOAL*	1.4	10.3

Sources:

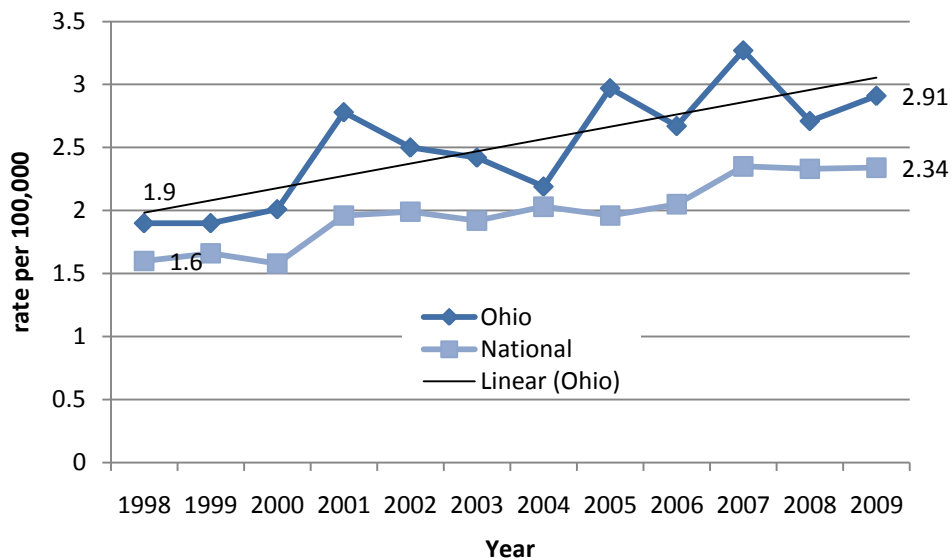
*Healthy People 2010

**Child Maltreatment Annual Reports: Reports from the States to the National Child Abuse and Neglect Data Systems – National statistics on child abuse and neglect. http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can

CHILD MALTREATMENT FATALITIES

Deaths due to maltreatment represent the most extreme and tragic scenario of abuse. At 2.91 deaths per 100,000 children ages birth to 18, Ohio's 2009 child maltreatment fatality rate exceeded the national rate (2.34 per 100,000) by 24 percent. In 2009, Ohio public children services agencies investigated 79 child deaths, which were identified to be the result of maltreatment. This equates to one child dying from abuse or neglect every 4.6 days in Ohio. Since 1998, Ohio's and the nation's maltreatment fatality rates have been generally increasing. Ohio's rate has increased 53 percent and the national rate has increased 46 percent from 1998 to 2009.

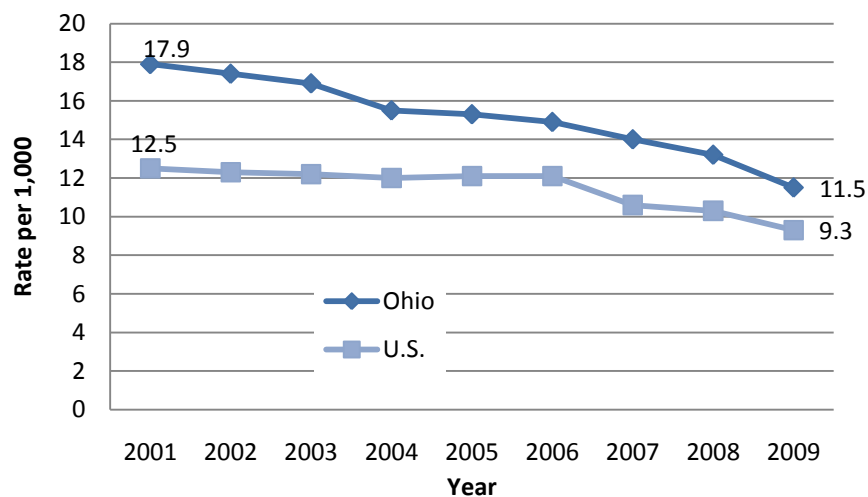
Figure 1.1. National and Ohio maltreatment death rates (per 100,000) of children <18 years by year, 1998-2009



CHILD MALTREATMENT CASES

During calendar year 2009, investigations by public children services agencies in Ohio revealed that 31,270 or 11.5 per 1,000 Ohio children under 18 years of age were identified as victims of maltreatment. **This is the equivalent of 86 children each day.** Although Ohio's rate of maltreatment has been decreasing since 2001, it still exceeded the national rate in 2009 by 24 percent. Approximately 693,174 or 9.3 per 1,000 children birth to 18 years were identified as abused or neglected in the United States during 2009. **This is approximately 1,900 children each day on average across the U.S.** It is also important to note that these figures represent only identified maltreatment that was reported to children's services. Therefore, they are an under-representation of the total amount of child maltreatment prevalent throughout Ohio and the U.S.

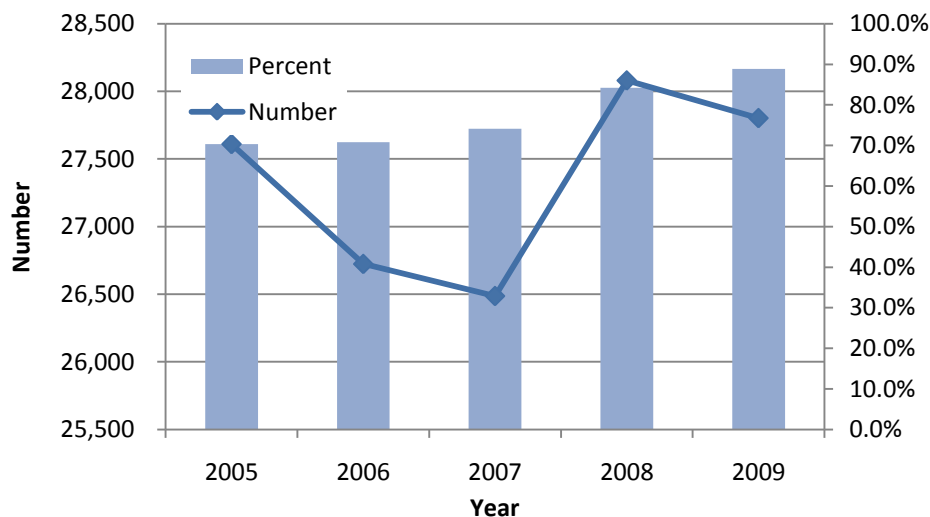
Figure 1.2 Ohio and national child maltreatment rates per 1,000 children birth to 18 years by year, 2001-2009



FIRST-TIME VICTIMS

The majority of these maltreatment cases investigated are first-time victims. In Ohio, the percent of cases that involve first-time victims has been increasing from 2005 to 2009.

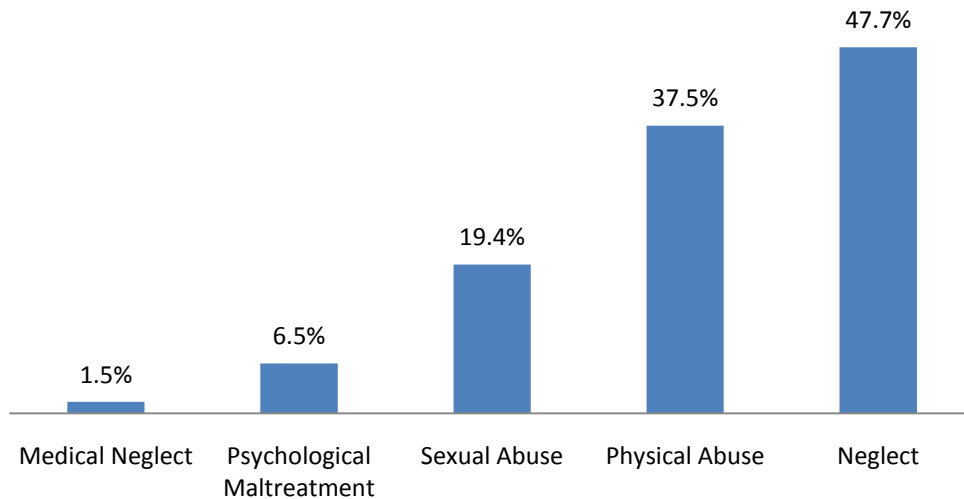
Figure 1.3. Number and Percent of First time victims, Ohio, 2005-09



MALTREATMENT TYPE

Of the Ohio cases, nearly half (48 percent) were neglected, 37.5 percent suffered physical abuse, 19.4 percent endured sexual abuse, 6.5 percent were subject to psychological maltreatment and 1.5 percent were medically neglected. Please note, totals exceed 100 percent because children may be exposed to more than one form of maltreatment.

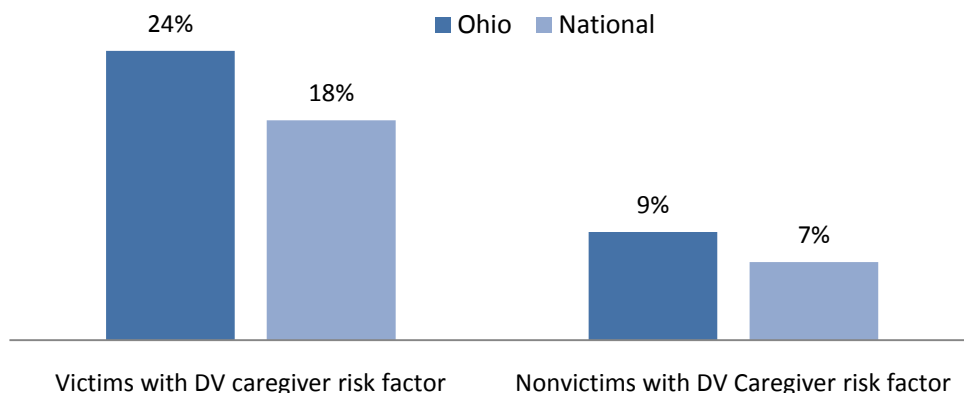
Figure 1.4. Child maltreatment by type of abuse, Ohio children <18 years, 2009



RISK FACTOR: CAREGIVER DOMESTIC VIOLENCE

Twenty-four percent of Ohio child maltreatment victims had a caregiver risk factor of domestic violence, compared with 9 percent among non-victims of maltreatment.

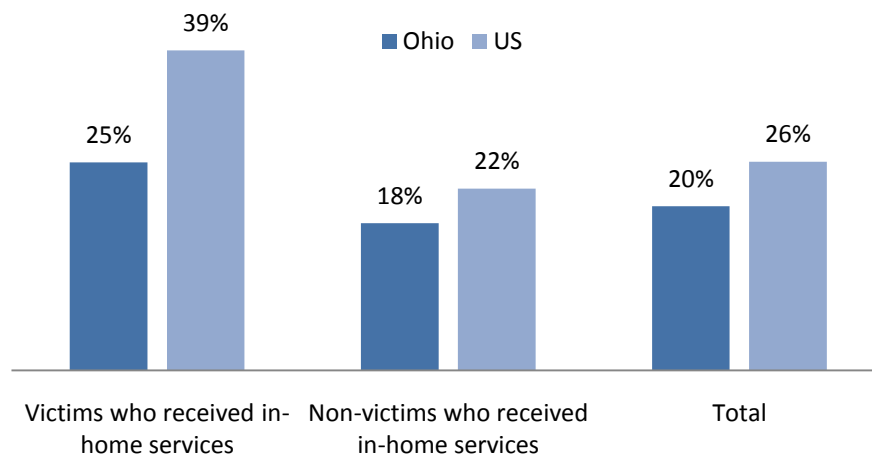
Figure 1.5. Percentage of child maltreatment victims and nonvictims with caregiver risk factor of domestic violence (DV) risk factor, Ohio and U.S., 2009*



RECEIVING IN-HOME SERVICES

In-home services include all services—except foster care or removal from the home—that are provided to families while the child is living in the home. Services may be provided directly in the home or in a professional setting. Approximately 8,647 Ohio victims received in-home services in 2009. This accounted for one-fourth of the Ohio children who were found to be victims, compared to 39 percent nationally. More than 23,900 non-victims in Ohio received in-home services in 2009. This accounted for 18 percent of non-victims in Ohio.

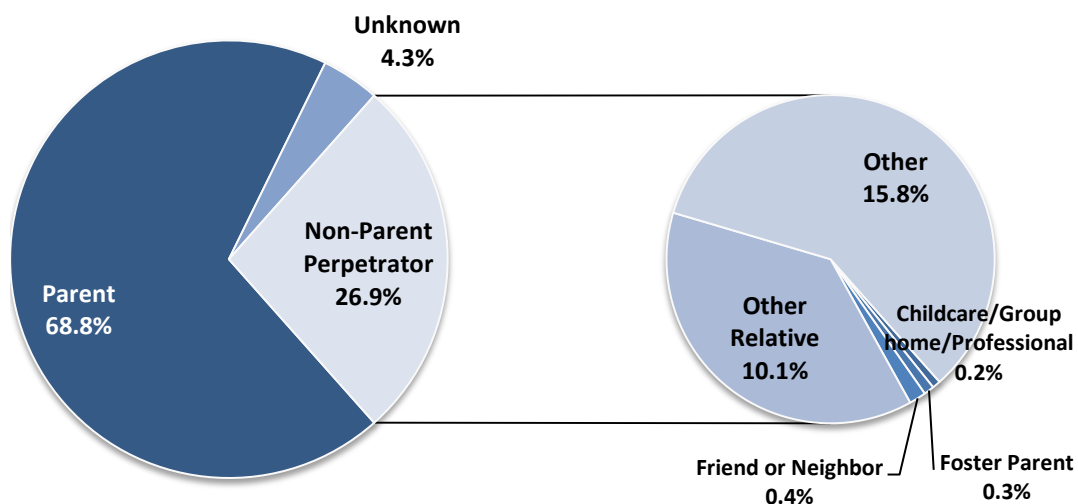
Figure 1.6. Number and Proportion of Victims, Non-victims Receiving In-home Services, Ohio vs. U.S., 2009



RELATIONSHIP OF PERPETRATOR TO VICTIM

In 7 out of 10 cases, parents were the perpetrators of child maltreatment in Ohio during 2009. “Other relatives” were the next most common (10%) relationship where maltreatment occurred.

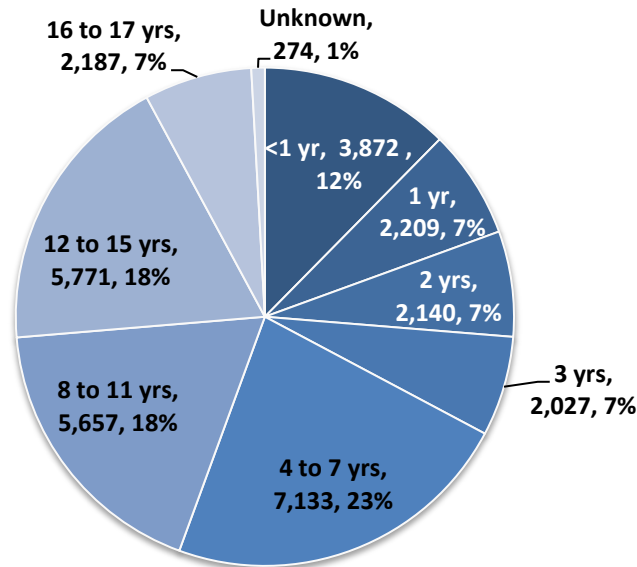
Figure 1.7. Proportional distribution of the relationship of perpetrator to Victim, Ohio, 2009



AGE GROUP

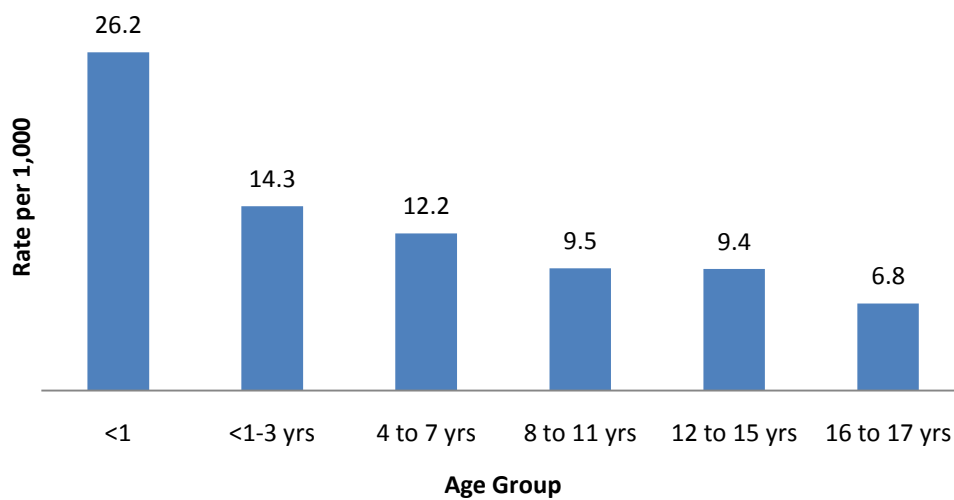
Children 3 years and younger accounted for one in three cases (32 percent), while children aged 4-7 years accounted for approximately one in four cases (23 percent), *Figure 1.8*.

Figure 1.8. Proportion of child maltreatment cases of Ohio children ages birth to 18 by age group, 2009



Child maltreatment rates decrease with age. In Ohio during 2009, *Figure 1.9*, the rates for age groups <1, 1-3, 4-7, 8-11, 12-15 and 16-17 years were 26.2, 14.3, 12.2, 9.5, 9.4 and 6.8 per 1,000 Ohio children in the same age group, respectively. The rate for infants <1 year was 288 percent greater than the rate for ages 16-17.

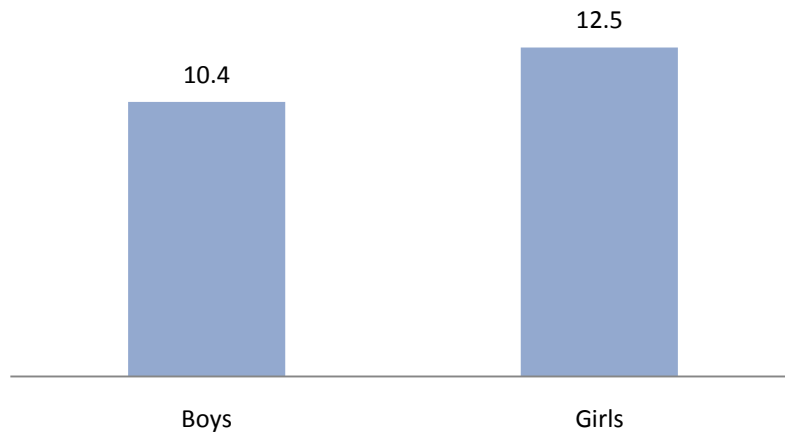
Figure 1.9. Child maltreatment rates (per 1,000), Ohio children ages birth to 18, by age group, 2009



SEX

In 2009, Ohio victims included more females (53.1%) than males (46.3%). Sex was unknown in 0.6 percent of cases. Maltreatment rates by sex were 12.5 and 10.4 per 1,000 female and male children birth to 18 years respectively, *Figure 1.10*.

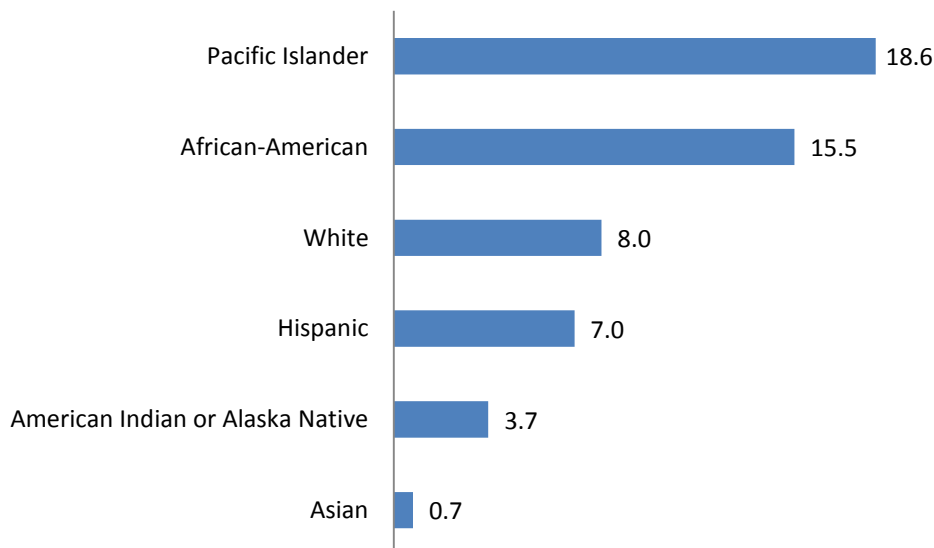
Figure 1.10. Maltreatment rates (per 1,000) Ohio children ages birth to 18 years, by sex, 2009



RACE/ETHNICITY

Examining race/ethnicity of cases, 53.1 percent were white, 19.5 percent were African American, 2.8 percent were Hispanic and 24.5 percent were unknown. This bar chart shows that Pacific Islander (n=18) and African-American children (n=6,083) had the highest rates of victimization at 18.6 and 15.5 per 1,000 children of the same race or ethnicity, respectively, *Figure 1.11*. Asian children (n=35) and American Indian/Alaska Native (n=20) had the lowest.

Figure 1.11. Ohio child maltreatment rates by race and ethnicity, 2009



PREVENTIVE SERVICES

In 2009, 46,531 Ohio children received child maltreatment services.

Data Source:

U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2010). Child Maltreatment 2008. Available from http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can.

Reference:

¹ *Guide to Community Preventive Services*. Early childhood home visitation to prevent violence. www.thecommunityguide.org/violence/home/homevisitation.html

The Task Force on Community Preventive Services recommends early childhood home visitation programs based on strong evidence of their effectiveness in reducing child maltreatment among high-risk families.



OHIO INJURY PREVENTION PARTNERSHIP

Child Injury Action Group

Strategic Plan 2011-2016

DRAFT 11-17-11

Introduction:

The Child Injury Action Group (CIAG) is an action group of the Ohio Injury Prevention Partnership and consists of representatives from various disciplines including: children's hospitals, local health departments, businesses, state agencies, professional associations and universities. Through a data-driven prioritization process, the CIAG has identified the five strategic priority areas that are contained in this plan. In addition to utilizing a data-driven approach, the CIAG also considered feasibility, partnerships, funding and other resources when drafting this plan. Strategic priorities include: teen driving safety, bicycle and wheeled sports helmets, infant sleep-related suffocation, sports-related traumatic brain injury, and child restraint/booster seat law review/revision. With limited funding, the CIAG strives to make an impact through policy, systems and environmental changes. As resources become available, individual-based interventions will be considered. Subcommittees have been formed by interest area to address objectives and activities listed in this plan. Further documentation of those activities is available in the action plans for each subcommittee. While this five-year plan is intended to serve as guidance for CIAG activities for that timeframe, the members of the CIAG intend to address other relevant, timely child injury issues as the need arises.

Using this Plan:

This strategic plan covers the timeframe of 2011-2016 and includes five strategic priorities. Each priority begins with a description of the issue and a broad goal statement. Objectives are associated with each strategic priority and are numbered sequentially. Each objective allows for several tracking fields:

- **Group Members:** Refers to the CIAG group members who have taken responsibility for the objective
- **Status:** Indicates the overall status of the objective according to the following color coded key: **Not Begun**, **Planning**, **In Progress**, **Complete**
- **Schedule:** Provides an overview of the action planning cycle for this objective. Action plans will be developed for each objective with further detail regarding timeline and accountability.
- **Measure of Success:** Provides a broad "critical success factor" associated with the objective that can be used to assess overall success regarding the implementation of the action plan and achievement of the objective.

Priority 1: Teen Driving

In Ohio, motor vehicle crashes kill more teens than any other cause of death. In 2010, 114 youth occupants aged 16 – 20 were killed and 16,041 were injured in crashes, according to the 2010¹ Ohio Traffic Crash Report. These figures represent 11.5 percent and 15.1 percent of the total motor vehicle-related deaths and injuries, respectively, among Ohioans of all ages in 2010. Of the deaths, 73 were to drivers and 41 to passengers. In 2010, 160 youthful drivers aged 16-20 were involved in fatal crashes, 18,946 were involved in injury crashes and 48,378 were involved in property damage crashes.

Speed, alcohol use, driving at night and distractions including cell phones/texting and multiple passengers are all risk factors for motor vehicle crashes among teens. Graduated driver's license (GDL) laws have been proven an effective way to reduce death and injury for teen drivers. A strong GDL is designed to maximize a new drivers experience while minimizing the risk.

Most GDL laws include a three-step approach including: supervised driving with a parent or other adult for at least 12 months, with practice at nighttime and in inclement weather. Teens are at a very low risk when they drive with an adult. The second phase should include restrictions during the provisional stage, when the teen is just beginning to drive without an adult including passenger limits and restricted driving hours. After successful completion of the second phase, the teen is a fully licensed driver.

Goal: *Reduce motor vehicle traffic-related death and injury to teen occupants aged 16 – 20 from a baseline of 14.0 deaths per 100,000² and 1,975.3 injuries³ per 100,000 by 10% by Sept. 30, 2016.*

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
1.1 Create CIAG teen driving subcommittee by soliciting new members with an interest in this topic by December 31, 2011.					12/31/2011	
1.2 Create a formal partnership with Ohio Teen Safe Driving Coalition to accomplish objectives 1.3 and 1.4 by September 30, 2011.					9/30/2011	
1.3 Partner with the Ohio Teen Safe Driving Coalition to promote and support legislative changes to the GDL by December 31, 2014.					12/31/2014	
1.4 Integrate safe teen driving messaging into existing					12/31/2016	

¹ 2010 Ohio Traffic Crash Reports, Ohio Department of Public Safety

² Ohio Department of Health, Office of Vital Statistics

³ Ohio Hospital Association

programs for teens and identify existing avenues for reaching parents with safe teen driving messages across the state by December 31, 2016.						
--	--	--	--	--	--	--

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
1.5 Identify gaps in existing educational materials and pursue resources to develop as needed, a set of approved educational materials to make available on the CIAG section of the OIPP Web site, by December 31, 2012.					12/31/2012	
1.6 Build partnerships with Ohio Department of Public Safety Driver Training Program and/or private driving schools and provide recommendations for driver training program standards by December 31, 2016.					12/31/2016	

Priority 2: Bicycle and Wheeled Sports Helmets

Each year, about 200 Ohio children between the ages of 5 and 15 are admitted as hospital inpatients for injuries they received while riding a bicycle and thousands more are treated in emergency departments (EDs). An average of five Ohio children in this age range die from bicycle-related injuries each year. Among Ohio children aged 5 to 14 from 2002 to 2005, falls from skateboards, roller skates and non-motorized scooters resulted in 10,440 ED visits and 112 hospital inpatient admissions.

From 2002-2009, ED visits for bicycle and wheeled recreation related traumatic brain injury (TBI) increased 64 percent in Ohio. A total of 9,383 Ohio youth were treated in EDs and 723 were hospitalized for bicycle and other wheeled recreation related TBIs from 2002-2009. Bicycle-related injuries were responsible for the greatest proportion of hospitalizations for sports/recreation TBIs. ED visits and hospitalizations for bicycle/wheeled recreation related TBIs from 2002-2009 in Ohio were associated with more than \$32.2 million in treatment charges. During this time period, 5 to 14 year olds were responsible for 76 percent of the ED visits and 73 percent of the hospitalizations for bicycle/wheeled recreation-related TBIs.³

Prevention of TBIs is key. Helmets are 85 to 88 percent effective in mitigating head and brain injuries, making the use of helmets the single most effective way to reduce bicycle and other wheeled sports related TBIs. Yet, helmet use among Ohio youth remains low. In 2008, only 46.7% of BRFSS respondents indicated that the oldest child in the household always or nearly always wore a helmet when cycling, while 43.1% indicated that the oldest child seldom or never did.⁴

Helmet laws and ordinances combined with community helmet distribution and education programs have shown the best results in increasing helmet use and reducing bicycle-related injury.⁵

Goal: Increase bicycle helmet use (always or nearly always use) from a baseline of “46.7”% to “55”% for Ohioans 18 years and younger by July 31, 2016.⁴

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
2.1 Create CIAG teen bicycle helmet and wheeled sports subcommittee by soliciting new members with an interest in this topic by December 31, 2011.					12/31/2011	
2.2 Create a formal partnership with Ohio Chapter AAP statewide collaborative to accomplish objectives 2.3-2.7 by December 31, 2011.					12/31/2011	
2.3 Promote and support the introduction of state legislation for required bicycle helmets in children under 18 by July 31, 2016.					7/31/2016	

⁴ Ohio Behavioral Risk Factor Surveillance System, 2008

⁵ Karkhaneh, M., Kalenga, JC. Et al. *Effectiveness of Bicycle Helmet Legislation to Increase Helmet Use: A Systematic Review*. Injury Prevention 2006; 12:76-82.

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
2.4 Establish baseline helmet usage rates to support bicycle helmet state initiative and to support tracking and evaluation efforts by actively participating in data gathering via survey or direct observations by December 31, 2011.					12/31/2011	
2.5 Recognize and promote State Helmet Awareness Day on September 21, 2011, and on an annual basis through the OIPP-CIAG.					Ongoing	
2.6 Develop partnerships with the Ohio Department of Education, State PTA, and Ohio Education Association to promote and support <i>bicycle helmets-to-schools</i> campaigns by December 31, 2012.					12/31/2012	
2.7 Support efforts to distribute helmets and educate pediatricians and their staff on helmet use and appropriate fitting of helmets by July 31, 2013.					7/31/2013	
2.8 Increase the proportion of Ohio children whose communities are covered by a local bicycle/wheeled-sports helmet ordinance by 7% from baseline of 15% by July 31, 2016.					7/31/2016	

Priority 3: Infant Sleep-related Suffocation

Suffocation is the leading cause of injury death for infants. From 2006-2009, there were 228 infant unintentional suffocation deaths in Ohio⁶. According to 2009 Ohio Child Fatality Review data, 93% (50) of the 54 asphyxia deaths to infants less than 1 year were sleep-related. 14% of the reviews for infant deaths from all causes were sleep-related, more than from any other single cause of death except prematurity.⁷

Promoting a safe sleep environment for infants is an important step in preventing infant suffocation. Current best practice recommends placing infants to sleep on their back in a bare crib. In 2009, 58% (88) of infant deaths occurred in adults beds, on couches or chairs, while only 28% (43) occurred in cribs or bassinets.⁷ More than half (51%, 78 deaths) of the infants were sharing a sleep surface with an adult, another child or both at the time of death.

Infants are at greatest risk of sleep-related suffocation during their first 6 months; 87% (133) of the infant sleep-related deaths in 2009 occurred during this early age. Therefore, it is critical that parents of newborns be provided with current best practice information on a safe sleep environment.

Goal: *Reduce unintentional sleep-related deaths for infants aged 0 to 12 months from 38.0 per 100,000 by 10% by Sept. 30, 2016.*

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
3.1 Create CIAG infant sleep-related suffocation subcommittee by soliciting new members with an interest in this topic by December 31, 2011.					12/31/2011	
3.2 Promote and support amending Claire's Law to include safe sleep policies and parent education policies in birthing hospitals and licensed child care centers by December 31, 2016.					12/31/2016	
3.3 Partner with at least one baby product retailer to promote safe sleep to customers by December 31, 2014.					12/31/2014	
3.4 Ensure that prenatal care providers and pediatric health care providers are promoting and distributing current safe sleep messages and materials by December 31, 2014.					12/31/2014	
3.5 Collaborate with other organizations to conduct a statewide safe sleep campaign December 31, 2013.					12/31/2013	

⁶ Ohio Department of Health, Office of Vital Statistics

⁷ 2009 Ohio Child Fatality Review Data

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
3.6 Partner with the Early Childhood Advisory Council to enact a policy requiring all identified state agencies with a role in parent education, early intervention, or child care to follow and promote current safe sleep recommendations by December 31, 2014.					12/31/2014	

Priority 4: Sports-related Traumatic Brain Injury (TBI)

On average from 2002-2009, nearly 4,000 Ohio youth were treated in emergency departments for sports/recreation (S/R) related TBIs each year, with a dramatic rise from 2,859 in 2002 to 6,040 in 2009, a total increase of 111 percent. Sports-related TBIs alone were associated with both the greatest number of emergency department visits each year as well as the greatest increase, 142 percent from 2002-09.

A concussion is a TBI caused by a blow, bump, or jolt to the head or by any fall or hit that “jars” the brain. Children should be removed from play following a suspected TBI/concussion until they can be evaluated by a qualified medical professional. An appropriate licensed health professional will be able to determine how serious the TBI/concussion is and when it is safe for a child to return to sports and other daily activities. No child should be allowed to return to activity on the same day he/she sustains a TBI/concussion or if he/she has any remaining symptoms.

Returning to play too early and experiencing repeated TBI may cause Second Impact Syndrome (SIS) or Post-Concussion Syndrome (PCS). SIS is a catastrophic condition that occurs when a second blow to the head happens before the child has completely recovered from a concussion. This second impact causes brain swelling, resulting in severe consequences such as brain damage, paralysis, and even death. PCS is the condition of having long-term concussion symptoms; risk for PCS is increased if a person sustains a second brain injury before the first one has healed.

Educating parents, coaches and players on the signs and symptoms of concussion/TBI and the dangers of returning to play too quickly or without medical evaluation is a key activity.

Goal: *Monitor the impact of state policy changes related to sports/recreation, physical activity and injury prevention on medically consulted SR TBI emergency department visits to establish a baseline. In 2009, 6,040 youth aged 18 and under were treated for SR TBI in emergency departments.*

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
4.1 Create CIAG sports-related TBI subcommittee by soliciting new members with an interest in this topic by December 31, 2011					12/31/2011	
4.2 Promote and support legislation requiring the following: 1) youth athletes in school and recreational leagues to be removed from practice or play if they are suspected of sustaining a concussion; 2) requiring any athlete suspected of sustaining a concussion to be cleared by an appropriate licensed health professional before returning to play; and 3) education requirements for coaches, parents and athletes on recognizing the signs and symptoms of a possible concussion by					12/31/2012	

December 31, 2012.						
--------------------	--	--	--	--	--	--

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
4.3 Identify, adapt and develop sport-related “recognition and prevention of traumatic brain injury” educational materials for coaches, parents, players and appropriate licensed health professionals to be posted to the ODH website by December 31, 2012.					12/31/2012	
4.4 Identify existing grant opportunities and inform the educational and recreational sports communities of their availability by December 31, 2012.					12/31/2012	

Priority 5: Child Restraint Law Review and Revision

From 2006-09, motor vehicle crashes remained the leading cause of injury death for Ohio children ages 5 to 9 and the third-leading cause for ages 1 to 4.⁸ From 1999 to 2007, at least 58 Ohio children under the age of 8 were killed as occupants in motor vehicle traffic crashes.⁹

Proper use of child safety seats and booster seats is one of the most important preventive measures to reduce motor vehicle-related death and injury; yet it remains a challenge in Ohio. Using a booster seat instead of a seat belt alone reduces the risk of death in a crash by 59%.¹⁰ In 2007, Ohio's booster seat use rate for children aged 4 to 7 was only 18%, one of the lowest in the country.¹¹

The CDC Task Force on Community Preventive Services recommends primary child restraint laws based on strong evidence of their effectiveness. This means that law enforcement are able to stop and cite drivers for failure to properly restrain a child in a child restraint or booster seat as required by law. Proper enforcement combined with education and safety seat distribution programs provide the greatest evidence of success in reducing these preventable deaths among children.

Goal: *Establish an Ohio-specific baseline for child restraint use for ages birth to 8 years when data becomes available. As part of a national effort, increase age appropriate child restraint use for ages birth to 12 months from 86 to 95 percent restrained in rear-facing child safety seats. As part of a national effort, increase age appropriate child restraint use for ages 1 to 3 years from 72 to 79 percent restrained in front-facing child safety seats. As part of a national effort, increase age appropriate child restraint use for ages 4 to 7 years from 43 to 47 percent restrained in booster seats.*

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
5.1 The CIAG will form a child passenger safety (CPS) subcommittee to address Ohio child restraint/booster seat legislation by September 1, 2011.					9/1/2011	
5.2 Review current statewide child restraint/booster seat law to identify existing gaps in the law by December 31, 2011.					12/31/2011	
5.3 Introduce a pilot training program with Ohio State Highway Patrol to integrate training on enforcement of child restraint law into training academy curriculum by July 1, 2012.					7/1/2012	

⁸ ODH Office of Vital Statistics

⁹ CDC WISQARS

¹⁰ National Highway Traffic Safety Administration

¹¹ Partners for Child Passenger Safety Study, Children's Hospital of Philadelphia

Objective	Group Members	Status	Schedule			Measure of Success
			Action Plan Due	Begin	End	
5.4 Educate law enforcement agencies to increase enforcement of current law and amount of money collected from child restraint/booster seat fines by 15 percent statewide by June 30, 2013.					6/30/2013	
5.5 Promote and support identified changes to the current child restraint/booster seat law by December 31, 2014.					12/31/2014	

2010 – 2014 Plan

Ohio Injury Prevention Partnership

OHIO OLDER ADULT FALLS PREVENTION COALITION STATE PLAN





OHIO DEPARTMENT OF HEALTH

246 North High Street
Columbus, Ohio 43215

614/466-3543
www.odh.ohio.gov

Ted Strickland/Governor

Alvin D. Jackson, M.D./Director of Health

January 7, 2011

Dear Partner in Injury Prevention,

The Ohio Department of Health, Violence and Injury Prevention Program (VIPP), is pleased to present:

Preventing Falls among Older Adults. Falls represent a serious threat to public health and safety. They are particularly harmful to older adults as the likelihood of falling and the consequences of a fall increase dramatically with age.

Falls are the leading cause of injury-related ER visits, hospitalizations and deaths for Ohioans aged 65 and older. According to the VIPP's *Burden of Injury from Unintentional Falls in Ohio*, falls among Ohioans 65 years and older accounted for \$4.2 billion, more than two-thirds (68 percent), of the total annual cost of nonfatal, hospital-admitted falls. In 2008, this group accounted for more than 80 percent of fall-related deaths while they represent only 14 percent of the population.

Through a Centers for Disease Control and Prevention Core Injury grant, the Ohio VIPP established the Ohio Injury Prevention Partnership (OIPP) in November of 2007. The purpose of the OIPP is to bring together a group of multi-disciplinary professionals from across the state to identify priority injury issues and develop strategies to address them. Falls among older adults are one of the OIPP's priorities and the members recommended the formation of a specific group to address the issue. In November of 2009 the *Ohio Older Adults Falls Prevention Coalition* was formed and a statewide partnership worked together to complete this state plan.

The five year plan addresses falls among older adults from a multi-faceted approach to include: education/awareness, infrastructure, policy, interventions/risk assessment and monitoring trends, prevention, management, rehabilitation and long-term care. Implementation of this plan will require collaboration with a wide range of partners and agencies including public health, aging networks and health care professionals that endeavor to reduce falls and fall-related injuries for older Ohioans.

I wish to express my gratitude to the coalition members who devoted their time toward the completion of this important document. I wish to particularly acknowledge our partner, the Ohio Department of Aging, for their expertise and resources in addressing falls among older adults. I also thank the Ohio Public Health Association and the Delaware County General Health District for their outstanding contributions to the completion of the plan.

Falls are not a normal part of aging. This myth must be dispelled so older Ohioans can live strong, independent, productive and healthy lives. We consider this blue print an important "*Call to Action*" in addressing this issue in a coordinated, systematic and evidence-based manner at the state level and hope that you will join with us to implement the plan.

Sincerely,

Alvin D. Jackson, M.D.
Director, Ohio Department of Health

Ohio Department of Health Violence and Injury Prevention Program

The VIPP at ODH is developing a comprehensive injury prevention program for the State of Ohio. The VIPP strives:

- To coordinate surveillance systems that collect injury data.
- To assess the burden of injuries and violence, and communicate information for the purpose of action.
- To promote evidence-based injury prevention interventions for at-risk populations.
- To coordinate and collaborate with partners in building program infrastructure.
- To encourage the adoption of policies and programs that lead to the prevention of injuries.
- To provide technical support and training as needed.
- *Ultimately, to make Ohio a safer place to live, work and play by reducing death and disability associated with intentional and unintentional injury.*

VIPP Initiatives:

For more details on these activities, please visit our website at:

<http://www.odh.ohio.gov/odhPrograms/hpr/injprev/ovipp.aspx>

- Ohio Injury Prevention Partnership and Associated Action Groups
- Local Injury Prevention Grant Program
- Child Passenger Safety (CPS) Program
- Injury Surveillance Activities
 - General Injury Surveillance
 - Census of Fatal Occupational Injuries (CFOI)
 - Ohio Violent Death Reporting System (OH-VDRS)

Public Health Injury Surveillance and Prevention Program Grant

ODH presently receives funding from the CDC for the Public Health Injury Surveillance and Prevention Program. The goal of the program is to establish and sustain a solid infrastructure for injury prevention that includes statewide injury surveillance to inform and evaluate public policy, as well as comprehensive injury prevention and control programs.

This funding is used to:

- Strengthen the infrastructure for injury prevention in Ohio.
- Improve injury surveillance.
- Influence and evaluate policy relative to the prevention of injuries.
- Increase collaboration in the field of injury prevention.

ODH has received funding from the CDC for core injury surveillance and prevention activities since 2000.

Ohio Injury Prevention Partnership (OIPP)

The OIPP is a group of professionals representing a broad range of agencies and organizations concerned with building Ohio's capacity to address the prevention of injury. Led by the Ohio Department of Health (ODH), Violence and Injury Prevention Program (VIPP) with funds from the CDC, the OIPP improves statewide collaboration related to injury prevention, and assists ODH with establishing priorities and future directions for injury and violence prevention in Ohio. Current priority areas include child/youth injury, drug poisoning, violence and falls among older adults.

Mission: To prevent injuries in Ohio using data and collaborative partnerships.

Vision: Working together to create a safe and injury free Ohio.



Ohio Older Adult Falls Prevention Coalition

With support from the CDC's Preventive Health and Health Services Block Grant and the Core Injury Grant, and in close collaboration with ODH and the OIPP, the Ohio Older Adult Falls Prevention Coalition was formed in November 2009. The coalition is comprised of professionals from a wide range of multi-disciplinary agencies and organizations throughout Ohio. The function of the coalition is to identify statewide priorities related to the prevention of falls among older adults which can lead communities to address areas of greatest need for their populations; determine broad focus areas, goals, objectives and activities to guide communities and the state in addressing these issues; and to monitor progress in each of five priority areas. The priority areas are education/awareness, infrastructure, policy, interventions/risk assessment and evaluation/monitoring trends.

Mission: The mission of the Ohio Older Adult Falls Prevention Coalition is to reduce the risk of falls through partnerships, education and policy.

Vision: Older Ohioans will have fewer falls and fall-related injuries, maximizing their independence and quality of life.

Falls Among Older Ohioans - Ages 65 and Older

Taken from ODH report: *Burden of Injury From Unintentional Falls in Ohio, 2002-05 and Fall-Related Injury Among Older Adults in Ohio Factsheet, 2010*

Falls are particularly harmful to older adults. Falls and fall-related injuries seriously affect older adults' quality of life and present a substantial burden to the Ohio health-care system. They easily surpass all other mechanisms of injury as a cause of ER visits, hospitalization and death. Important findings related to falls among older adults include:

Falls among older adults have reached epidemic proportions and rates continue to rise.

- From 2000 to 2008, Ohioans aged 65 and older experienced a 141 percent increase in the number of fatal falls and 132 percent increase in the fall death rate. On average, 2.4 older Ohioans suffered fatal falls each day in 2008.¹
- In 2007, there were nearly four (3.7) fall-related ER visits for every 100 Ohio older adults (*data not shown*) and nearly 11 (10.6) fall-related hospitalizations for every 1,000 Ohio older adults. Fall-related ER visit and hospitalization rates also increased 61 percent and 57 percent respectively from 2002 to 2007.²

Older adults account for a disproportionate share of fall-related injury.

- Falls are the leading cause of injury-related ER visits, hospitalizations and deaths for Ohioans aged 65 and older.^{1,2} Fall-related ER visit and hospitalization rates for Ohioans 65 years and older are higher than rates for all other injuries combined.¹
- Ohioans 65 and older accounted for approximately 82 percent of fatal falls in 2008; while they represent only 14 percent of the population.¹

The likelihood of falling and the severity of fall-related injury increases with age, and therefore the risk for hospitalization and death also rise with age.

- Average age increases when comparing fall-related ER visits (38 years), inpatient hospitalizations (70 years) and deaths (76 years). Younger Ohioans are more likely to be treated in an ER for fall-related injuries and not to require an overnight stay in the hospital.^{1,2}
- Average length of stay in days also increases with age.²
- More than 90 percent of fall-related hip fractures occur among those 65 years and older, and nearly half (48.7 percent) of fall-related inpatient hospitalizations among those 65 and older involved a hip fracture.²

Age and gender play a large role in determining risk for type of fall.

- From ages 65 and older, female risk for fall-related injury skyrockets, with the disparity between male and female rates widening with advancing age. In numbers of fall-related hospitalizations, there were two women treated for every man among 65-74-year-olds and there was a 4:1 female/male ratio for those aged 85 years and older.²

Older adults with poor health status and those who are isolated are at greater risk of falling.

- The number of health problems and the risk of falling increase proportionately. Behavioral Risk Factor Surveillance Survey (BRFSS) respondents with diabetes, eye disease, obesity, heart disease or stroke had a higher prevalence of falls in the past three months than those without.³
- Social isolation is a risk factor for fatal falls. Married elders are significantly less likely to die from a fall than the unmarried.¹

Fatal and medically-treated falls represent only a proportion of all falls among older adults.

- As reported in the 2006 BRFSS results, 14.3 percent of Ohio respondents aged 65 and older indicated that they fell during the previous three months, projecting to a total of approximately 215,000 persons who suffered at least one fall.³
- Nearly one-third of those who fell (31.6 percent), or an estimated 67,500 older Ohioans, reported sustaining an injury that resulted in a doctor visit or restricted activity.³

Falls among older adults are costly.

- On average annually in Ohio, direct treatment charges for fall-related hospitalizations total \$298.5 million. These charges represent nearly half (45 percent) of the \$650 million in charges for all leading causes of injury combined.⁴
- Direct medical costs represent only a fraction (8 percent) of the total cost of falls among older adults in Ohio - \$4.2 billion in 2003.⁴

Despite these staggering statistics, falls are not a normal part of aging. There are evidence-based strategies designed to reduce the risk of falling. This plan is an attempt to promote these strategies systematically throughout Ohio.

Introduction

Fall-related injury is a significant public health problem among older adults because of its frequency, the morbidity associated with falls and the costs of the resulting health care.⁵ CDC reports that in the US, 30 percent of older adults aged 65 or older living in the community and more than 50 percent of those living in residential care facilities or nursing homes fall every year. This rate rises with age, with functional impairment and disability being highest in those older than 90 years. Among older adults, falls are the leading cause of injury deaths and the most common cause of nonfatal injuries and hospital admissions for trauma. In 2000, CDC found that traumatic brain injury accounted for 46 percent of fatal falls among older adults. Most fractures among older adults are caused by falls. The most common fractures are of the spine, hip, forearm, leg, ankle, pelvis, upper arm and hand. And astonishingly, in 2000, direct medical costs totaled \$179 million for fatal falls and \$19 billion for nonfatal fall injuries.



ODH reports that falls among older adults in Ohio have reached epidemic proportions, and account for a disproportionate share of fall-related injuries.⁶ In 2008, older adults accounted for 20 percent of all fall-related ER visits, and 71 percent of fall-related inpatient discharges and 82 percent of deaths, while they only represented 14 percent of the overall Ohio population.⁶

From 2002-2007, there were approximately 78,300 inpatient hospitalizations coded for fall-related injury among adults aged 65 and older in Ohio. When examining non-medically-treated falls, this number increases to more than 215,000 according to the 2006 Ohio BRFSS. Of survey respondents aged 65 and older, 14.3 percent indicated that they had fallen in the previous three months. Nearly one third, 31.6 percent (69,217), of those who fell reported that they had sustained an injury that resulted in a doctor visit or restricted activity during the previous three months. For both males and females, the estimated prevalence of falling for ages 65-74 was lower than ages 75 and older (11.4 percent versus 17.2 percent overall.)⁶

Many studies have agreed that the risk of falling and incurring an injury from a fall is greater in older adults with poor health status. And as the number of health issues increases so does the likelihood of falling. Older adults with chronic conditions that lead to altered sensory or motor systems are particularly vulnerable to falls.⁶ Other fall-related risks include prescription drug interactions, impaired cognitive function, use of alcohol, history of falls and reduced visual cues, among others.

Falls and fall-related injuries cause significant mortality, disability, direct and indirect costs, including loss of independence and quality-of-life.⁷ Many people who fall, even those who are not injured, develop a fear of falling. This fear may cause them to limit their activities, leading to reduced mobility and physical fitness, therefore increasing their actual risk of a future fall. These injuries impose an enormous burden on individuals, society and the nation's health care system. Falls among older adults are extremely costly. The total medical costs for nonfatal, hospital-admitted falls for older adults aged 65 or older in Ohio was \$327.3 million in 2003.⁶

The topic of fall prevention is especially important at this time because Ohio, like the rest of the US, is aging and the impact of these injuries will continue to increase. The Administration on Aging reports in the Profile of Older Americans 2008 that the older population--persons 65 years or older--numbered 37.9 million in 2007, will increase to 40 million by the end of 2010 (a 15 percent increase) and then to 55 million in 2020 (a 36 percent increase for that decade). By 2030, there will be about 72.1 million older persons, almost twice their number in 2007.

Ohio Older Adult Falls Prevention Action Group

Table of Contents

GOAL 1: EDUCATION/AWARENESS FOR OLDER ADULT FALLS PREVENTION 10

GOAL 2. INFRASTRUCTURE 13

GOAL 3: POLICY 18

GOAL 4: INTERVENTIONS/RISK ASSESSMENT 22

GOAL 5. MONITORING TRENDS FOR FALL-RELATED DATA 24

EVIDENCE-BASED INTERVENTIONS AND RESOURCES 29

CONTRIBUTORS 31

REFERENCES 31

Goal 1: Education/Awareness for Older Adult Falls Prevention

1. To improve the fall prevention knowledge and behaviors among seniors and caregivers through community education and awareness efforts.

Objectives	Activities	Implementation Timeframe	Expected Outcomes	Partners	Funding Implications
1.1 To increase the knowledge of risk factors, prevalence, consequences, and prevention strategies among community members and seniors.	1.1.1 Develop Web content for ODH's injury prevention Web site that provides tools for risk assessment and prevention tips.	From 2010-2011	Material will be recommended for ODH website and posted on OPHA website	ODH, OPHA, coalition member organizations	May need additional funding to add a Fall Prevention-specific page to the OPHA website
	1.1.2. Link with partnered organizations and agencies' Web sites.	Ongoing 2010-2014	Organizational partner websites will be listed on OPHA and ODH websites	All coalition member organizations	Current funding or in-kind resources
	1.1.3. Offer 4-5 regional conferences on fall risk factors and prevention strategies.	From 2011-2012	Conferences will be held and evaluations summarized	All coalition member organizations and others as identified	Additional funding will be needed to support these conferences
	1.1.4 Identify and engage state and local health/aging organizations and agencies to discuss and integrate fall prevention awareness, risk assessment and intervention strategies based on the venue where older Ohioans reside.	From 2010-2014	Additional agencies/ organizations will participate in state or local Fall Prevention Coalitions	All coalition member organizations	Current funding

1.2 To increase the knowledge of fall risk factors and prevention strategies among caregivers and health care providers.	1.2.1. Identify county champions representing each of Ohio's counties.	From 2010-2014	List of champions will be available and posted to Web sites, including counties represented	All coalition member organizations and local partners	Current funding and in-kind resources from existing network
	1.2.2 Provide awareness, risk assessment and intervention information to "2-1-1" information centers" across the state through county champions.	From 2010 - 2014	Information will be disseminated; feedback data on Web site "hits" or places shared will be requested	United Way agencies and AIRS information systems; all coalition member organizations	Additional funding may be needed to collect and summarize these data
	1.2.3 Develop a toolkit/press kit for use throughout Ohio and link to it online.	From 2010-2014	Toolkit will be developed and posted online; can be shared by e-mail	All coalition member organizations, ODH, ODA	Current funding and in-kind resources; some additional funding may be needed to print some toolkit items for those without Internet access and to address multiple languages

1.3 To increase knowledge of risk factors and prevention strategies among policy makers.	1.3.1. Hold legislative fall prevention educational event at the statehouse.	From 2011-2014	Fall Prevention Awareness Day event will take place at the statehouse annually	All coalition member organizations	Funding will be needed to support this activity
	1.3.2 Obtain proclamation from Governor declaring Fall Prevention Awareness Week/Day.	From 2010-2014	Proclamations/ resolutions will be obtained and shared on Web sites, via e-mail and through the media	ODH/ODA/ OPHA	Current funding
1.4 Identify systems that have health/aging association meetings.	1.4.1 Engage state associations to distribute fall prevention information.	From 2010-2014	Lists of potential organizations/ associations will be developed; letters of commitment to be sent/returned	All coalition member organizations, other associations as identified	May require additional funding to coordinate this effort and produce summary

Goal 2. Infrastructure

1. To create a sustainable system which identifies needs, existing resources and gaps.

Objectives	Activities	Implementation Timeframe	Expected Outcomes	Partners	Funding Implications
1.1 To perform system-level needs assessment and review available data.	1.1.1 Identify or develop valid, reliable needs assessment tool at state and local levels.	From 2010 - 2011	A tool is identified and a process is developed to use it.	ODA/ODH/ selected coalition members	Current funding and in-kind efforts of Coalition members
	1.1.2 Identify existing assessment data.	From 2010 - 2011	Data sets identified and listed	ODA/ODH/ selected coalition members	Current funding and in-kind efforts of Coalition members
	1.1.3 Review resulting assessment of the needs of professionals, older adults and caregivers to gather their points of views.	From 2011 - 2012	Report on needs identified is produced and shared	ODA/ODH/ selected coalition members	Current funding and in-kind efforts of Coalition members
	1.1.4 Identify both real and perceived, quantitative and qualitative needs as determined by key stakeholders in the community.	From 2011 - 2012	Stakeholder input is obtained, considered and included in report	All coalition member organizations and others to be identified.	Additional funding may be needed

1.2 To perform resources assessment by identifying risk factors and related state resources.	1.2.1 Determine how the data are to be gathered; who will gather the data; and analyze the validity of the data.	From 2010-2011	Assessment tool developed and process identified to collect/analyze data	Key informants/ coalition member organizations, hospitals, etc.	Current funding
	1.2.2 Identify and list resources focused on medication management, fear of falling, sensory impairments, etc.	From 2010-2011	Resource list compiled and shared	Pharmacy, medical, vision, speech and hearing and other health professionals and organizations	Current funding
	1.2.3. Identify and list resources focused on physical activity/mobility and environment.	From 2010-2011	Resource list compiled and shared	State and local public health, PT/OT orgs, universities, researchers, YM/WCAs, and other coalition members, builders associations, city planners and county commissioners	Current funding

2. To develop strategies to fill the gaps in order to reduce the number of falls and fall-related injuries.

2.1 Identify gaps and connect them with resources.	2.1.1 Develop resource guides of who is doing what and where (e.g. Central Ohio - see Web site example).	From 2011-2013	Resource guides developed and shared – online preferred	Coalition member organizations, information and referral organizations (ADRCs and 211 systems)	Additional funding may be needed to collect and update the guide
	2.1.2 Share and update resource information with colleagues in education/awareness capacities (to meet Alliance of Information and Referral Systems standards)	From 2011-2014	Web resource “go-to” site developed, updated and promoted	Coalition member organizations and other identified organizations	Funding will be needed to monitor quality of resources listed and to provide frequent updates; can link to Admin on Aging Funding already in place
2.2 Facilitate sustainability by identifying local champions for this work.	2.2.1 Identify point people for fall prevention at each Area Agency on Aging Region.	December 2010	List of point persons will be provided and shared	ODA and AAAs	Current funding and in-kind
	2.2.2 Identify county-specific champions for fall prevention efforts.	December 2010	List of champions will be provided and shared	ODH, AAAs, EMAs, local coalitions, local senior centers and others	Current funding and in-kind

2.2.3 Institutionalize funding mechanisms for maintaining efforts to support fall prevention efforts at the state and local level.

From 2010-2014

Funding committee to be formed; grant applications will be submitted; legislative funding will be considered

Coalition member organizations and other organizations identified

Additional funding will be needed in various venues and for various populations and partner efforts

Goal 3: Policy

1. To provide information to organizational, local and state leaders resulting in legislation, regulations, and policies that address falls prevention interventions.

Objectives	Activities	Implementation Timeframe	Expected Outcomes	Partners	Funding Implications
1.1 Develop falls prevention agenda.	1.1.1. Assemble falls advocacy group.	From 2010 – 2011	Advocacy group identified	Selected coalition member organizations	Current funding
	1.1.2. Identify and prioritize falls issues annually that could be addressed by policy initiatives.	From 2010 – 2014	Propose policy initiatives and/or support them	All coalition member organizations and others to be identified	Current funding to propose, possible additional funding to implement
	1.1.3 Identify local champions.	From 2010 – 2011	List of local champions we can contact for support	All coalition member organizations and others to be identified	Current funding
	1.1.4 Charge falls policy advocacy group participants with advocating through his/her agency/organization, etc.	From 2010 – 2014	Log of phone calls, e-mails, releases pertaining to policy advocacy	All coalition member organizations and others to be identified	Current funding or software update funds

	1.1.5 Draft annual policy advocacy agenda in the form of a “white paper” in conjunction with needs and resource assessments and overall OIPP policy initiatives.	From 2010 - 2014	Annual white papers are produced and shared	Coalition work groups and other constituents	Current funding
1.2 Annually compile federal, state and local statutes, etc.	1.2.1 Identify current rules, regulations, ordinances, etc. that support or are contrary to falls prevention tenets.	From 2010 – 2014	Key legislation identified and addressed through action steps	All coalition member organizations and Policy Advocacy Group	Funding needed to staff this activity and perform follow-up
	1.2.2 Identify proposed legislation currently being considered.	From 2010 – 2014	Proposed legislation identified; coalition involved in review and recommends action steps	All coalition member organizations and Policy Advocacy Group	Funding needed to staff this activity and perform follow-up
	1.2.3 Identify key legislation for consideration in Ohio.	From 2010 - 2014	Proposed legislation identified; coalition involved in review and recommends action steps	All coalition member organizations and Policy Advocacy Group	Funding needed to staff this activity and perform follow-up
1.3 Develop strategies for approaching legislators and other stakeholders.	1.3.1 Identify stakeholders at federal, state and local levels.	From 2010 – 2014	List of stakeholders and legislators to be contacted	ODH, ODA, OPHA, other coalition member organizations	Current funding

1.3.2 Identify supporters/ adversaries of mandates.	From 2010 – 2014	Supporters identified and detractors educated	ODH, ODA, OPHA, other coalition member organizations	Current funding
1.3.3 Develop key messages regarding falls to address legislators/policy makers.	From 2010 – 2014	Educational materials and data developed for policy use	ODH, ODA, OPHA, other coalition member organizations	Funding needed to staff activity to develop materials and keep them current and locally pertinent
1.3.4. Provide/develop recommendations to legislators/policy makers.	From 2010 – 2014	Recommendations included in annual white papers are included in state and local policies	ODH, ODA, OPHA, other coalition member organizations	Funding needed to staff this activity and to monitor outcomes
1.3.5 Meet with stakeholders on their own turf, etc. to discuss falls prevention.	From 2010 – 2014	At least six meetings or contacts are held per year	Policy Advocacy group members, coalition member organizations and identified champions	Funding to support travel expenses and possibly staff
1.3.6 Create messages that public can use to advocate with stakeholders.	From 2010 - 2014	Advocacy messages and materials developed and updated annually	Policy Advocacy Group and other coalition member organizations	Current funding

1.4 Educate public sector, key organizations and stakeholders about falls.	1.4.1. Develop public relations program that incorporates social marketing concepts/principles.	From 2010 – 2014	Media materials will be developed and shared	ODA, ODH, OPHA	Funding to produce media materials and public education items
	1.4.2 Conduct trainings at appropriate public/private clubs, organizations, etc.	From 2010 – 2014	Conduct a minimum of 10 events per year	Policy Advocacy Group and/or other coalition member organizations, ODH, ODA, OPHA	Funding needed to support travel expenses, material development, etc.
	1.4.3 Invite legislators/stakeholders to regional falls prevention education events.	From 2011 - 2014	List of legislators and other stakeholders invited and attending various coalition events	Policy Advocacy Group and/or other coalition members, ODH, ODA, OPHA	Funding needed for space/logistics and materials and speaker fees for these events
1.5 Promote state wide advocacy initiatives driven by falls state advocacy group.	1.5.1 Create framework for local/community organizations.	From 2010 – 2014	Number of local communities that adopted some fall initiatives as recommended by advocacy group	Advocacy Group and other coalition member organizations; engage public relations offices of ODA/ODH	Funding needed for media time and advertising

	1.5.2 Act as a resource for local/community organizations.	From 2010 - 2014	Maintain online toolkit materials and log contacts from local organization and/or public;	Policy Advocacy Group	Current funding
1.6 Propose at least one fall prevention related legislation policy to be considered for adoption.	1.6.1 Identify potential policy issues that could be addressed by legislation.	By 12/31/2014	Proposed legislation is assigned a Senate or House Bill number with bipartisan sponsorship	Policy Advocacy Group, OPHA	Current funding to support promotion of legislation

Goal 4: Interventions/Risk Assessment

1. To create an easy and accessible tool box for health care providers, older adults and caregivers to utilize in order to reduce the risk of falls.

Objectives	Activities	Implementation Timeframe	Expected Outcomes	Partners	Funding Implications
1. 1 Provide information for health care providers.	1.1.1 Develop or identify risk assessment and intervention tools.	From 2010-2011	Tool kit of various risk assessment screening items will be available	All coalition member organizations and other identified associations	Current funding and in-kind resources
	1.1.2 Develop or identify resource guide of intervention and risk assessment tools.	From 2011-2012	Guides will be available with information specific to various areas of the state	All coalition member organizations and others as identified	Current funding and in-kind resources
	1.1.3 Provide information on training opportunities for best practices.	From 2010- 2014	Training and continuing education opportunities will be included in organization's annual meetings, announced in newsletters and journals, posted on Web site calendars	All coalition member organizations and others as identified	Funding may be required to provide some trainings by the coalition

1.2 Provide information for Client/Caregivers.	1.2.1. Develop or identify and distribute self-use risk assessments such as home and medicine assessments; as well as intervention services.	From 2010-2013	Materials identified and disseminated, posted to Web sites, printed as needed	All coalition member organizations and others as identified	Current funding and in-kind resources
	1.2.2. Identify places/businesses that can assist in distributing these items, in addition to Web resources.	From 2010-2013	Business partners identified, promoted and recognized; items posted to Web sites	All coalition member organizations & businesses identified	Current funding and in-kind resources
	1.2.3. Develop or identify and distribute risk and intervention resource guide for public use.	From 2010-2014	Guides developed including information specific to various areas of the state, posted to Web sites, shared with business partners	All coalition member organizations and other partners as identified	Funding may be needed to print materials for public use
1.3 Provide information for the general public.	1.3.1 Assure that risk assessment and intervention resources are included in public education. Campaign materials to be developed.	From 2011-2014	Risk assessment and intervention resources will be included in public education and social marketing campaign materials	All Coalition member organizations, media partners and other partners as identified	Funding will be needed or leveraged to fully implement this activity

Goal 5. Monitoring Trends for Fall-Related Data

1.To capture quality falls-related data in order to monitor trends.

Objectives	Activities	Implementation Timeline	Expected Outcomes	Partners	Funding Implications
1.1 Partner to assess the quality of existing data sources and opportunities for linkage, etc.	1.1.1 Inventory current sources of injury data in Ohio (death, risk factor, fatality review, ED and inpatient hospital, EMS, Trauma, crime, traffic crash, poison control, brain injury, etc.) for reporting information about injuries from falls and fall risk factors.	From 2010 – 2011	Fall data sources will be identified and published	ODH Injury Program, ODA, OIPP Data Action Group	Current Funding
	1.1.2 Produce recommendations about the inclusion in injury-related or fall-related questions on behavior risk surveys, hospital/nursing home/assisted living forms, physician office intake forms and EMS guidance documents, etc.	From 2011 – 2012	Printed list of recommended questions to be included in patient assessments	ODH Injury Program, ODH Division of Quality, coalition member organizations, local coalition members, county champions	Current Funding

1.2 Identify gaps in data/ information and work to fill them.	1.1.3 Identify methods to determine the impact of injuries on high-risk groups and communities (e.g., YPLL, costs, outcomes).	From 2011 - 2012	Improved quality of falls data from various reporting sources	OIPP Data Action Group, ODH Injury Program, coalition member organizations, local coalitions, CDC data sources	Current Funding
	1.1.4 Monitor the implementation of fall prevention reporting recommendations.	From 2011 and ongoing through 2014	Improved quality of falls data from various reporting sources	ODH Injury Program, ODH Quality Division, other coalition member organizations responsible for data collection, nursing homes, etc.	Current Funding
	1.2.1 Survey stakeholders/ partners to identify additional data elements needed to better evaluate trends in falls and fall-related injuries and fatalities.	From 2010 – 2011	Additional data elements will be determined and a summary of the survey will be produced	Coalition member organizations, local health departments/ coalitions, ODH BRFSS, Division of Quality and Injury Program	Current Funding

	1.2.2 Determine or develop ways to obtain additional data elements.	From 2011 – 2012	Guidance document will be produced, new partners or data sources identified	ODH Injury Program and Division of Quality, other partners as appropriate	Current Funding
1.3 Establish baselines.	1.3.1 Review the existing data and establish baselines for added measures (HP 2020).	From 2011 -1 2012	Baselines will be established and published for existing and added measures	ODH Injury Program, ODH Quality Division, OIPP Data Action Group, local coalitions and other data source partners as identified	Current Funding
1.4 Partner to improve the quality of external cause of injury coding (e-coding) in hospital and discharge data.	1.4.1 Implement recommendations from the MMWR report to improve e-coding in Ohio hospital data.	Throughout 2011	Guidance document or position paper will be produced to encourage improved use of e-coding	Coalition member organizations, ODH Injury Program and local coalitions	Current funding, may require additional funding for training on e-coding related to fall data
	1.4.2 Provide procedure guidelines for continuous quality improvement once e-coding is in place.	From 2011-2013	Guidance document will be produced for distribution	OHA, Hospital RHIT Association, ODH Injury Program, ODPS, OIPP Data Work Group	Current funding, may require additional funding for training

1.4.3 Provide data, standards and training to clinicians, coders and administrators for improving the recording of injury circumstance information in medical records.	From 2013-2014	Increase the proportion of injury discharges that are e-coded	Ohio Hospital Association, Hospital RHIT Association, ODH Injury Program, ODPS, OIPP Data Work Group	Additional funding may be required for training
1.4.4 Produce reports for clinicians and coders to demonstrate the value of their efforts.	2014 and ongoing	Increase the proportion of injury discharges that are e-coded	Ohio Hospital Association, Hospital RHIT Association, ODH Injury Program, ODPS, OIPP Data Work Group	Current funding, may require additional funding for distribution

2. Develop mechanisms to make the data more accessible and user friendly.

2.1 Increase the availability of statewide and community-specific data for planning, surveillance and evaluation.	2.1.1 Produce reports/fact sheets on the injury and fall priority areas.	From 2011 and ongoing	Reports/Fact sheets produced annually	All coalition member organizations	Current and in-kind funding
	2.1.2 Develop multiple methods of dissemination to enhance the timeliness and accessibility.	From 2011 and ongoing	Amount and method of dissemination is captured in database	All coalition member organizations	Current funding
	2.1.3. Explore ways to promote access to Web based data resources, especially to underserved communities.	From 2010 and ongoing	Proposal for web-based data resource is produced and list of potential funding sources produced	All coalition member organizations	In-kind with pursuit of additional funding
2.2 Review data and report trends every five years.	2.2.1 Updated burden of falls report produced.	By 2013	Report is produced and publicized	All coalition member organizations	Additional funding may be required

Evidence-based Interventions and Resources

Prevention of Falls Among Older Adults – Multi-Factorial Interventions

Effective fall prevention programs for older adults include the following components:

- Medical Management (Risk Assessment by a Health Professional)
- Balance and Mobility (Physical Activity)
- Environmental resources provide information on evidence-based fall prevention programs.

CDC Fall Prevention Activities

<http://www.cdc.gov/ncipc/duip/FallsPreventionActivity.htm>

<http://www.cdc.gov/ncipc/preventingfalls/>

Preventing Falls: What Works A CDC Compendium of Effective Community-based Interventions from Around the World –

This compendium, designed for public health practitioners and community-based organizations, describes 14 Scientifically tested and proven interventions:

http://www.cdc.gov/ncipc/preventingfalls/CDCCompendium_030508.pdf

Preventing Falls: How to Develop Community-based Fall Prevention Programs for Older Adults

This “how-to” guide is designed for community-based organizations that are interested in developing their own effective fall prevention programs:

http://www.cdc.gov/ncipc/preventingfalls/CDC_Guide.pdf

National Council on Aging – Center for Healthy Aging – Fall Prevention

<http://www.healthyagingprograms.org/content.asp?sectionid=98>

Fall Prevention Center of Excellence

<http://www.stopfalls.org/>

Contributors

NAME	AGENCY	NAME	AGENCY
Susan Sutherland, RS	Delaware General Health District	Melinda Deacon	Ohio Assisted Living Association
Lois Hall, MS	Ohio Public Health Association	Jean Thompson	Ohio Assisted Living Association
Diane Ramey	Area Agency on Aging, Region 5	Beth Foster, RN, BA, CPHQ	Ohio Council for Home Care and Hospice
Vicky Abdella	Area Agency on Aging, Region 7	Sande Johnson	Ohio Department of Aging
Vicky Woyan	Area Agency on Aging, Region 7	Dick LeBlanc	Ohio Department of Aging
David Painter	Arthritis Foundation, Central Ohio Chapter	Cathy Stocksdaile	Ohio Department of Aging, Quality Assurance /Quality Improvement
Suzanne Minnich	Brain Injury Association of Ohio	Tim Erskine	Ohio Department of Public Safety
Jane Acri, LSW	Central Ohio Area Agency on Aging	Joe Sabino	Ohio Pharmacists Association
Jeanne Grothaus	Central Ohio Diabetes Association	Jamie Weaver	Ohio Public Health Association
Dan Davis	Central Ohio Parkinson Society	Michele Stokes, PhD, MS	OhioHealth Gerlach Ctr for Senior Health
Denise Franer	Clermont County Health District	Michelle Thomas, PT, DPT	OhioHealth Neighborhood Care, Columbus
Lea Blackburn, LISW, ACSW	Community Partnerships, Columbus	Theresa Jeffers, BS, CHES	OSU Medical Center, Trauma Program
Fara Waugh, LISW-S	Council for Older Adults of Delaware County, Center for Older Adults	Ann Smith, PhD, RN, CRA, ANP	OSUMC-Trauma Clinic
Vince Caraffi	Cuyahoga County Board of Health	Julie McCarthy	Partners in Prime, Hamilton
Anne Goodman, MPH	Delaware General Health District	Kira Baldonado	Prevent Blindness
Sheila Faryman, MD	Dept. of Medical Education, John J Gerlach Ctr.	Dara Bakes, BS, EMT-P	Riverside Methodist Hospital, Columbus
Teri Moore	Franklin County Office on Aging	Elizabeth Baum, MD, CMD	SUMMA Health Systems, Akron
Amy Wermert, MPH	Grant Medical Center, Trauma Program, Columbus	Kristin Beadle, DPT	The Balance and Mobility Clinic of Columbus
Ana Rojas Moonitz	Hamilton County HD	Deanna Montanaro	The University of Toledo Medical Center
Mary Jo McGuire, MS, OTR/L, OTPP, FAOTA	Home and Community Services, The Rehabilitation and Health Center, Akron	Arvind Modawal, MD, MPH	University of Cincinnati Medical Center
Christy Beeghly, MPH	Injury Prevention Program, Ohio Dept. of Health	Kimberly Bigelow, PhD	University of Dayton
Cindy Penn	Injury Prevention Program, Ohio Dept. of Health	Ben Anders	Upper Arlington Fire Division, Office of EMS & Training
Kathy Papp, RN, MSN	LifeCare Alliance, Columbus	Lynne O'Neil	Wood County Committee on Aging
Regina Rambo	Mercy St. Vincent's Medical Center, Toledo	Lolita Haverlock	YMCA, Liberty Township, Powell
Virginia Winenger	Mt Carmel East		Alzheimer's Assn., Central Ohio Chapter

References

¹ODH Office of Vital Statistics

² Ohio Hospital Association

³ Behavioral Risk Factor Surveillance System, 2006

⁴ Children's Safety Network Economics & Data Analysis Resource Center

⁵ Hornbrook MC, Stevens VJ, Wingfield DJ, Hollis JF, Greenlick MR, Ory MG. Preventing falls among community-dwelling older persons: results from a randomized trial. *Gerontologist* 1994; 34(1):16–23.

⁶ Ohio Department of Health. The Burden of Injury from Unintentional Falls in Ohio; 2002-2005.
<http://www.healthyohiprogram.org/diseaseprevention/fallsrept.aspx>

⁷ Stevens JA, Corso PS, Finkelstein EA, Miller TR. The costs of fatal and nonfatal falls among older adults. *Injury Prevention* 2006;12:290–5.

This publication was supported by the Cooperative Agreement Award Number 5U17CE52524801-04 and the Preventive Health and Health Services Block Grant from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Ohio's EMS Data Systems





Ohio's EMS Data Systems: Purpose

- To reliably inform performance improvement, education, research and system design of the state's EMS and trauma systems.



Ohio's EMS Data Systems: Components

- EMS Incident Reporting System
- Ohio Trauma Registry – Acute Care
- Ohio Trauma Registry – Rehabilitation



Ohio's EMS Data Systems: Components

- EMS Incident Reporting System
 - Collects data from EMS agencies on all requests for emergency medical service
 - Online January 1, 2002
 - 8,366,610 records
 - 978 EMS agencies reporting
 - \approx 1,000,000 records annually



Ohio's EMS Data Systems: Components

■ EMS Incident Reporting System

□ Data collected (80 data elements):

■ Incident demographics

- Date, time, place of incident
- All EMS times from 911 call to return to service

■ Patient demographics

■ Patient assessment

■ Treatment

- Procedures, medications

■ Disposition



Ohio's EMS Data Systems: Components

- Ohio Trauma Registry – Acute Care
 - Collects data from all inpatient hospitals on patients admitted for treatment of injuries.
 - Currently limited to “severe injuries” (48-hour rule)
 - Online January 1, 1999
 - 404,553 records
 - 194 hospitals reporting
 - ≈45,000 records annually



Ohio's EMS Data Systems: Components

- Ohio Trauma Registry – Acute Care
 - Data collected (77 data elements):
 - Patient Demographics
 - Cause of injury
 - Place, work-relatedness, motivation
 - EMS assessment / treatment
 - ED assessment / treatment
 - Inpatient course
 - Vent days, ICU LOS, complications



Ohio's EMS Data Systems: Components

- Ohio Trauma Registry – Acute Care
 - Data collected:
 - Diagnoses
 - Severity
 - Operative procedures
 - Discharge status / disposition
 - Autopsy information



Ohio's EMS Data Systems: Components

- Ohio Trauma Registry – Rehabilitation
 - Collects data from all inpatient rehab facilities on patients admitted for rehabilitation following injury
 - Online January 1, 2005
 - 6,183 records
 - 30 facilities reporting
 - \approx 1,000 records annually



Ohio's EMS Data Systems: Components

- Ohio Trauma Registry – Rehabilitation
 - Data collected (36 data elements):
 - Patient demographics
 - Disability assessment on admission
 - Disability assessment on discharge
 - Discharge status and disposition



Ohio's EMS Data Systems

- What's being done with the data?

Ohio's EMS Data Systems

■ Scientific publications

1. Farm Injuries in Ohio, 2003-2006: A Report from the Emergency Medical Services Prehospital Database

L Forst, T Erskine

Journal of Agricultural Safety and Health. 15(2): 171-183

2. Using data linkage to assess the impact of motorized recreational vehicle-related injuries in Ohio

KA Conner, H Xiang, JI Groner, GA Smith

Journal of Safety Research. 39 (2008) 469–475

3. Level I Versus Level II Trauma Centers: An Outcomes-Based Assessment

MT Cudnik, CD Newgard, MR Sayre, SM Steinberg

Journal of Trauma. 2009;66:1321–1326.

4. The contribution of traumatic brain injury to the medical and economic outcomes of motor vehicle-related injuries in Ohio

LM Rochette, KA Conner, GA Smith

Journal of Safety Research. 40 (2009) 353–358

Ohio's EMS Data Systems

■ Scientific publications

6. Identification of an age cutoff for increased mortality in patients with elderly trauma

JM Caterino, T Valasek, HA Werman

American Journal of Emergency Medicine. (2010) 28, 151–158

7. Identification of appropriate Glasgow Coma Score trauma criteria in elderly patients

JM Caterino, MT Cudnik

Annals of Emergency Medicine. 52(4): S52

8. The impact of a standard enforcement safety belt law on fatalities and hospital charges in Ohio

KA Conner, H Xiang, GA Smith

Journal of Safety Research. 41 (2010) 17-23

9. Development of statewide geriatric patients trauma triage criteria

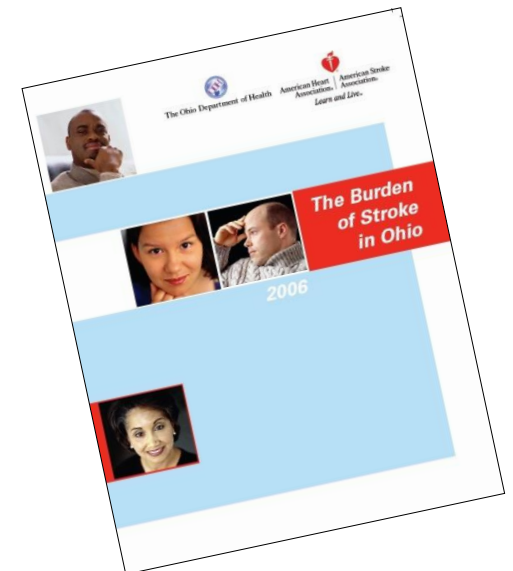
HA Werman, T Erskine, J Caterino, JF Riebe, T Valasek, Members of the Trauma Committee of the State of Ohio EMS Board

Prehospital & Disaster Medicine. 2011;26(3):1–10

Ohio's EMS Data Systems

■ Other Reports

- Burden of Stroke in Ohio
- Burden of Heart Disease in Ohio
- Biennial Report on the Incidence of Traumatic Brain Injury in Ohio





Ohio's EMS Data Systems

- CODES Program
- FARS Program
- OVDRS Program

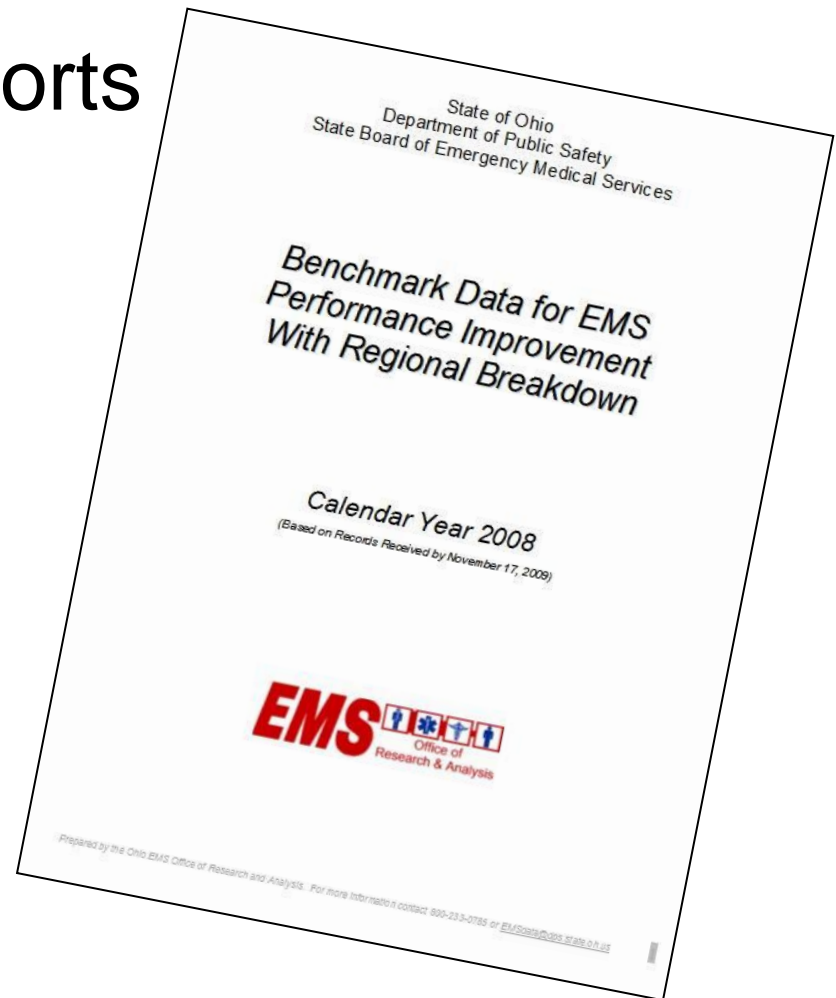


Ohio's EMS Data Systems

- Ad hoc public records requests
 - 716 requests since 2003
 - Average of 90 requests annually

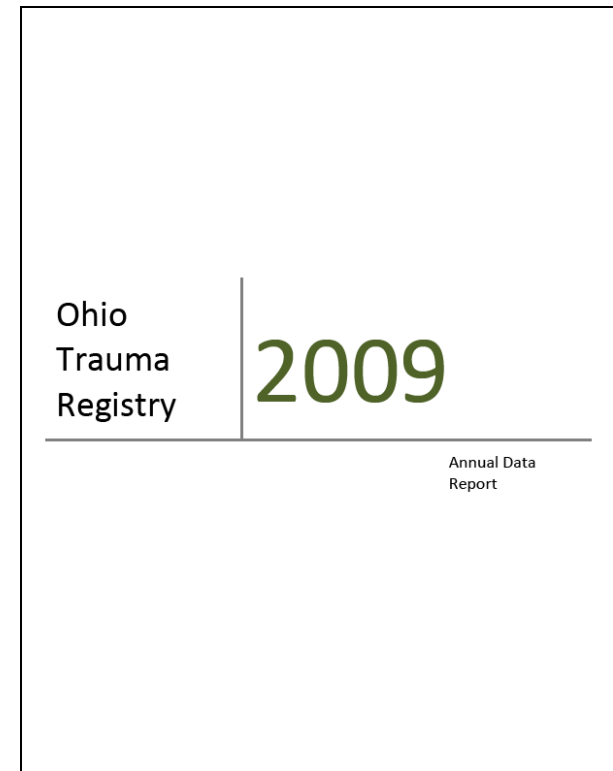
Ohio's EMS Data Systems

- EMS Benchmark Reports
 - 2003-2010



Ohio's EMS Data Systems

- Ohio Trauma Registry Data Report
 - 2001-2003, 2009





Ohio's EMS Data Systems: Purpose

- To reliably inform performance improvement, education, research and system design of the state's EMS and trauma systems.



Ohio's EMS Data Systems: Purpose

- To reliably inform performance improvement, education, research and system design of the state's EMS and trauma systems.

What do you
want to know?

We can help.



EMS Office of Research and Analysis

800-233-0765

EMSdata@dps.state.oh.us



2011 Youth Risk Behavior Surveillance Survey (YRBSS) Ohio's Students

Ohio Injury Prevention Partnership
August 17, 2012

What is the YRBSS?

Developed in 1990 by the Centers for Disease Control and Prevention (CDC)

Designed to measure prevalence of youth behaviors that contribute to leading causes of death, disease and injury

Conducted every two years in schools with grades 9 through 12



What is the YRBSS?

Consists of 99 multiple choice questions

- At least 58 questions must be “core” CDC questions, which cannot be changed
- Additional 41 questions are selected from CDC standard question list

Ohio has kept most questions from year to year
resulting in trend data



What is its History?

- 1993-1999: Ohio Department of Education (ODE)
- 2001 survey was not completed due to requests from the Ohio legislature
- 2003- present : Moved to Ohio Department of Health from ODE
- Weighted data in 1997, 1999, 2003, 2007, 2011
 - Non-weighted survey years 1995 and 2009



How is the Sample Selected?

August thru October - a school data file is created to list all eligible Ohio schools with grades 9 through 12

Sample size based on:

- Size of the eligible population
- Estimate of student response rate
- Desired precision of results
- Staff resources

Survey administered January through May



How is the Sample Selected?

- Student response rate determined by average daily attendance and parental consent
- Passive consent is used unless school districts request active consent
- Overall response rate of 60 percent is needed for weighted data
- Schools receive a monetary incentive



How are Students Selected?

- Students are selected by class
- Each student has an equal opportunity of being selected (random selection)
- Classes selected are required by all students, e.g. English or 3rd period classes
- Student identity is anonymous



Who Participated in the 2011 YRBSS?

- 51 public and non-public schools were selected
- 40 agreed to participate and successfully administered the survey
- 1,442 usable surveys make up the 2011 data
- School response rate = 78 percent
- Student response rate = 77 percent



Reporting the Results

Gender

- Female - 49%
- Male - 51%

Grade levels

- 9th Grade – 27%
- 10th Grade – 25%
- 11th Grade – 24%
- 12th Grade – 23%
- Ungraded or other grade – 1%



Reporting the Results

Race and Ethnicity

- Black or African American – 15%
- White – 78%
- Other Races* – 1%
- Multiple Races – 2% (non-Hispanic)
- Multiple Races – 3% (Hispanic)
- Hispanic/Latino – 1%

*American Indian/Alaska Native, Asian and Native Hawaiian/Other Pacific Islander



Reporting the Results

1. Unintentional Injury, Violence and Bullying
2. Suicide
3. Mental Health
4. Tobacco Use Prevention
5. Alcohol and **Other Drug Use**
6. Unintended Pregnancy, Prevention and **Sexual Violence**
7. Physical Activity
8. Nutrition
9. Obesity Prevention
10. Sleep
11. Positive Youth Development



Today's Presentation



Unintentional
Injury





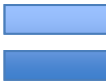
Violence



Prescription
Drug Use



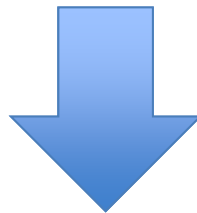
Data Presentation

- Trend data where available – 1993-2011
- Symbols used:
 - Increase 
 - Decrease 
 - No significant change 
- Policy drives system & environmental change

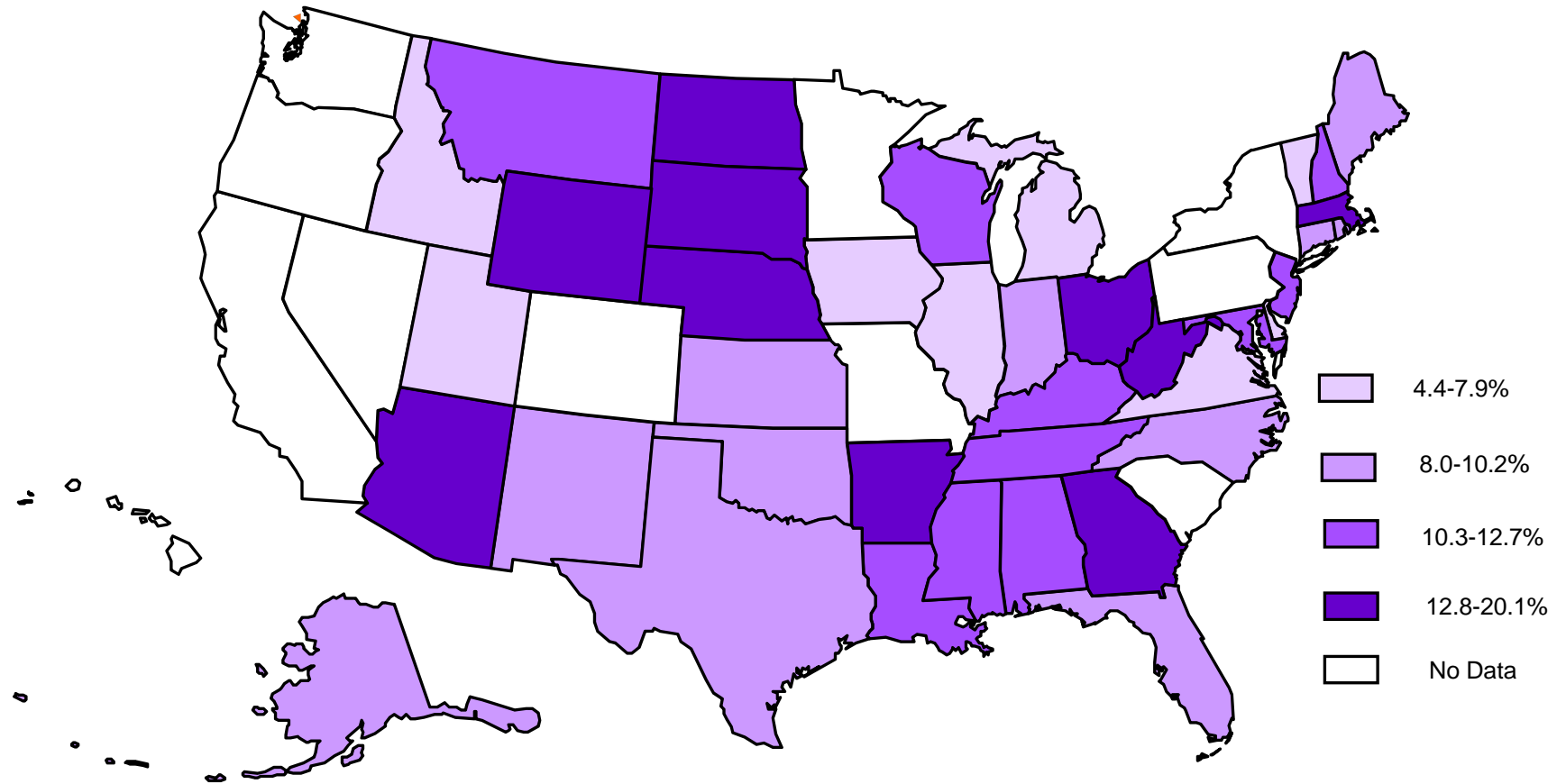


Unintentional Injury

- **Never or rarely wore a seat belt** when riding in a care driven by someone else **decreased** from **20%** in 1993 to **17%** in 2011.
- Rode in a car or other vehicle **driven by someone who had been drinking alcohol declined** from **36.8%** in 1993 to **21.0%** in 2011.
- **Drove a car or other vehicle when the had been drinking alcohol declined** from **11.5%** in 1993 to **7.2%** in 2011.

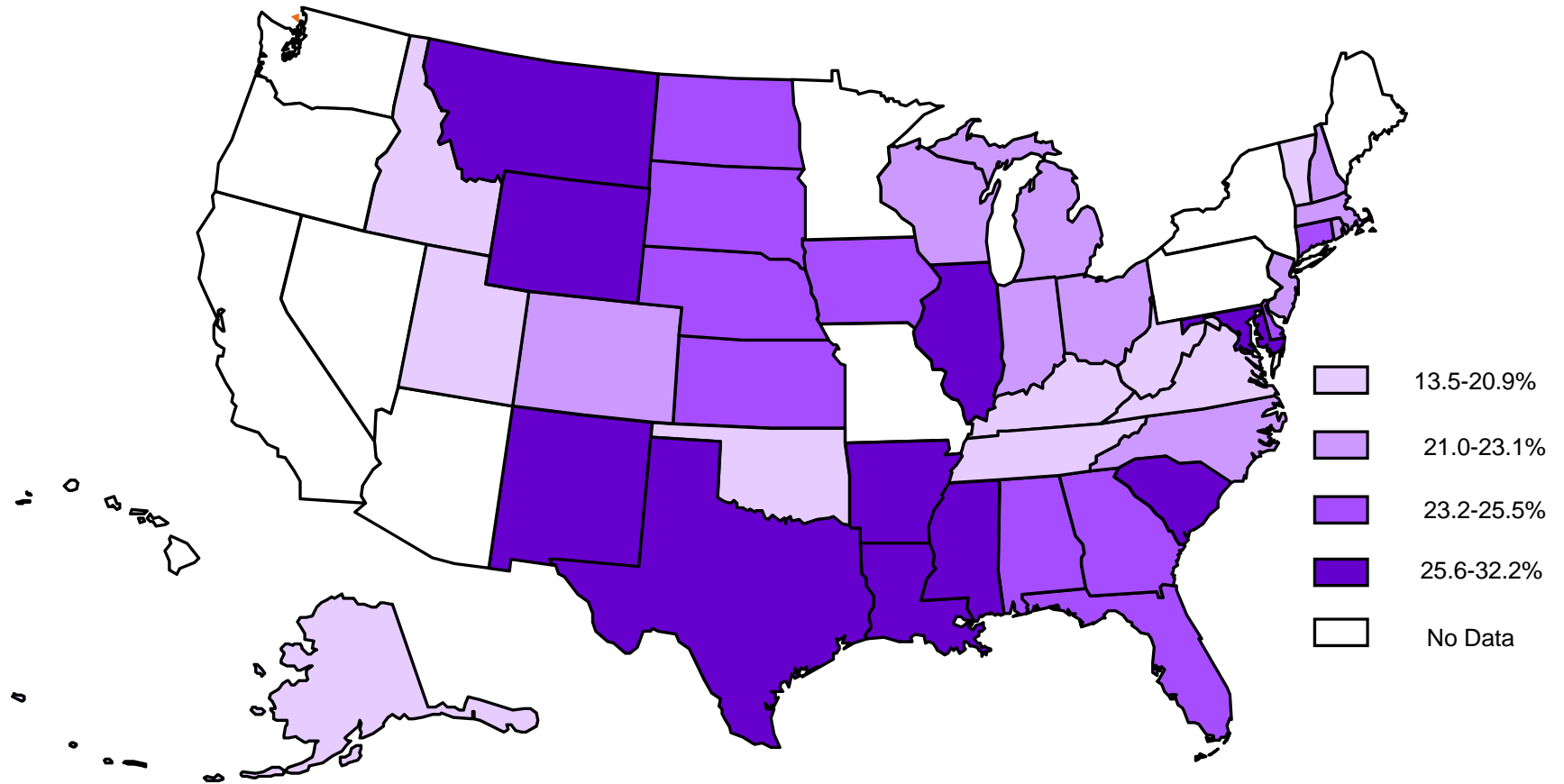


Percentage of High School Students Who Rarely or Never Wore a Seat Belt,* 2011



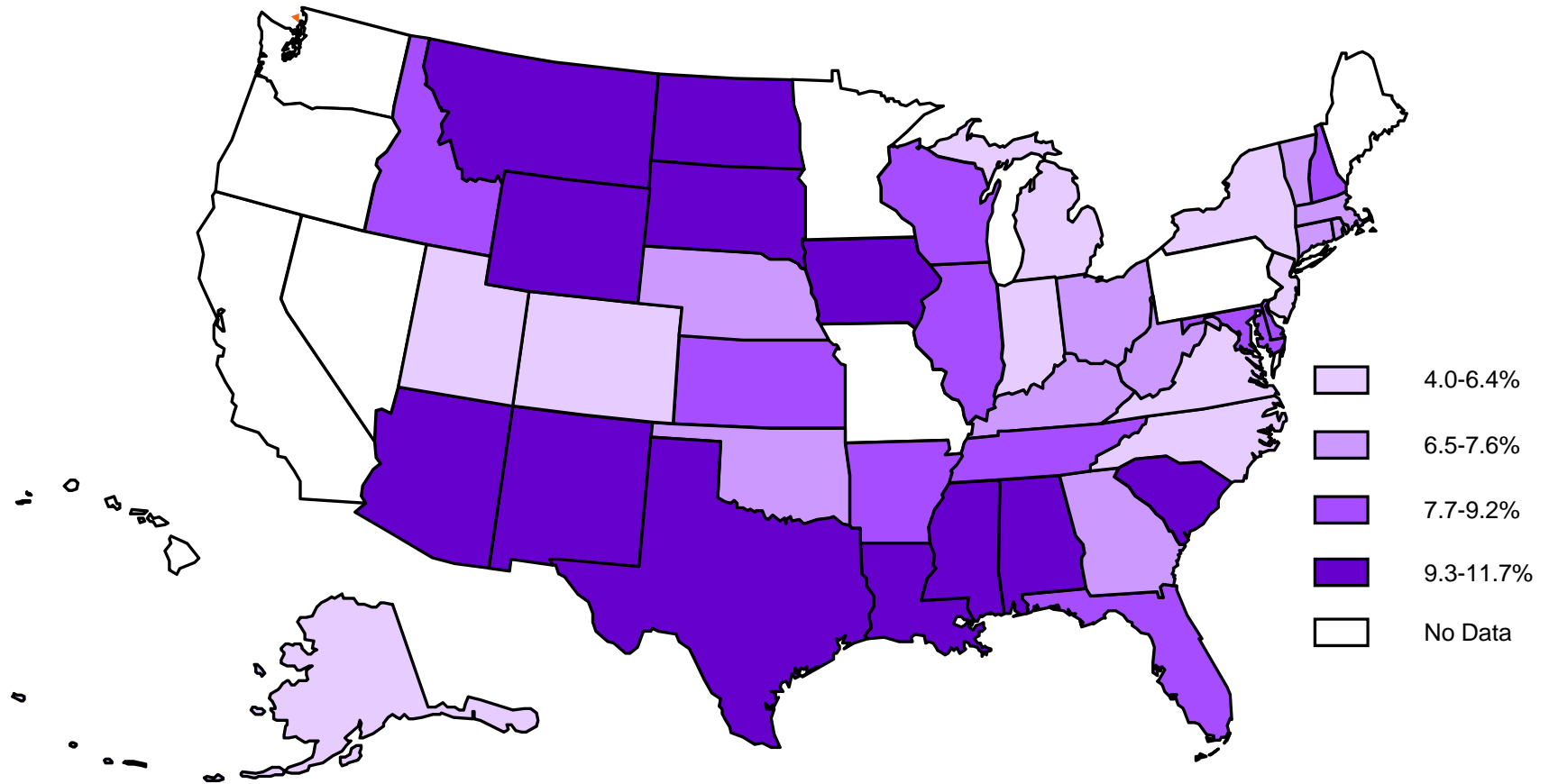
* When riding in a car driven by someone else.

Percentage of High School Students Who Rode in a Car or Other Vehicle Driven by Someone Who Had Been Drinking Alcohol,* 2011



* One or more times during the 30 days before the survey.

Percentage of High School Students Who Drove a Car or Other Vehicle When They Had Been Drinking Alcohol,* 2011



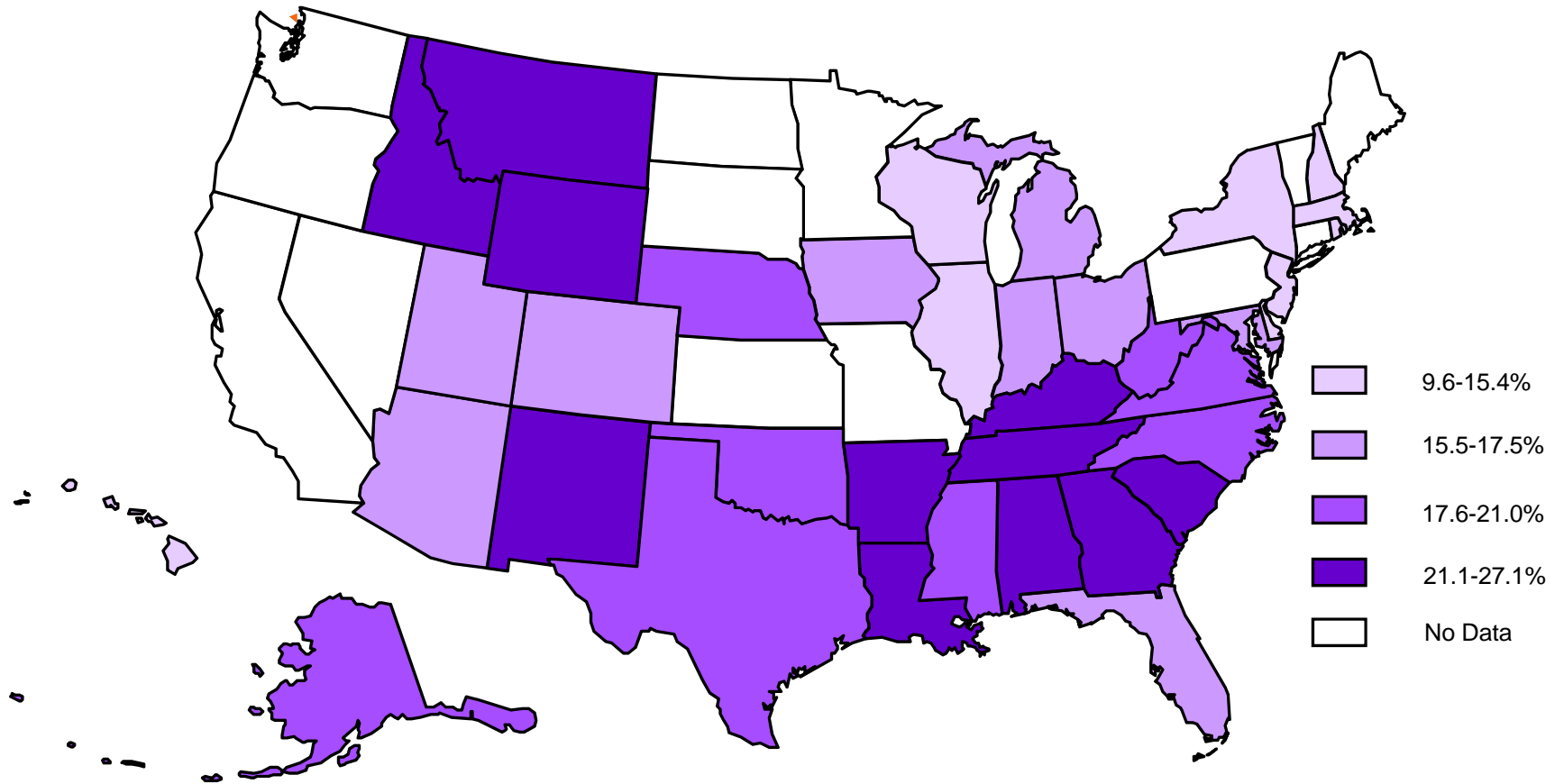
* One or more times during the 30 days before the survey.

Violence

- Carried a **weapon** on one or more of the past 30 days **decreased** from **22%** in 1993 to **13%** in 2003.
 - **Increased** thereafter to **16%** in 2011.
- **Physical fight** one or more times during the past twelve months **decreased** from **44%** in 1993 to **32%** in 2003.
 - **Leveled off** after that point (**31%** in 2011)

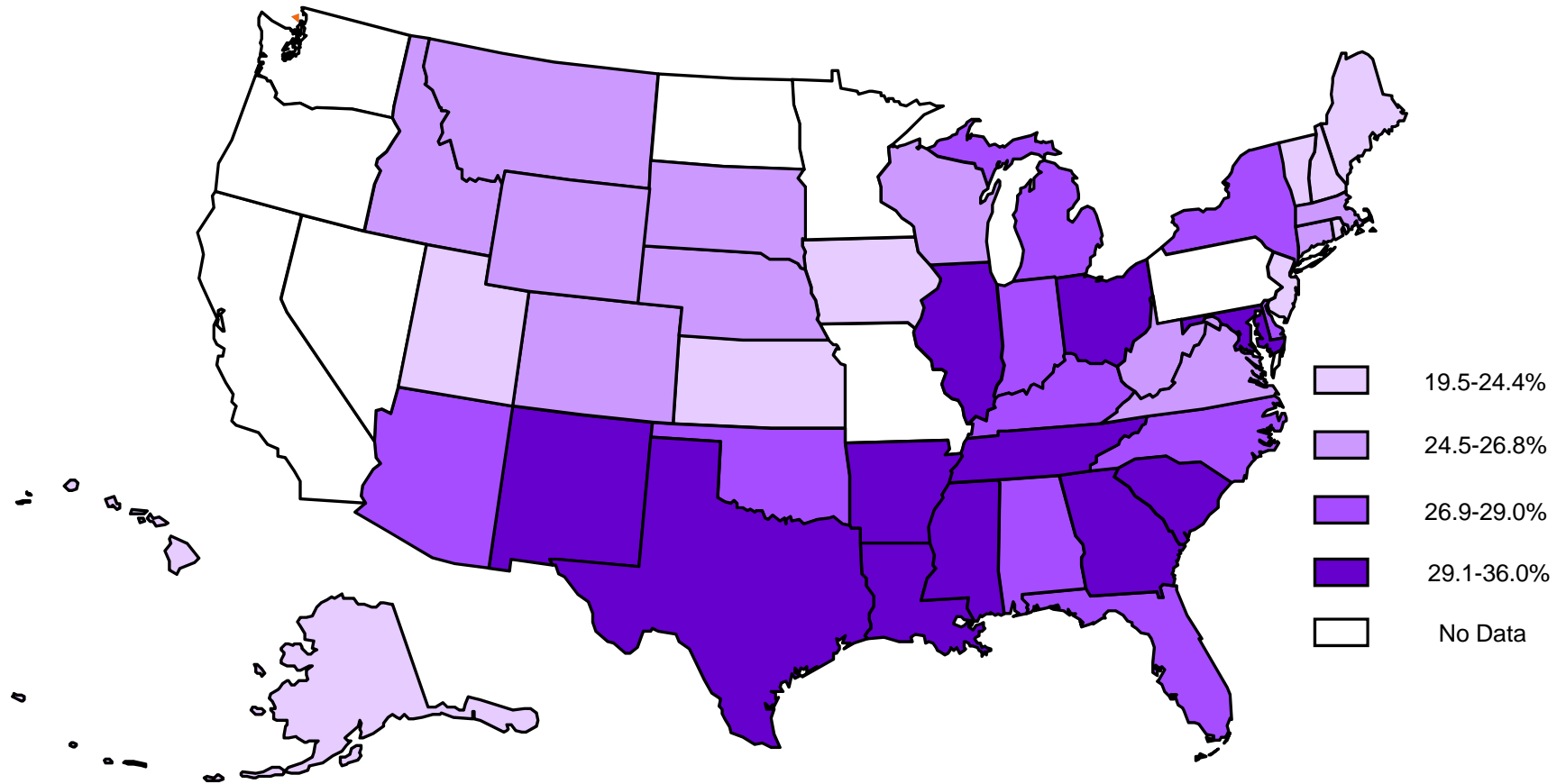


Percentage of High School Students Who Carried a Weapon,* 2011



* For example, a gun, knife, or club on at least 1 day during the 30 days before the survey.

Percentage of High School Students Who Were in a Physical Fight,* 2011



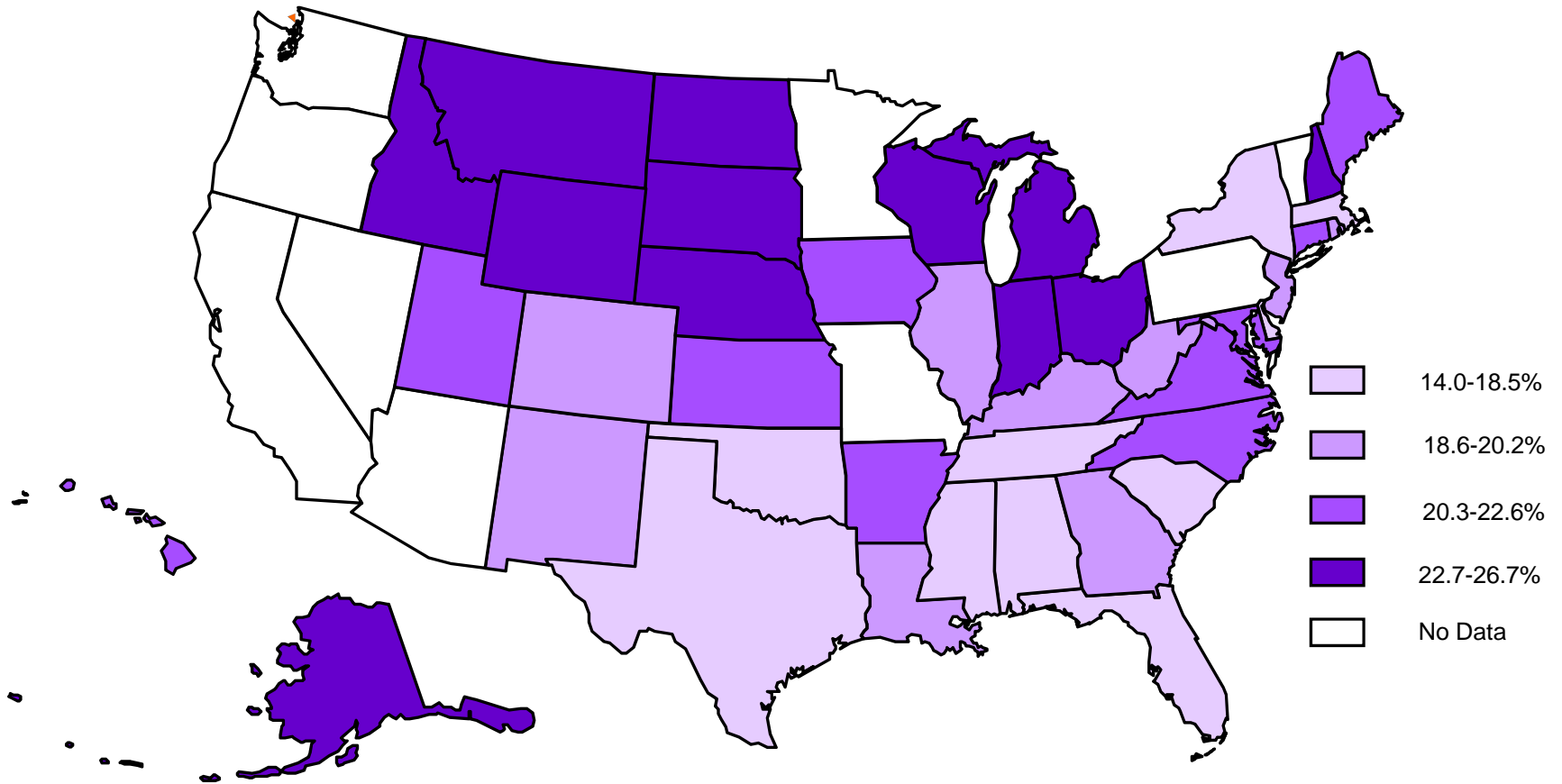
* One or more times during the 12 months before the survey.

Bullying

- **23%** of students in 2011 reported being bullied on school grounds.
- **14%** of students reported in 2011 being bullied away from school property.
- **15%** of students in 2011 reported being electronically bullied.

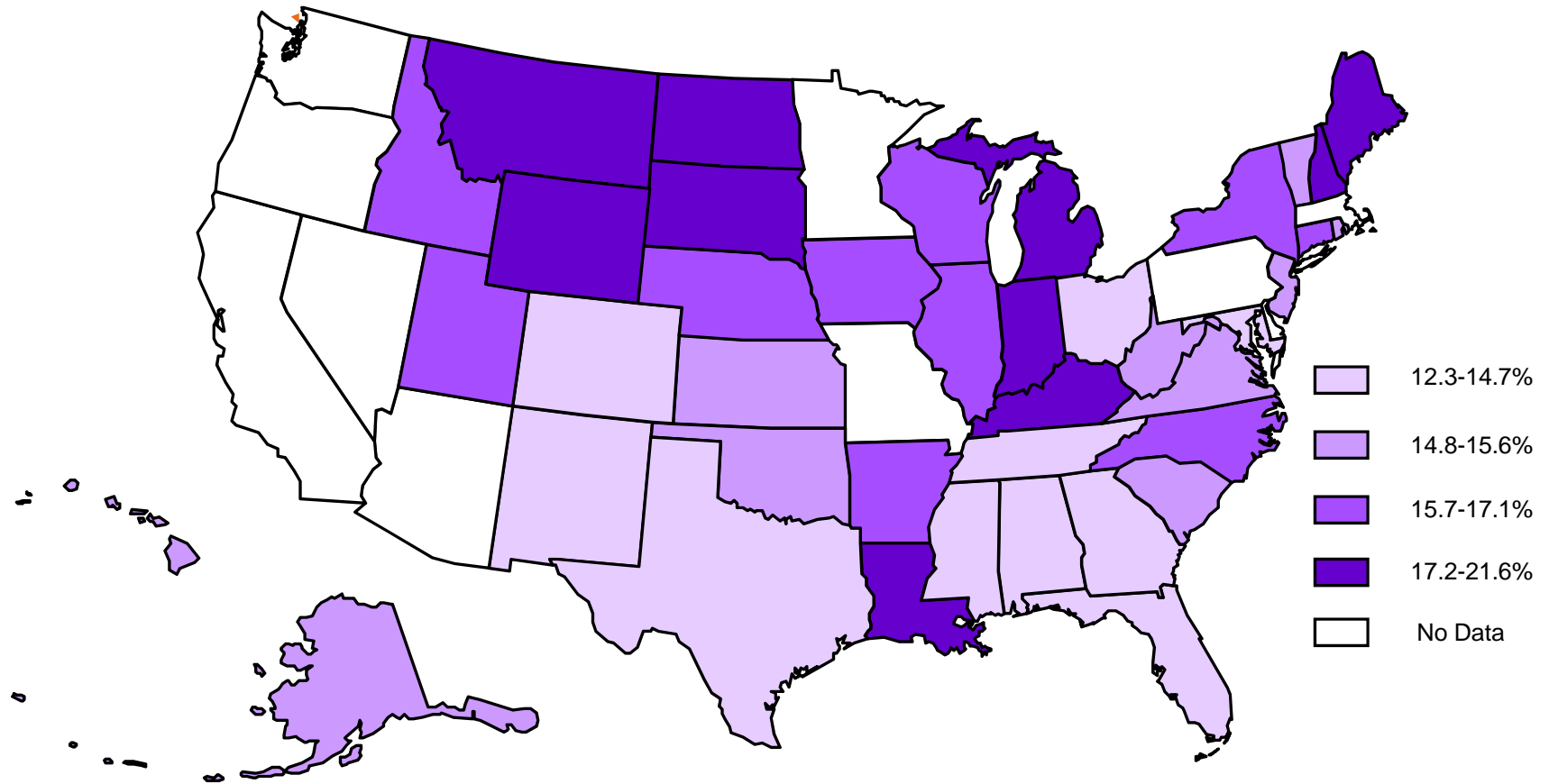


Percentage of High School Students Who Were Bullied on School Property,* 2011



* During the 12 months before the survey.

Percentage of High School Students Who Were Electronically Bullied,* 2011



* During the 12 months before the survey.

Suicide

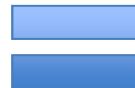
- **Considered attempting suicide** during the past 12 months decreased (**28.1%** to **14.3%** between 1993 and 2011).



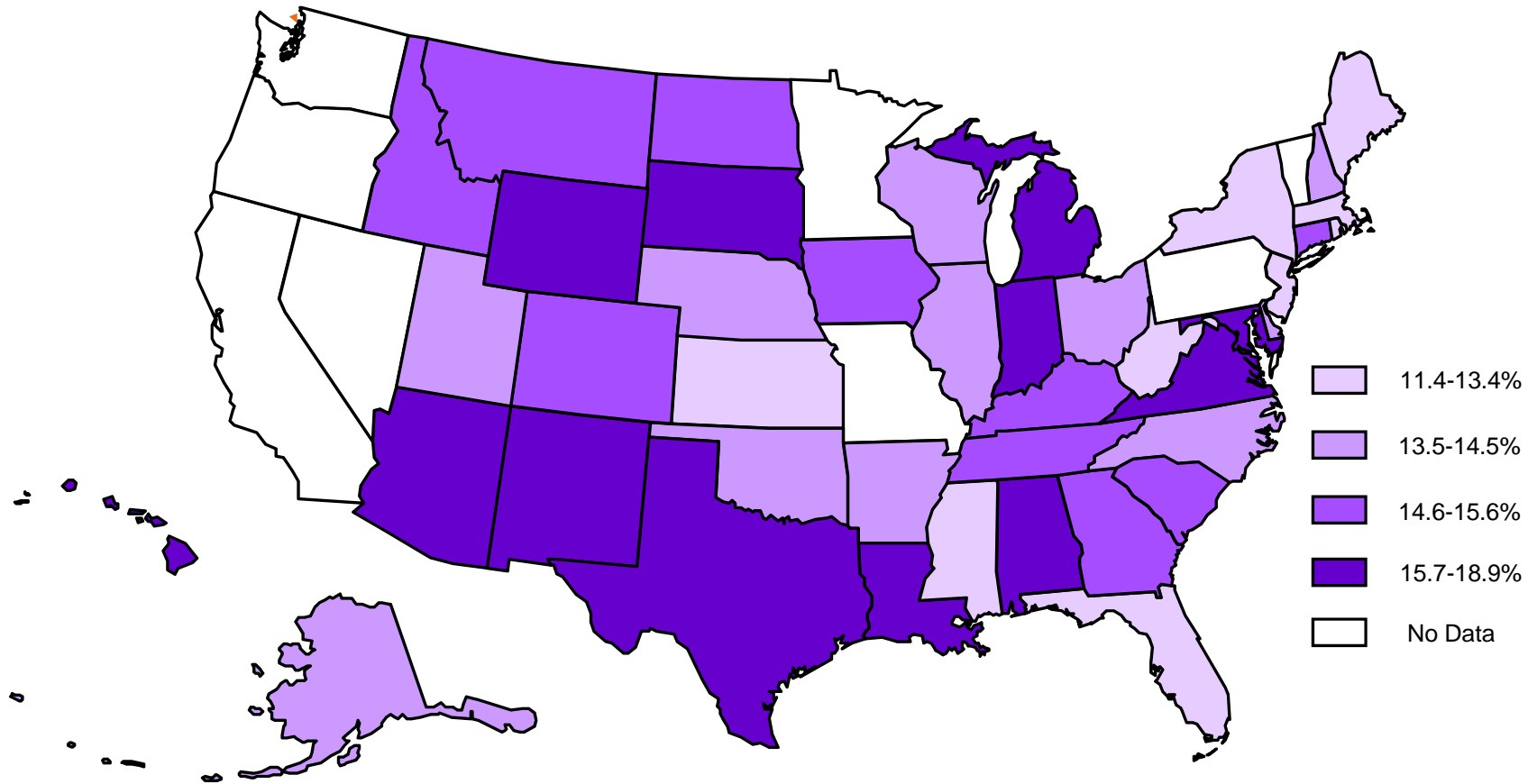
- **Attempted suicide did not significantly change** across the period (**10.6** in 1993 and **9.1%** in 2011).



- **Suicide attempts resulting in injury did not significantly change** over time (**2.8%** in 1993 and **4.0%** in 2011).

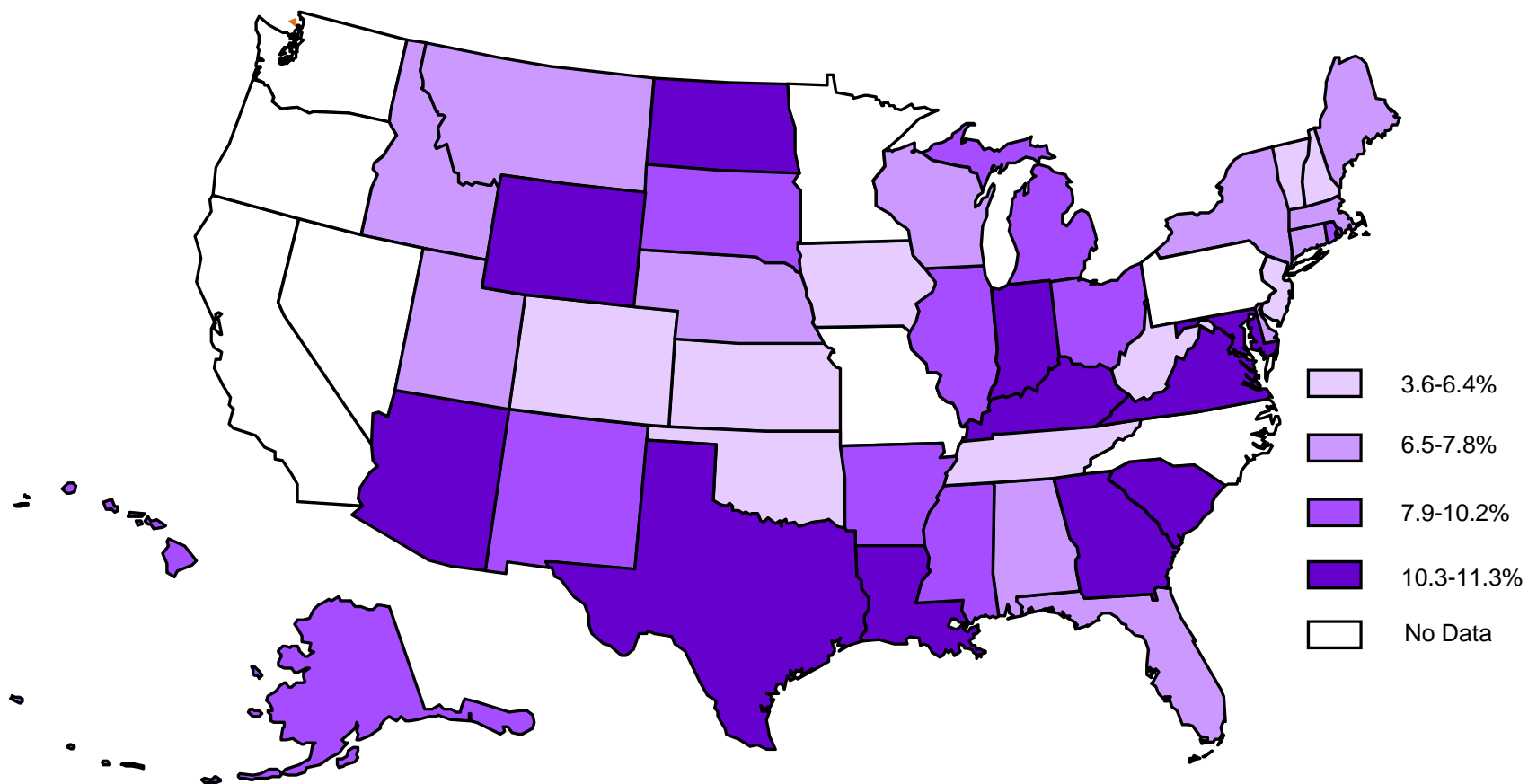


Percentage of High School Students Who Seriously Considered Attempting Suicide,* 2011



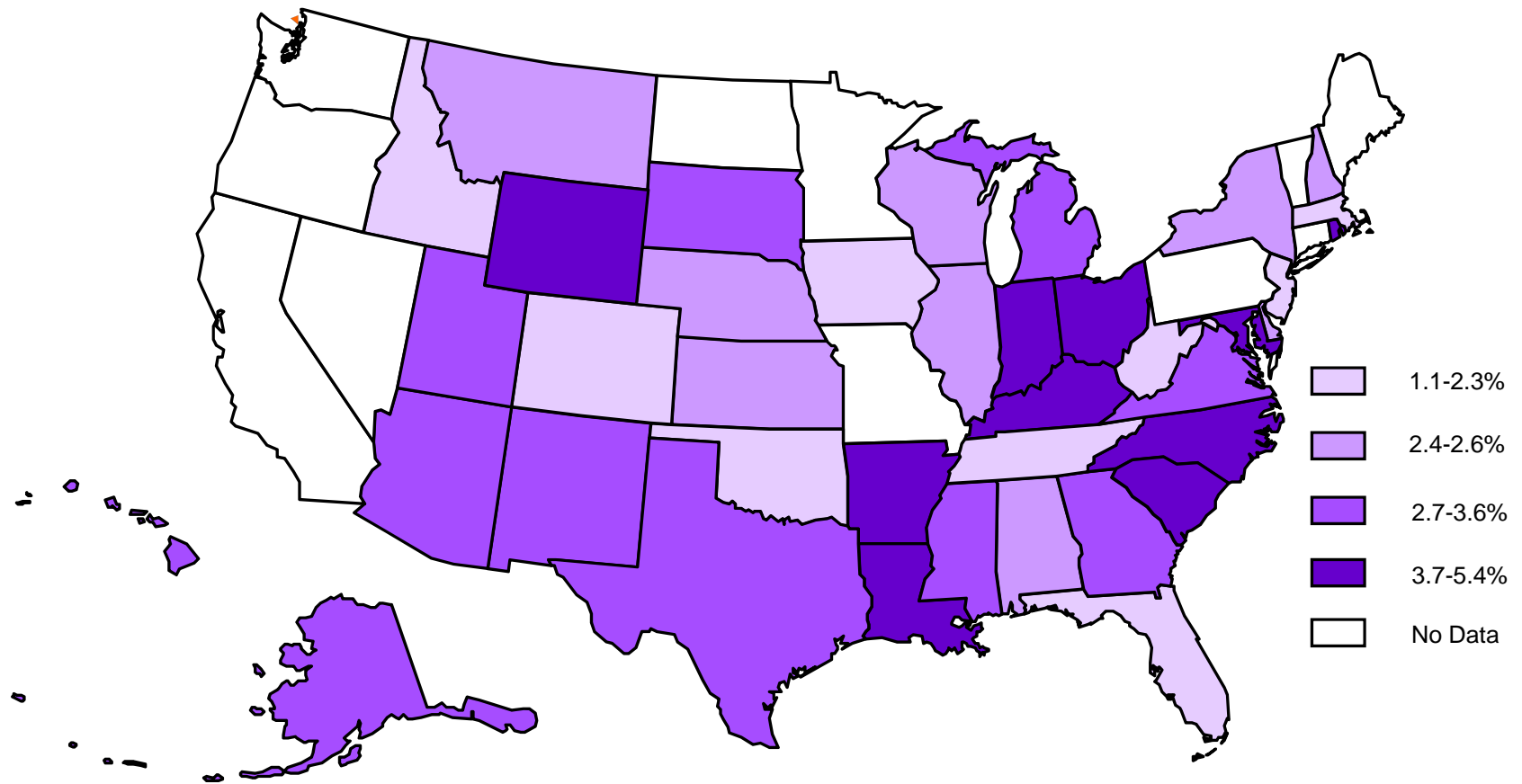
* During the 12 months before the survey.

Percentage of High School Students Who Attempted Suicide,* 2011



* One or more times during the 12 months before the survey.

Percentage of High School Students Whose Suicide Attempt Resulted in an Injury, Poisoning, or an Overdose That Had to Be Treated by a Doctor or Nurse,* 2011



* During the 12 months before the survey.

Prescription Drug Use

During the students life, the **number of times they used of Rx pain relievers/painkillers** (Vicodan, Percocet, OxyContin, Lortabs, Codeine) **without a doctors Rx:**

Possible Response	%
0 times	78.7
1 or 2 times	8.8
3 to 9 times	4.6
10 to 19 times	3.1
20 to 29 times	1.3
40 times or more	3.6
TOTAL	100.0



Prescription Drug Use

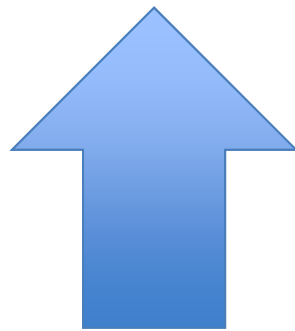
Type of Rx drug students have taken most often without a doctor's Rx:

Possible Response	%
I don't take Rx drugs	78.7
Narcotic pain relievers	11.6
Tranquilizers	1.5
Sleeping pills	1.4
Stimulants	1.9
Multiple at the same time	1.3
Not sure	3.5
TOTAL	100.0

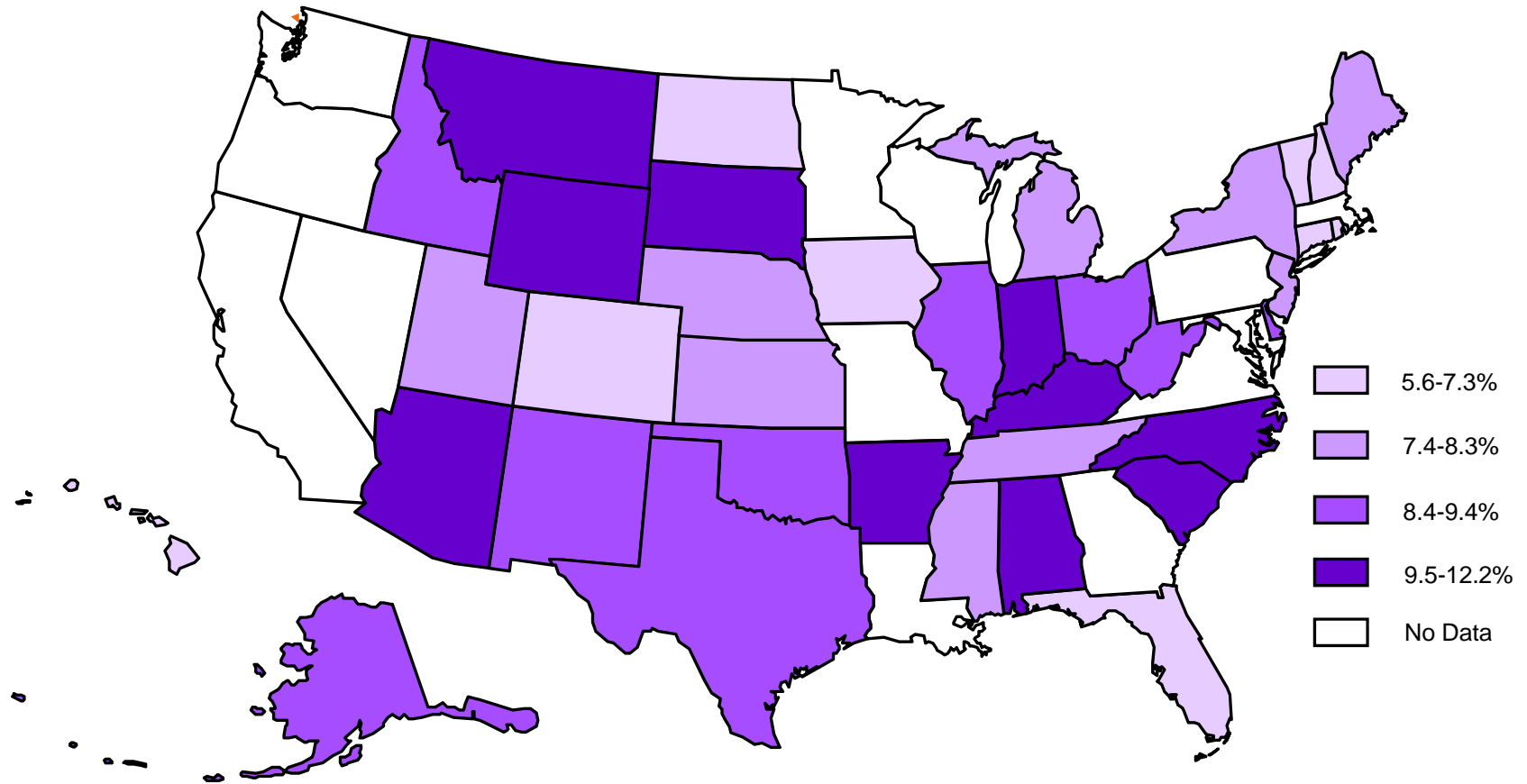


Sexual Violence

Percentage of students who had ever been physically forced to have sexual intercourse when they did not want to **increased** from 8% in 2003 to 9% in 2011.



Percentage of High School Students Who Were Ever Physically Forced to Have Sexual Intercourse,* 2011



* When they did not want to.

YRBSS OHIO Information

2011 YRBS Summary Tables can be found on the ODH website

http://www.odh.ohio.gov/en/odhprograms/chs/s/ad_hlth/youthrsk/youthrsk1.aspx



YRBSS National Information

www.cdc.gov/yrbs

- Questionnaire and item rationale
- *Morbidity and Mortality Weekly Report* Surveillance Summaries
- Youth Online
- Data and codebooks for the national YRBS surveys
- Publications, journal articles, and fact sheets



Proposed new questions for 2013

- Texting while driving
- Sports related head injuries
- Return to play after sports related head injury



Conclusions

- Substantial percentages of youth are engaging in risky behaviors and contributing to causes of death
- Positives: declining unintentional injuries and suicide ideation
- Negatives: No change among violence, suicide attempts, and high prescription drug use
- Fluid system that can measure emerging issues



Contact Information:

Geri Lester

Coordinated School Health Program Consultant

School & Adolescent Health Services

Ohio Department of Health

614-728-2957

Geraldine.lester@odh.ohio.gov



HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

100. ASSESSMENT: Regular systematic collection, assembly, analysis, and dissemination of information on the health of the community.

101. There is a thorough description of the epidemiology of injury in the system jurisdiction using both population-based data and clinical databases.

Essential Service: Monitor Health

Indicator		Scoring
101.1 There is a thorough description of the epidemiology of injury mortality in the system jurisdiction using population-based data.	1	<p>1. There is no thorough description of the epidemiology of injury mortality in the system jurisdiction.</p> <p>2. Death certificate data have been used to describe the statewide incidence of trauma deaths aggregating all etiologies, but no E-code reporting is available.</p> <p>3. Death certificate data, by E-code, are reported on a statewide basis, but are not reported by sub-State jurisdiction.</p> <p>4. Death certificate data, by E-code, are reported on statewide and sub-State jurisdictions. These data are compared to national benchmarks, if available.</p> <p>5. Death certificate data, by E-code, are used as part of the overall assessment of trauma care in a State or sub-State, including statewide rural and urban preventable mortality studies.</p>

Essential Service: Monitor Health

Indicator		Scoring
101.2 There is a description of injuries within the trauma system jurisdiction including the distribution by geographic area, high-risk populations (pediatric, elder, distinct cultural/ethnic, rural, and others), incidence, prevalence, mechanism, manner, intent, mortality, contributing factors, determinants, morbidity, injury severity (including death), and patient distribution using any or all the following: vital statistics, emergency department (ED) data, EMS data, hospital discharge data, State police data (those from law enforcement agencies), medical examiner data, trauma registry, and other data sources. The description is updated at regular intervals. Note: Injury severity should be determined through the consistent and system-wide application of one of the existing injury scoring methods, for example, Injury Severity Score (ISS).	3	<p>1. There is no written description of injuries within the trauma system jurisdiction.</p> <p>2. One or more population-based data sources (e.g., vital statistics and medical examiner data) describe injury within the jurisdiction, but clinical data sources are not used.</p> <p>3. One or more population-based data sources and one or more clinical data sources are used to describe injury within the jurisdiction.</p> <p>4. Multiple population-based and clinical data sources are used to describe injury within the jurisdiction, and the description is systematically updated at regular intervals.</p> <p>5. Multiple population-based and clinical data sources (e.g., trauma registry, ED data, and others) are electronically linked and used to describe injury within the jurisdiction.</p>

Essential Service: Monitor Health

Indicator		Scoring
101.3 There is a comparison of injury mortality using local, regional, statewide, and national data.	1	<p>1. There is no written comparison of injury mortality using local, regional, statewide, and national data.</p> <p>2. There is a written descriptive comparison of at least the leading cause of injury death using local, regional, and statewide data.</p> <p>3. There is a written descriptive, graphic, and tabular comparison of the leading cause of injury death using local, regional, statewide, and national data.</p> <p>4. There is a written descriptive, graphic, and tabular comparison of the top three leading causes of injury death using local, regional, statewide, and national data.</p> <p>5. There is a written descriptive, graphic, and tabular comparison of the top ten</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

		leading causes of injury death using local, regional, statewide, and national data.
--	--	---

Essential Service: Monitor Health

Indicator		Scoring
101.4 Collaboration exists between EMS, public health officials, and trauma system leaders to complete injury risk assessments.	2	<p>1. No injury risk assessments are conducted.</p> <p>2. Trauma system leaders conduct injury risk assessments; however, there is no involvement of EMS or public health officials in those assessments.</p> <p>3. Public health officials, along with EMS and trauma system leaders, assist with the design of injury risk assessments.</p> <p>4. Public health officials, along with EMS and trauma system leaders, assist with the design and analysis of injury risk assessments.</p> <p>5. The public health epidemiologist, along with EMS and trauma system leaders, is involved in the development of injury reports. There is clear evidence of data sharing, data linkage, and well-defined reporting roles and responsibilities.</p>

Essential Service: Monitor Health

Indicator		Scoring
101.5 Integration of injury into other public health risk assessments that occurs at State, regional, and community levels, resulting in the integration into key reports and planning documents such as Healthy People 2010.	1	<p>1. No injury risk assessments are completed.</p> <p>2. Injury risk assessments are conducted in a segregated manner by the trauma program, separate from other public health risk assessments.</p> <p>3. Injury risk assessments are combined with other assessment data, after separate collection and analysis efforts.</p> <p>4. Injury risk assessments are conducted by public health officials as an integrated component with other health risk assessments.</p> <p>5. Injury risk assessments are conducted by public health officials as an integrated component with other health risk assessments. Comparisons and contrasts between injury death and disability rates are made, fully integrated, and published, along with other leading health risk indicators, for example, HIV/AIDS, cardiac, and cancer, in Health of the State and other formal public health documents.</p>

Essential Service: Diagnose and Investigate

Indicator		Scoring
101.6 The trauma system works with EMS and the public health system to complete a jurisdiction-wide study of the determinants of injury using existing data sources and public health tools.	1	<p>1. There is no jurisdiction-wide study of the determinants of injury.</p> <p>2. The trauma system, EMS, and public health officials (including EMS) use existing data sources such as the Behavioral Risk Factor Surveillance System (BRFSS) to describe determinants of injury among the general population.</p> <p>3. The trauma system, EMS, and public health officials (including EMS) use existing data sources such as the Youth Risk Behavior Survey (YRBS) to describe determinants of injury among high-risk subpopulations.</p> <p>4. Statewide data from all potential sources, for example, BRFSS, YRBS, Fatality Analysis Reporting System (FARS), vital records, and others, pertaining to the risk of injury are summarized, electronically linked, and analyzed to determine the potential target areas for injury prevention activities.</p> <p>5. A State injury prevention plan identifies injury prevention targets based, in part, on the determinants of injury and injury risk, and identifies strategies to document and demonstrate the cost-benefit of various behaviors.</p>

Essential Service: Diagnose and Investigate

Indicator		Scoring
101.7 The trauma system works with EMS and public health to identify special at-risk populations.		<p>1. There is no effort to describe risks to special at-risk populations such as age categories, cultural/ethnic populations, geographic variances, pediatrics, and high-risk co-morbidities, for example, substance abuse, or children with special</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

	2	<p>health care needs, or any combination of these.</p> <p>2. Risk assessments have been conducted for various age groupings, for example, adolescents and elder persons.</p> <p>3. In addition to risk assessments for age cohorts, cultural/ethnic variations have been analyzed.</p> <p>4. In addition to risk assessments for age and cultural/ethnic cohorts, geographic distribution of injury within the jurisdiction has been analyzed, for example, inner city versus suburban.</p> <p>5. There is strong evidence that multiple special at-risk populations have been identified during the assessment processes.</p>
--	---	---

Benchmark

102. There is an established trauma management information system (MIS) for ongoing injury surveillance and system performance assessment.

Essential Service: Monitor Health

Indicator	Scoring
102.1 There is an established injury surveillance process that can, in part, be used as an MIS performance measure.	<p>4</p> <p>1. There is no established system-wide injury surveillance process.</p> <p>2. There is a system-wide trauma registry, but not all hospitals in the service area contribute to the trauma management information system.</p> <p>3. There is a system-wide trauma registry with all hospitals in the service area contributing data.</p> <p>4. The system-wide trauma registry data are bolstered by one or more of the following databases: EMS data system, ED data system, or hospital discharge data.</p> <p>5. The statewide trauma registry, EMS data system, ED data system, hospital discharge data, rehabilitation, and burn data system are accessible, electronically linked, and have consistent data definitions and elements. The data are used for both injury surveillance and MIS performance measures.</p>

Essential Service: Monitor Health

Indicator	Scoring
102.2 Injury surveillance is coordinated with statewide and local community health surveillance.	<p>1</p> <p>1. Injury surveillance, as described in 102.1, does not occur within the system.</p> <p>2. Injury surveillance occurs in isolation from other health risk surveillance and is reported separately.</p> <p>3. Injury surveillance occurs in isolation but is combined and reported with other health risk surveillance processes.</p> <p>4. Injury surveillance occurs as part of broader health risk assessments.</p> <p>5. Processes of sharing and linkage of data exist between EMS systems, public health systems, and trauma systems, and the data are used to monitor, investigate, and diagnose community health risks.</p>

Essential Service: Monitor Health

Indicator	Scoring
<p>102.3 Trauma data are electronically linked from a variety of sources.</p> <p>Note: Deterministically means with such patient identifiers as name and date of birth. Probabilistically means computer software is used to match likely records through such less certain identifiers as date of incident, patient age, gender, and others.</p>	<p>2</p> <p>1. Trauma registry data exist but are not deterministically or probabilistically linked to other databases.</p> <p>2. Trauma registry data exist and can be deterministically linked through hand-sorting processes.</p> <p>3. Trauma registry data exist and can be deterministically linked through computer-matching processes.</p> <p>4. Trauma registry data exist and can be deterministically and probabilistically linked to at least one other injury database including: EMS data systems (i.e., patient care records, dispatch data, and others), ED data systems, hospital discharge data, and others.</p> <p>5. All data stakeholders (insurance carriers, FARS, and rehabilitation, in addition to typical trauma system resources) have been identified, data access</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

		agreements executed, hardware and software resources secured, and the "manpower" designated to deterministically and probabilistically link, analyze, and report a variety of data sources in a timely manner.
--	--	--

Essential Service: Monitor Health

Indicator		Scoring
102.4 There is a process to evaluate the quality, timeliness, completeness, and confidentiality of data.	1	<p>1. There is no process or written policy to evaluate the quality, timeliness, completeness, and confidentiality of the data collected in the system.</p> <p>2. There is a process of evaluation and written policy but no compliance with governance. Confidentiality of information is not ensured.</p> <p>3. The process of reviewing the quality, timeliness, completeness, and confidentiality of data is just beginning. There is some compliance with a draft written policy.</p> <p>4. There are draft written policies in place for evaluating the quality (including both reliability and validity), timeliness, and completeness of data and for ensuring confidentiality.</p> <p>5. There is a comprehensive written policy and demonstrated compliance concerning data management and governance including an evaluation of the quality, timeliness, and completeness of data, with confidential protection of records ensured while allowing appropriate access for research purposes.</p>

Essential Service: Monitor Health

Indicator		Scoring
102.5 There is an established method of collecting trauma financial data from all health care facilities and trauma agencies including patient charges as well as administrative and system costs.	2	<p>1. Financial data are not collected as part of the trauma system registry.</p> <p>2. Financial data are collected as part of the trauma system registry at individual facilities but are not reported to the lead trauma authority.</p> <p>3. Financial data are collected as part of the trauma system registry and are analyzed and reported by the lead trauma authority.</p> <p>4. Financial data from the trauma registry are linked with at least one other source of cost data such as hospital discharge data.</p> <p>5. Financial data are linked and analyzed from the trauma registry, insurers, emergency department, EMS, hospital discharge, and rehabilitation and are compared with general trauma system infrastructure costs to establish the general financial health of the system and its value to the community.</p>

Benchmark

103. A resource assessment for the trauma system has been completed and is regularly updated.

Essential Service: Monitor Health

Indicator		Scoring
103.1 The trauma system has completed a comprehensive system status inventory that identifies the availability and distribution of current capabilities and resources.	1	<p>1. There is no statewide resource assessment.</p> <p>2. A State resource assessment has been completed that documents the frequency and distribution of resources for at least two of the following categories: prehospital and hospital personnel, education programs, facilities, and prehospital equipment.</p> <p>3. A State resource assessment has been completed that documents the frequency and distribution of resources for more than two of the following categories: leadership, system development, legislation, finances, injury prevention, workforce resources, education, EMS, transport, communications, trauma care facilities, interfacility transfer, medical rehabilitation, information systems, medical oversight, system evaluation, performance improvement, and research.</p> <p>4. A trauma jurisdiction-specific resource assessment has been completed for at least half of the trauma jurisdictions.</p> <p>5. Trauma jurisdiction-specific resource assessments have been completed for the State, regional, and local areas and are updated at least biennially.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

Essential Service: System Management		
Indicator		Scoring
103.2 The trauma system has completed a gap analysis based on the inventories of internal and external system status as well as system resource standards.	1	<p>1. There are no resource standards on which to base a gap analysis.</p> <p>2. The State trauma advisory committee has begun to develop statewide trauma system resource standards so that a gap analysis can be completed.</p> <p>3. State trauma system resource standards have been approved by the appropriate approving authority.</p> <p>4. A gap analysis of statewide trauma system resources has been completed for the entire State based on the system resource standards adopted.</p> <p>5. A gap analysis of statewide trauma system resources has been completed for the entire State and is updated at regular intervals based on the trauma resource standards in place.</p>

Essential Service: System Management		
Indicator		Scoring
103.3 There has been an initial assessment (and periodic reassessment) of overall system effectiveness.	1	<p>1. No preventable mortality assessment has been conducted on a system-wide basis.</p> <p>2. A system-wide preventable mortality study has been completed.</p> <p>3. A system-wide preventable mortality study that includes rates, frequencies, and types of inappropriate care rendered within the hospitals participating in the trauma system has been conducted.</p> <p>4. A system-wide preventable mortality study that includes rates, frequencies, and types of inappropriate care rendered in all phases of care within the trauma system, for example, prehospital, rehabilitation, and others, has been conducted.</p> <p>5. The system has completed preventable mortality studies that include the determination of rates of inappropriate care, as well as an examination of the number of severely injured (ISS > 15) patients arriving at the highest levels of available care within appropriate times. The assessment is repeated at regular intervals (could be an annual summary of deaths and complications).</p>

Essential Service: System Management		
Indicator		Scoring
103.4 The trauma system has undergone a jurisdiction-wide external independent analysis.	3	<p>1. No external examination of the trauma system or individual components has occurred.</p> <p>2. Individual trauma centers have undergone outside consultation and verification.</p> <p>3. In addition to trauma center verification, at least one other component of the system has been analyzed by external reviewers, for example, prehospital, rehabilitation, burns, and others.</p> <p>4. An outside group of trauma system "experts" has conducted a formal trauma system external assessment and has made specific recommendations to the system.</p> <p>5. Independent, external reassessment occurs regularly, at least every 5 years.</p>

Benchmark		
104. An assessment of the trauma system's emergency preparedness has been completed including coordination with the public health, EMS systems, and the emergency management agency.		
Essential Service: System Management		
Indicator		Scoring
104.1 There is a resource assessment of the trauma system's ability to expand its capacity to respond to mass casualty incidents (MCIs) in an all-hazards approach.		<p>1. There is no resource assessment of the trauma system's ability to expand its capacity to respond to mass casualty incidents for in an all-hazards approach.</p> <p>2. An assessment of the ability of some components of the trauma care system to respond to a mass casualty incident has been included in all-hazards planning.</p> <p>3. An assessment of the ability of all components of the trauma system to</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

	4	<p>respond to a mass casualty incident has been conducted on a jurisdiction-wide basis.</p> <p>4. A written inventory of system-wide MCI capacity has been completed and includes: medical reserve personnel, facility surge capacity, additional equipment resources and caches, communication interoperability, overall management structure such as NIMS (National Incident Management System), and SEMS (Standardized Emergency Management System).</p> <p>5. The written inventory of trauma system-wide MCI capacity has been shared with, and incorporated into, broader community-wide and statewide planning efforts for all-hazards responses.</p>
--	---	---

Essential Service: System Management

Indicator	Scoring
104.2 There has been a consultation by external experts to assist in identifying current status and needs of the trauma system to be able to respond to mass casualty incidents.	<p>3</p> <p>1. No external examination of the trauma system's performance or ability to respond within the all-hazards response system has occurred at the State, regional, or local level.</p> <p>2. Individual trauma centers have undergone outside consultation during tabletop and simulated incident drills.</p> <p>3. In addition to the involvement of at least some individual trauma centers, at least one other component of the trauma system has been analyzed by external reviewers, for example, prehospital, communications, information systems, and others.</p> <p>4. Preparations are under way for a formal system-wide review of the trauma system response to a mass casualty incident (to occur within the next 6 months).</p> <p>5. An outside group of all-hazards response "experts" has conducted a formal external assessment and has made specific recommendations to the system.</p>

Essential Service: System Management

Indicator	Scoring
104.3 The trauma system has completed a gap analysis based on the resource assessment for trauma emergency preparedness.	<p>1</p> <p>1. There are no resource standards on which to base a gap analysis.</p> <p>2. The statewide trauma advisory committee, in conjunction with appropriate incident management personnel, has begun to develop statewide MCI response resource standards.</p> <p>3. State resource standards for trauma system response during a mass casualty incident have been developed and approved.</p> <p>4. Some components (e.g., prehospital) of the trauma system, or facilities within it, have completed a gap analysis based on the adopted standards.</p> <p>5. A system-wide trauma system MCI resource gap analysis has been completed for the jurisdiction based on the system resource standards adopted.</p>

Benchmark

105. The system assesses and monitors its value to its constituents in terms of cost-benefit analysis and societal investment.

Essential Service: System Management

Indicator	Scoring
105.1 The benefits of the trauma system, in terms of years of productive life lost (YPLL), quality-adjusted life years (QALY), disability-adjusted life years (DALY), and so on, are described.	<p>1</p> <p>1. There are no cost data available to the system to compare to quality of life indicators.</p> <p>2. Trauma system costs are included in the trauma management information system that can serve as the basis for these calculations.</p> <p>3. Additional sources of data, in terms of other economic and quality of life measures, are available.</p> <p>4. Cost and quality of life measures can be analyzed and presented in descriptive and graphic form.</p> <p>5. A series of reports and fact sheets are available and regularly updated to descriptively and graphically illustrate costs and benefits of the trauma system as well as the cost and benefits of specific personal behaviors.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

Essential Service: System Management		
Indicator		Scoring
105.2 Cases that document the societal benefit are reported on so that the community sees and hears the benefit of the trauma system to society.	2	<p>1. No effort is made to gather, catalogue, or report cases that document the societal benefit of the trauma system so that the community sees and hears the benefit of the trauma system to society. Such cases, for example, document descriptive information on dramatic "saves" within the trauma system.</p> <p>2. Dramatic saves and functional outcome returns are documented at each facility or within various components of the system.</p> <p>3. Cases concerning dramatic saves and return to a quality life are on file (at a system level), but not reported unless asked for by the press.</p> <p>4. Dramatic saves and functional outcome returns are provided to, and reported by, the press.</p> <p>5. Cases are used as part of information fact sheets that are distributed to the press and other segments of the community. These information fact sheets document the cost-benefit of the trauma system to the community.</p>

Essential Service: System Management		
Indicator		Scoring
105.3 An assessment of the needs of the media concerning trauma system information has been conducted.	1	<p>1. There is no routine or planned contact with the media.</p> <p>2. Plans are in place to feed information to the media in response to a particular traumatic event.</p> <p>3. The media have been formally asked about what types of information would be helpful in reporting on trauma cases and issues.</p> <p>4. Information resources for the media have been developed, based on the stated needs of the media; media representatives are included in trauma system informational events.</p> <p>5. In addition to routine media contact, the media are involved in various oversight activities such as local, regional, and State trauma advisory councils.</p>

Essential Service: System Management		
Indicator		Scoring
105.4 An assessment of the needs of public officials concerning trauma system information has been conducted.	1	<p>1. There is no routine or planned contact with public officials.</p> <p>2. Plans are in place to provide information to public officials in response to a particular traumatic event.</p> <p>3. Public officials and policy makers have been formally asked what types of information would be helpful in planning, monitoring, and reporting on trauma system issues.</p> <p>4. Information resources for public officials have been developed, based on the stated needs of the public officials; public officials are included in trauma system informational events.</p> <p>5. In addition to routine contact, public officials are involved in various oversight activities such as local, regional, and State trauma advisory councils.</p>

Essential Service: System Management		
Indicator		Scoring
105.5 An assessment of the needs of the general public concerning trauma system information has been conducted.	1	<p>1. There is no routine or planned contact with the general public. 2. Plans are in place to provide information to the general public in response to a particular traumatic event.</p> <p>3. The general public has been formally asked about what types of information would be helpful in understanding and supporting trauma system issues.</p> <p>4. Information resources for the general public have been developed, based on the stated needs of the general public; general public representatives are included in trauma system informational events.</p> <p>5. In addition to routine contact, the general public is involved in various</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

		oversight activities such as local, regional, and State trauma advisory councils.
--	--	---

Essential Service: System Management

Indicator		Scoring
105.6 An assessment of the needs of health insurers concerning trauma system information has been conducted.	1	1. There is no routine or planned contact with health insurers. 2. Plans are in place to provide information to health insurers during a response to a particular payment, reimbursement, and cost issue. 3. Health insurers have been formally asked about what types of information would be helpful in reporting on trauma cases and issues. 4. Information resources for health insurers have been developed, based on the stated needs of the insurers; insurance representatives are included in trauma system informational events. 5. In addition to routine contact, health insurers are involved in various oversight activities such as local, regional, and State trauma advisory councils.

Essential Service: System Management

Indicator		Scoring
105.7 An assessment of the needs of the general medical community, including physicians, nurses, prehospital care providers, and others, concerning trauma system information, has been conducted.	1	1. There is no routine or planned contact with the broad medical community. 2. Plans are in place to provide information to the broad medical community in response to a particular trauma system event or issue. 3. The broad medical community has been formally asked about what types of information would be helpful in reporting on trauma cases and issues. 4. Information resources for the general medical community have been developed, based on the stated needs of the general medical community; general medical community representatives are included in trauma system informational events. 5. In addition to routine contact, the broad medical community is involved in various oversight activities such as local, regional, and State trauma advisory councils.

200. POLICY DEVELOPMENT: Promoting the use of scientific knowledge in decision making that includes building constituencies; identifying needs and setting priorities; legislative authority and funding to develop plans and policies to address needs; and ensuring the public's health and safety.

Benchmark		
201. Comprehensive State statutory authority and administrative rules support trauma system leaders and maintain trauma system infrastructure, planning, oversight, and future development.		
Essential Service: Develop Policies		
Indicator		Scoring
201.1 The legislative authority (statute and regulations) plans, develops, implements, manages, and evaluates the trauma system and its component parts, including the identification of the lead agency and the designation of trauma facilities.	1	1. There is no specific legislative authority to plan, develop, implement, manage, and evaluate, or fund, the trauma system and its component parts. 2. There is legislative authority for establishing a trauma system, and specific timelines for adoption are being drafted and reviewed by trauma and injury constituencies. 3. The lead agency is identified in State statute and is required to plan and develop a statewide trauma system. 4. The lead agency is authorized to take actions to implement the trauma system and to report on the progress and effectiveness of system implementation. 5. The lead agency is required to plan, develop, implement, manage, monitor, and improve the trauma system while reporting regularly on the status of the trauma system within the State.
Essential Service: Develop Policies		
Indicator		Scoring

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

201.2 The legislative authority states that all the trauma system components, EMS, injury control, incident management, and planning documents, work together for the effective implementation of the trauma system (infrastructure is in place).	2	<p>1. There is no legislative authority or integrated management, and system participants do not routinely work together.</p> <p>2. There is no legislative authority; planning documents reflect a silo management structure in that participating agencies are not linked. For key issues, stakeholders sometimes come together to resolve problems.</p> <p>3. There is no legislative authority, but people are working together to improve system effectiveness and management within their individual jurisdictions.</p> <p>4. There is legislative authority, although it is not clearly evident that system components are integrated and working together.</p> <p>5. There is legislative authority; it clearly provides for the integration of trauma system components for an effective management and infrastructure to plan and implement the trauma system, as evidenced by agency involvement and interaction.</p>
---	---	---

Essential Service: Develop Policies

Indicator	Scoring
201.3 Administrative rules/regulations direct the development of operational policies and procedures at the State, regional, and local levels.	<p style="text-align: center;">1</p> <p>1. There is no legal authority to adopt administrative rules/ regulations regarding the development of a trauma system at the State, regional, or local level.</p> <p>2. There is legal authority, but there are no administrative rules/ regulations governing trauma system development, including components of the trauma system such as designation of trauma facilities, adoption of triage guidelines, integration of prehospital providers and rehabilitation centers, communication protocols, and integration with public health and all-hazards preparedness plans.</p> <p>3. There are draft State, regional, or local rules/regulations for the different components of trauma system development including integration with public health and all-hazards preparedness plans.</p> <p>4. There are existing statewide administrative rules/regulations for planning, developing, and implementing the trauma system and its components at the State, regional, and local levels.</p> <p>5. The lead agency regularly reviews, through established committees and stakeholders, the rules/regulations governing system performance, including policies and procedures for system operations at the State, regional, and local levels that include integration with public health and all-hazards preparedness plans.</p>

Essential Service: Develop Policies

Indicator	Scoring
201.4 The lead agency has adopted clearly defined trauma system standards (e.g., facility standards, triage and transfer guidelines, and data collection standards) and has sufficient legal authority to ensure and enforce compliance.	<p style="text-align: center;">1</p> <p>1. The lead agency does not have sufficient legal authority and has not adopted or defined trauma system performance and operating standards, nor is there sufficient legal authority to do so.</p> <p>2. Sufficient authority exists to define and adopt standards for trauma system performance and operations, but the lead agency has not yet completed this process.</p> <p>3. There is sufficient legal authority to adopt and implement operation and performance standards including enforcement. Draft process procedures have been developed.</p> <p>4. The authority exists to fully develop all operational guidelines and standards; the stakeholders are reviewing draft policies and procedures; and adoption by the lead agency, including implementation and enforcement, is pending.</p> <p>5. The authority exists; operational policies and procedures and trauma system performance standards are in place; and compliance is being actively monitored.</p>

Benchmark

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

202. Trauma system leaders (lead agency, trauma center personnel, and other stakeholders) use a process to establish, maintain, and constantly evaluate and improve a comprehensive trauma system in cooperation with medical, professional, governmental, and citizen organizations.

Essential Service: Mobilize Community Partnership

Indicator	Scoring
202.1 The lead agency demonstrates that it can bring organizations together to implement and maintain a comprehensive trauma system.	<p>2</p> <p>1. There is no evidence of partnerships, alliances, or organizations working together to implement and maintain a comprehensive trauma system.</p> <p>2. There have been limited attempts to organize groups, but to date no ongoing system committees meeting regularly to design or implement the trauma system.</p> <p>3. The lead agency has multiple committees meeting regularly to develop and implement a comprehensive trauma system plan.</p> <p>4. The lead agency demonstrates, through its various committees, an ability to bring together multidisciplinary groups interested in developing, implementing, and maintaining a comprehensive trauma system plan. Multiple stakeholders for various disciplines are routinely recruited to participate in system operational issues and refinement depending on expertise needed (e.g., data vs. public information and education).</p> <p>5. The lead agency has brought together multiple stakeholder groups to assist with, and make recommendations on, the development and implementation of the trauma system, preferably through a trauma-specific statewide multidisciplinary, multi-agency advisory committee.</p>

Essential Service: Mobilize Community Partnership

Indicator	Scoring
202.2 The lead agency has developed and implemented a trauma-specific statewide multidisciplinary, multi-agency advisory committee to provide overall guidance to trauma system planning and implementation strategies. The committee meets regularly and is instrumental in providing guidance to the lead agency.	<p>5</p> <p>1. There is no trauma-specific statewide multidisciplinary, multi-agency advisory committee providing guidance to the State lead agency in planning and developing a statewide trauma system.</p> <p>2. There is no trauma-specific statewide multidisciplinary, multi-agency advisory committee, and attempts to organize one have not been successful but are continuing.</p> <p>3. There is a trauma-specific statewide multidisciplinary, multi-agency advisory committee, but its meetings are infrequent and guidance is not always sought or available. Collaborative working arrangements have not been realized.</p> <p>4. There is a trauma-specific statewide multidisciplinary, multi-agency advisory committee. Committee members and stakeholders regularly attend meetings. Collaboration and consensus are beginning.</p> <p>5. There is a trauma-specific multidisciplinary, multi-agency advisory committee with well-defined goals and responsibilities. It meets regularly with the lead agency providing staff support. The committee routinely provides guidance and assistance to the lead agency on system issues. Multiple subcommittees meet as often as necessary to resolve specific system issues and to report back to the trauma-specific statewide multidisciplinary, multi-agency advisory committee. There is strong evidence of consensus building among system participants.</p>

Essential Service: Inform, Educate, Empower

Indicator	Scoring
202.3 A clearly defined and easily understood structure is in place for the trauma system decision-making process.	<p>1</p> <p>1. There is no defined decision-making process (written policy and procedure) regarding the trauma program within the trauma system lead agency or its committees.</p> <p>2. There is an unwritten decision-making process that stakeholders use when convenient, although not regularly or consistently.</p> <p>3. The decision-making process is articulated within the State Trauma System</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

		Plan, although it has not been fully implemented. Policies are not written. 4. The decision-making process is contained within the trauma system plan, and there are current policies and procedures in place to guide decision making. Use of the decision-making process is infrequent. 5. There is a clearly defined process for making decisions affecting the trauma program. The process is articulated in the trauma system plan and is further identified within system policies. Stakeholders know and understand the process and use it to resolve issues and to improve the program.
--	--	---

Essential Service: Inform, Educate, Empower

Indicator		Scoring
202.4 Trauma system leaders have adopted and use goals and time-specific, quantifiable, and measurable objectives for the trauma system.	1	<p>1. There are no goals or time-specific, quantifiable, and measurable objectives for the trauma system.</p> <p>2. Trauma system leaders have met to discuss time-specific, quantifiable goals.</p> <p>3. Trauma system leaders are beginning the process of identifying measurable program goals and outcome-based, time-specific, quantifiable, and measurable objectives.</p> <p>4. Trauma system leaders have adopted goals and time-specific, quantifiable, and measurable objectives that guide system performance.</p> <p>5. Trauma system leaders, in consultation with their trauma-specific statewide multidisciplinary, multi-agency advisory committee, have established measurable program goals and outcome-based, time-specific, quantifiable, and measurable objectives that guide system effectiveness and system performance.</p>

Benchmark

203. The State lead agency has a comprehensive written trauma system plan based on national guidelines. The plan integrates the trauma system with EMS, public health, emergency preparedness, and incident management. The written trauma system plan is developed in collaboration with community partners and stakeholders.

Essential Service: Inform, Educate, Empower

Indicator		Scoring
203.1 The lead agency, in concert with a trauma-specific multidisciplinary, multi-agency advisory committee, has adopted a trauma system plan.	2	<p>1. There is no trauma system plan, and one is not in progress.</p> <p>2. There is no trauma system plan, although some groups have begun meeting to discuss the development of a trauma system plan.</p> <p>3. A trauma system plan was developed and adopted by the lead agency. The plan, however, has not been endorsed by trauma stakeholders.</p> <p>4. A trauma system plan has been adopted, developed with multi-agency groups, and endorsed by those agencies.</p> <p>5. A comprehensive trauma system plan has been developed, adopted in conjunction with trauma stakeholders, and includes the integration of other systems (e.g., EMS, public health, and emergency preparedness).</p>

Essential Service: Inform, Educate, Empower

Indicator		Scoring
203.2 A trauma system plan exists and is based on analysis of the trauma demographics and resource assessments.	1	<p>1. There is no effort under way to develop a trauma system plan.</p> <p>2. The lead agency is developing a trauma system plan without reference to the trauma demographics and resource assessments and analyses.</p> <p>3. The lead agency is actively developing a trauma system plan based on trauma demographics and resource assessments and analyses.</p> <p>4. A trauma system plan has been developed identifying system priorities and timelines and integrating trauma demographics and resource assessments and analyses along with EMS, public health, and emergency preparedness plans.</p> <p>5. The trauma system plan is updated at least biennially based on changes in trauma demographics and resource assessments and analyses. It is reviewed for integration of other relevant plans such as EMS, emergency preparedness, and public health.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

Essential Service: Inform, Educate, Empower		
Indicator		Scoring
203.3 There is within the trauma system plan congruence of the population demographics with system development and resource allocation priorities. Note: Needs of specific populations (e.g., pediatric, burn, and Native American) are integrated into the plan. Considerations should be given to age, population characteristics, and urban and rural environments	1	<p>1. There is no evidence that population demographics drive resource allocation or that this information is used to establish system priorities in developing or implementing the trauma system plan.</p> <p>2. Population demographics and system resources have been identified. It is not clear that this information is used for system allocation, priority setting, or system planning.</p> <p>3. There is evidence that planning processes take into consideration the needs of special populations and other cultural or geographic parameters.</p> <p>4. There is evidence within the trauma system plan that consideration of the needs of differing groups, cultural, geographic, and others, has been included. Specific application of information regarding the needs of special groups is occurring at the provider level.</p> <p>5. The plan addresses the needs of all residents and visitors including special population groups applicable to the geographic area.</p>
Essential Service: Inform, Educate, Empower		
Indicator		Scoring
203.4 The trauma system plan clearly describes the system design (including the components necessary to have an integrated and inclusive trauma system) and is used to guide system implementation and management. For example, the plan includes references to regulatory standards and documents, and includes methods of data collection and analysis.	1	<p>1. There is no trauma system plan.</p> <p>2. The trauma system plan does not address or incorporate the trauma system components (prehospital, communication, transportation, acute care, rehabilitation, and others), nor is it inclusive of all-hazards preparedness, EMS, or public health integration.</p> <p>3. The trauma system plan provides general information about all the components including all-hazards preparedness, EMS, and public health integration; however, it is difficult to determine who is responsible and accountable for system performance and implementation.</p> <p>4. The trauma system plan addresses every component of a well-organized and functioning trauma system including all-hazards preparedness and public health integration. Specific information on each component is provided, and trauma system design is inclusive of providing for specific goals and objectives for system performance.</p> <p>5. The trauma system plan is used to guide system implementation and management. Stakeholders and policy leaders are familiar with the plan and its components and use the plan to monitor system progress and to measure results.</p>
Essential Service: Inform, Educate, Empower		
Indicator		Scoring
203.5 A written injury prevention and control plan is developed and coordinated with other agencies and community health programs. The injury program is data driven, and targeted programs are developed based on high injury risk areas. Specific goals with measurable objectives are incorporated into the injury plan.	2	<p>1. There is no written plan for a coordinated injury prevention and control program.</p> <p>2. There are multiple injury prevention and control programs that may conflict with one another or with the goals of the trauma system, or both.</p> <p>3. There is a written plan for a coordinated injury prevention and control program that is linked to the trauma system plan and that has goals and time-specific, measurable objectives.</p> <p>4. The injury prevention and control plan is being implemented in accordance with established timelines.</p> <p>5. The injury prevention and control plan is being implemented in accordance with established timelines; data concerning the effectiveness of the plan are being collected and are used to validate, evaluate, and modify the plan.</p>
Essential Service: Mobilize Community Partnerships		

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

Indicator	Scoring
203.6 The trauma system plan has established clearly defined methods of integrating with emergency preparedness plans (all hazards).	<p>1</p> <p>1. There is no trauma system plan and no integration between trauma and emergency preparedness.</p> <p>2. There is an established trauma system plan; but it is silent on emergency integration, and no evidence is present to demonstrate integrated incident management and trauma systems.</p> <p>3. The trauma system plan addresses the interaction of the lead agency of the trauma system and emergency preparedness service system. Close coordination and clearly defined goals and objectives are in process.</p> <p>4. The trauma system plan addresses coordination between the lead agency of the trauma system and the lead agency for emergency preparedness. Plans are integrated, and working collaboration exists and is demonstrated. Routine working drills and training exercises are incorporated into operational plans.</p> <p>5. The trauma system plan addresses the lead agency coordination between EMS and emergency preparedness. Plans are well integrated, and routine simulated incident drills that are conducted use an all-hazards approach. Results from drills and live responses are used to further improve the plans and processes.</p>

Essential Service: Mobilize Community Partnerships

Indicator	Scoring
203.7 The trauma system plan has established clearly defined methods of integrating the trauma system plan with the EMS, emergency, and public health preparedness plans.	<p>1</p> <p>1. There is no mention of integration between the trauma system plan and the EMS, emergency, and public health preparedness plans.</p> <p>2. There is some cross-reference between plans, but defined methods of working collaboratively are not developed.</p> <p>3. The written plans are integrated and there are defined methods for working collaboratively; however, implementation or practice within the geographic area has not occurred.</p> <p>4. The trauma system plan has been integrated with other relevant plans. There is evidence of system integration activity.</p> <p>5. The trauma system planning and operations have been fully integrated with the EMS, emergency, and public health preparedness plans. Training and exercises are conducted regularly, and the integration of the system and its plans is evident.</p>

Benchmark

204. Sufficient resources, including those both financial and infrastructure related, support system planning, implementation, and maintenance.

Essential Service: Develop Policies

Indicator	Scoring
204.1 The trauma system plan clearly identifies the human resources and equipment necessary to develop, implement, and manage the trauma program, both clinically and administratively. (The trauma system plan integrates with the Assessment of Resources done previously.)	<p>1</p> <p>1. There is no method of assessing available resources or of identifying resource deficiencies in either the clinical or administrative areas of the trauma system.</p> <p>2. The trauma system plan addresses resource needs and identifies gaps in resources within the trauma system, but no mechanism for correcting resource deficiencies has been identified.</p> <p>3. Resource needs are identified, and a draft plan, inclusive of goals and timelines, has been prepared to address the resource needs. Plan has not been implemented.</p> <p>4. Resource needs are clearly identified, and action plans are being implemented to correct deficiencies in both clinical areas and admin support functions.</p> <p>5. A resource assessment survey has been completed and is incorporated into the trauma system plan. Goals and measurable objectives to reduce or eliminate resource deficiencies have been implemented. Evaluation of progress on meeting resource needs is evident, and when necessary, the plan has been adapted.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

Essential Service: System Management		
Indicator		Scoring
204.2 Financial resources exist that support the planning, implementation, and ongoing management of the administrative and clinical care components of the trauma system.	1	<p>1. There is no funding to support the trauma system planning, implementation, or ongoing management and operations for either trauma system administration or trauma clinical care.</p> <p>2. Some funding for trauma care within the third-party reimbursement structure has been identified, but ongoing support for administration and clinical care outside the third-party reimbursement structure is not available.</p> <p>3. There is current funding for the development of the trauma system within the lead agency organization consistent with the trauma system plan, but costs to support clinical care support services have not been identified (transportation, communication, uncompensated care, standby fees, and others). No ongoing commitment of funding has been secured.</p> <p>4. There is funding available for both administrative and clinical components of the trauma system plan. A mechanism to assess needs among various providers has begun. Implementation costs and ongoing support costs of the lead agency have been addressed within the plan.</p> <p>5. A stable (consistent) source of reliable funding for the development, operations, and management of the trauma program (clinical care and lead agency administration) has been identified and is being used to support trauma planning, implementation, maintenance, and ongoing program enhancements.</p>

Essential Service: System Management		
Indicator		Scoring
204.3 Designated funding for trauma system infrastructure support (lead agency) is legislatively appropriated. Note: Although nomenclature concerning designated, appropriated, and general funds varies between jurisdictions, the intent of this indicator is to demonstrate long-term, stable funding for trauma system development, management, evaluation, and improvement.	4	<p>1. There is no designated funding to support the trauma system infrastructure.</p> <p>2. One-time funding has been designated for trauma system infrastructure support, and appropriations have been made to the lead agency budget.</p> <p>3. Limited funds for trauma system development have been identified, but the funds have not been appropriated for trauma system infrastructure support.</p> <p>4. Consistent, though limited, infrastructure funding has been designated and appropriated to the lead agency budget.</p> <p>5. The legislature has identified, designated, and appropriated sufficient infrastructure funding for the lead agency consistent with the trauma system plan and priorities for funding administration and operations.</p>

Essential Service: System Management		
Indicator		Scoring
204.4 Operational budgets (system administration and operations, facilities administration and operations, and EMS administration and operations) are aligned with the trauma system plan and priorities. Examples: Full-Time Equivalents (FTEs) per population to support the infrastructure; costs to improve the communication system.	1	<p>1. There are no operational budgets.</p> <p>2. There are limited operational budgets, not sufficient to cover related program costs for the lead agency, the EMS system, or the trauma center.</p> <p>3. There are operational budgets that may be sufficient to cover most program costs, but they are without regard to the trauma system plan or priorities.</p> <p>4. There are operational budgets that have some ties to the trauma system plan and that include consideration for the extraordinary costs to the trauma system (e.g., providers).</p> <p>5. An operational budget exists for each component in the plan and matches system needs and priorities with program and operational expenditures.</p>

Essential Service: Mobilize Community Partnerships		
Indicator		Scoring
204.5 The trauma system plan includes identification of additional resources (both manpower and equipment) necessary to	1	<p>1. The trauma system plan does not include the identification of additional resources necessary to respond to mass casualty incidents.</p> <p>2. The trauma system plan addresses mass casualty incidents but has not</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

respond to mass casualty incidents.		<p>identified additional resources.</p> <p>3. The trauma system plan identifies resources, but it is unclear how the needs are going to be met.</p> <p>4. The trauma system plan identifies both equipment and manpower resources available currently and additional resources needed; it also defines a process for securing and ensuring that equipment and human resources are available.</p> <p>5. There is a well-drafted and rehearsed trauma system plan, along with sufficient caches of equipment and backup personnel, that ensures the rapid deployment of additional resources during mass casualty incidents.</p>
-------------------------------------	--	--

Benchmark

205. Collected data are used to evaluate system performance and to develop public policy.

Essential Service: System Management

Indicator		Scoring
205.1 Collected data are used for strategic and budgetary planning.	3	<p>1. There is no central data repository that can be accessed for strategic or budgetary planning.</p> <p>2. There are varying databases that can be accessed but no single reporting structure to produce reports and to analyze findings.</p> <p>3. Data are collected and stored in a central repository; however, reports are not routinely generated that could be used for strategic or budgetary planning.</p> <p>4. There is a central warehouse for trauma and system financial data that are used for annual reporting of system performance.</p> <p>5. There is a central repository and data warehouse for all trauma system data. System participants including trauma centers and the lead agency can access the data. Regular (written, on-line, or electronic) reports are generated to identify financial information and budget utilization. Regular reports are used for strategic planning and performance efficiency.</p>

Essential Service: Develop Policies

Indicator		Scoring
<p>205.2 Collected data from a variety of sources are used to review the appropriateness of trauma system policies and procedures.</p> <p>Note: The format of the reports in this and other sections may be written, Web-based, or other electronic media.</p>	1	<p>1. There are no written, quantifiable trauma system performance standards or performance improvement mechanisms.</p> <p>2. There are draft written, quantifiable system performance standards or performance improvement mechanisms for each component of the trauma system.</p> <p>3. There are written, quantifiable system performance standards and performance improvement mechanisms that have been adopted by the lead agency in consultation with the trauma-specific statewide multidisciplinary, multi-agency advisory committee.</p> <p>4. Data from trauma, EMS, public safety, and other sources are routinely used by the lead agency to assess the extent of compliance of the trauma system with adopted standards.</p> <p>5. The lead agency, in cooperation with the trauma-specific statewide multidisciplinary, multi-agency advisory committee, uses compliance data from trauma, EMS, public safety, and other sources to improve system design changes or to make other system refinements. There is routine and consistent feedback to all system providers to ensure that data-identified deficiencies are corrected.</p>

Essential Service: System Management

Indicator		Scoring
205.3 The trauma management information system (MIS) is used to assess system performance, to measure system compliance with applicable standards, and to allocate trauma system resources to	2	<p>1. There is no trauma management information system.</p> <p>2. There is a limited trauma management information system consisting of a trauma patient registry, but no data extraction is used to identify resource needs, to establish performance standards, or to routinely assess and evaluate system effectiveness.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

areas of need or to acquire new resources.		<p>3. There is a trauma management information system that routinely reports (written, on-line, or electronic) on system-wide management performance and compliance. Linkage between management reports, resource utilization, and performance measures has begun.</p> <p>4. Routine trauma MIS reports are issued at the State, regional, and local levels as well as at the provider level. Reports focus on management strengths, compliance with standards, and resource utilization. Trends are used to improve system efficiency and performance.</p> <p>5. Trauma MIS reports are used extensively to improve and report on system performance. The lead agency issues regular and routine reports to providers. Trauma leaders assess reports to determine system deficiencies and to allocate resources to areas of greatest need. System performance and standard compliance are assessed and reported.</p>
--	--	---

Essential Service: Inform, Educate, Empower

Indicator		Scoring
205.4 Injury prevention programs use trauma MIS data to develop intervention strategies.	2	<p>1. There is no evidence to suggest that trauma MIS data are used to determine injury prevention strategies.</p> <p>2. There is some evidence that trauma MIS data are available for injury prevention program strategies, but the use of these data is limited and sporadic.</p> <p>3. Trauma MIS reports are routinely provided to the injury prevention programs. The usefulness of the reports has not been measured, and injury prevention providers are just beginning to use trauma injury reports for program strategies and decision making.</p> <p>4. Trauma MIS reports on the status of injury, and injury mechanisms, are routinely available to injury prevention providers and are used routinely to realign injury programs to target the greatest need.</p> <p>5. A well-integrated trauma and injury reporting system exists. Evidence is available to demonstrate how system providers routinely use MIS data to identify program needs, to develop strategies on program priorities, and to set annual goals for injury prevention.</p>

Essential Service: Inform, Educate, Empower

Indicator		Scoring
205.5 Education for trauma system participants is developed based on a review and evaluation of trauma MIS data.	1	<p>1. There is no correlation between training programs for providers and the trauma management information system.</p> <p>2. There is limited use of trauma MIS reports to target educational opportunities.</p> <p>3. There is evidence that some providers are using trauma MIS reports to identify educational needs and to incorporate them into training programs.</p> <p>4. Many educational forums have been conducted based on an analysis of the performance data in the trauma management information system. Clear ties link education of providers with identified areas of need from trauma MIS reports.</p> <p>5. Routine analysis of trauma information and educational opportunities is being conducted. Integrated program objectives tying system performance and education are implemented and routinely evaluated. Regular updates to trauma information and education are available. Trauma MIS data are used to measure outcomes and effectiveness.</p>

Benchmark

206. Trauma system leaders, including a trauma-specific statewide multidisciplinary, multi-agency advisory committee, regularly review system performance reports.

Essential Service: Inform, Educate, Empower

Indicator		Scoring
206.1 Trauma data reports are generated		1. No trauma data reports are generated to evaluate and improve system

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

by the trauma system no less than once per year and are disseminated to trauma system leaders and stakeholders to evaluate and improve system performance effectiveness.	2	<p>performance effectiveness.</p> <p>2. Some general trauma system information is available for the stakeholders, but it is not consistent or regular.</p> <p>3. Trauma data reports are done on an annual basis, but are not used for decision making and evaluating system effectiveness.</p> <p>4. Routine reports are generated using trauma system data and other databases so that the system can be analyzed, standards evaluated, and performance measured.</p> <p>5. Regularly scheduled reports are generated from trauma system data and are used by the stakeholder groups to evaluate and improve system performance effectiveness.</p>
--	---	---

Essential Service: Inform, Educate, Empower

Indicator		Scoring
206.2 The trauma-specific statewide multidisciplinary, multi-agency advisory committee regularly reviews annotated trauma system data reports and system compliance information to monitor trauma system performance and to determine the need for system modifications.	3	<p>1. There is no trauma-specific statewide multidisciplinary, multi-agency advisory committee, and there are no regular reports of system performance.</p> <p>2. There is a trauma-specific statewide multidisciplinary, multi-agency advisory committee, but it does not routinely review trauma system data reports.</p> <p>3. The trauma-specific statewide multidisciplinary, multi-agency committee meets regularly and reviews process-type reports; no critical assessment of system performance has been completed.</p> <p>4. The trauma-specific statewide multidisciplinary, multi-agency advisory committee meets regularly and routinely assesses reports from trauma data to determine system compliance and operational issues needing attention.</p> <p>5. The trauma-specific statewide multidisciplinary, multi-agency advisory committee and related stakeholder groups meet regularly and review trauma data reports to assess system performance over time, looking for ways to improve system effectiveness and patient outcomes.</p>

Benchmark

207. The lead agency informs and educates State, regional, and local constituencies and policy makers to foster collaboration and cooperation for system enhancement and injury control.

Essential Service: Mobilize Community Partnerships

Indicator		Scoring
207.1 The lead agency ensures communications, collaboration, and cooperation between State, regional, and local systems.	2	<p>1. There is no evidence of active dialogue, either written or verbal, to suggest a strong working relationship between the trauma system lead agency and other governmental agencies (State, regional, or local).</p> <p>2. There is little evidence that the lead agency and other governmental agencies working to implement a trauma system actively engage in system planning and operational dialogue.</p> <p>3. The lead agency issues a quarterly update on trauma system activities. The update is largely one-way communication to other governmental agencies. Routine communication usually revolves around an event (reactionary); proactive, open communication is not the norm.</p> <p>4. The lead agency, through its multidisciplinary committee, engages in open, frequent communication with its constituencies. Newsletters, activity reports, and proactive planning are occurring through the lead agency. Communication and collaboration among governmental organizations is occurring, although they are largely event based.</p> <p>5. State, regional, and local systems engage in mutual and cooperative plan development and implementation. The lead agency seeks input and dialogue with a multitude of stakeholders. The communication is open, frequent, and proactive. Frequent dialogue occurs between the lead agency and local, regional, or State trauma system participants and leaders. There is evidence of mutual respect and sharing of information among the multidisciplinary groups.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

Essential Service: Inform, Educate, Empower		
Indicator		Scoring
207.2 The trauma system leaders (lead agency, advisory committees, and others) informs and educates constituencies and policy makers through community development activities, targeted media messaging, and active collaborations aimed at injury prevention and trauma system development.	2	<p>1. No targeted messaging or media campaigns have begun to educate and inform community and State leaders or policy makers about either injury prevention needs or trauma system development activities.</p> <p>2. Limited interfaces with policy makers and the media, aimed at both injury prevention and trauma system development, have occurred. Community development activities have been limited to incident-specific response opportunities.</p> <p>3. Community activities have begun with the development of an injury prevention campaign, and there have been initial discussions with policy makers regarding trauma system development.</p> <p>4. Trauma system leaders are engaging policy makers in discussions about injury prevention and the trauma system. Media awareness and media messaging have been targeted at injury prevention activities with limited trauma system integration.</p> <p>5. A well-orchestrated and continuing trauma media campaign is under way. Key policy makers at the State, regional, and local levels are keenly aware of the benefits of a trauma system and of the importance of injury prevention programs.</p>

Essential Service: Mobilize Community Partnerships		
Indicator		Scoring
207.3 Trauma system leaders (lead agency; trauma-specific statewide multidisciplinary, multi-agency advisory committees; and others) mobilize community partners in identifying the injury problem throughout the State and in building coalitions of personnel to design systems that can reduce the burden of injury.	3	<p>1. No State lead agency exists to establish, maintain, or mobilize community partners in identifying the injury problem or in building community coalitions.</p> <p>2. A State lead agency to review and report on the injury problem statewide exists, but there is limited involvement with community coalitions or trauma system partners.</p> <p>3. A State lead agency for injury prevention has been established, and a statewide injury coalition has been meeting regularly and reporting on the status of injury in the State. Interface between the injury coalition and the trauma-specific statewide multidisciplinary, multi-agency advisory committee or trauma system leaders (government, acute care, or rehabilitation) has been limited.</p> <p>4. Trauma system leaders (lead agency; trauma-specific statewide multidisciplinary, multi-agency advisory committees; and others) for injury prevention have a proven track record for identifying the injury problem and for targeting messages and programs to reduce the impact of injury in the State. The injury prevention lead agency (if not the trauma system lead agency) interfaces with the trauma-specific statewide multidisciplinary, multi-agency advisory committee. Trauma system and injury prevention leaders have begun to identify strategies and are working collaboratively. Key policy makers are well informed about the burden of injury in the State.</p> <p>5. Trauma system and injury prevention leaders regularly inform and educate policy makers on trauma system development and injury prevention. Injury coalitions and trauma-specific statewide multidisciplinary, multi-agency advisory committees are integrated and work collaboratively to inform the community and to educate community leaders.</p>

Essential Service: Inform, Educate, Empower		
Indicator		Scoring
207.4 A trauma system public information and education plan exists that heightens public awareness of trauma as a disease, the need for a trauma care system, and the	1	<p>1. There is no written public information and education plan on trauma system or injury prevention and control.</p> <p>2. There is a trauma system public information and education plan, but linkages between programs and implementation of specific objectives have waned.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

prevention of injury.	<p>3. There is a trauma system, and injury prevention plans have a linked public information and education component that has specific timetables and measurable goals and objectives.</p> <p>4. The trauma system public information and education plan are being implemented in accordance with the timelines established and agreed on by the stakeholders and coalitions.</p> <p>5. The trauma system public information and education plan are being implemented in accordance with the timelines. Data concerning the effectiveness of the strategies are used to modify the plan and programs.</p>
-----------------------	---

Benchmark

208. The trauma, public health, and emergency preparedness systems are closely linked.

Essential Service: Mobilize Community Partnerships

Indicator	Scoring
208.1 The trauma system and the public health system have established linkages including programs with an emphasis on population-based public health surveillance, and evaluation, for acute and chronic traumatic injury and injury prevention.	<p>2</p> <p>1. There is no evidence that demonstrates program linkages, a working relationship, or the sharing of data between public health and the trauma system. Population-based public health surveillance, and evaluation, for acute or chronic traumatic injury and injury prevention has not been integrated with the trauma system.</p> <p>2. There is little population-based public health surveillance shared with the trauma system, and program linkages are rare. Routine public health status reports are available for review by the trauma system lead agency and constituents.</p> <p>3. The trauma system and the public health system have begun sharing public health surveillance data for acute and chronic traumatic injury. Program linkages are in the discussion stage.</p> <p>4. The trauma system has begun to link with the public health system, and the process of sharing public health surveillance data is evolving. Routine dialogue is occurring between programs.</p> <p>5. The trauma system and the public health system are integrated. Routine reporting, program participation, and system plans are fully vested. Operational integration is routine, and measurable progress can be demonstrated. (Demonstrated integration and linkage could include such activities as rapid response to and notification of incidents, integrated data systems, communication cross-operability, and regular epidemiology report generation.)</p>

Essential Service: Mobilize Community Partnerships

Indicator	Scoring
208.2 The incident management and trauma systems have formal established linkages for system integration and operational management.	<p>1</p> <p>1. There are no formal established linkages for system integration or operational management between the incident management and trauma systems.</p> <p>2. There are limited linkages or interfaces between the incident management and trauma systems specific to mass casualties.</p> <p>3. Plans are in place for both incident management and trauma system linkage. Integration is beginning, and cooperation within the multidisciplinary groups is occurring. Draft policies are being reviewed, and operational management strategies are being aligned.</p> <p>4. There is evidence of program linkages between the incident management and trauma systems. Operational management guidelines exist and are routinely evaluated and tested.</p> <p>5. Strong program linkages and interfaces are present. The incident management and trauma systems are well integrated, and operational procedures have been implemented, tested, and evaluated. System participants meet regularly and are familiar with the operational plans of both areas. Data from the trauma system and from the incident management system are shared.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

300. ASSURANCE: *Assurance to constituents that services necessary to achieve agreed-on goals are provided by encouraging actions of others (public or private), requiring action through regulation, or providing services directly.*

Benchmark

301. The trauma management information system (MIS) is used to facilitate ongoing assessment and assurance of system performance and outcomes and provides a basis for continuously improving the trauma system including a cost-benefit analysis.

Essential Service: Evaluation

Indicator	Scoring
301.1 The lead trauma authority ensures that each member hospital of the trauma system collects and uses patient data as well as provider data to assess system performance and to improve quality of care. Assessment data are routinely submitted to the lead trauma authority.	<p>3</p> <p>1. There is no system-wide management information data collection system that the trauma centers and other community hospitals regularly contribute to or use to evaluate the system.</p> <p>2. There is a trauma registry system in place in the trauma centers, but it is used by neither all facilities within the system nor the lead trauma authority to assess system performance.</p> <p>3. The trauma management information system contains information from all facilities within a geographic area.</p> <p>4. The trauma management information system is used by the trauma centers to assess provider and system performance issues.</p> <p>5. Hospital trauma registry data are routinely submitted to the lead trauma authority, are aggregated, and are used to evaluate overall system performance.</p>

Essential Service: Evaluation

Indicator Scoring	
301.2 Prehospital care providers collect patient care and administrative data for each episode of care and provide these data not only to the hospital, but have a mechanism to evaluate the data within their own agency including monitoring trends and identifying outliers.	<p>2</p> <p>1. There is no jurisdiction-wide prehospital data collection.</p> <p>2. Prehospital care providers have a patient care record for each episode of care, but it is not yet automated or integrated with the trauma management information system.</p> <p>3. The prehospital patient care record electronically captures patient care provided by field personnel and can be transferred or entered into the trauma registry system within individual trauma centers.</p> <p>4. The prehospital patient data system is integrated into the trauma management information system and is used by prehospital and hospital personnel to review and evaluate prehospital and system performance.</p> <p>5. Individual prehospital agency data are electronically submitted to the lead trauma authority, are aggregated with other prehospital agency data, and are used to evaluate overall trauma system performance.</p>

Essential Service: Evaluation

Indicator	Scoring
301.3 Trauma registry, emergency department (ED), prehospital, rehabilitation, and other databases are linked or combined to create a trauma system registry.	<p>3</p> <p>1. Some trauma registry and prehospital patient records are manually entered into a database when needed to answer system questions. There is no rehabilitation registry.</p> <p>2. There are databases for trauma, emergency departments, prehospital, and rehabilitation as well as statewide injury databases. None of the databases are routinely linked.</p> <p>3. There are electronic trauma registry and prehospital patient record databases. Both databases are linked, but the system does not use these data for routine review of system performance. Some rehabilitation data are collected separately from the trauma registry.</p> <p>4. There is an integrated management information system that includes, at a minimum, hospital and prehospital databases. The information is linked, and providers use the databases for system evaluation. Rehabilitation centers routinely provide electronic data to the trauma registry system.</p> <p>5. There is an integrated management information system that includes, at a minimum, trauma, ED, prehospital, 9-1-1 dispatch, and rehabilitation databases</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

		that are regularly used by the lead trauma authority and system provider agencies to monitor trauma system performance.
Essential Service: Evaluation		
Indicator		Scoring
301.4 The lead agency has available for use the latest in computer/technology advances and analytical tools for monitoring injury prevention and control components of the trauma system. There is reporting on the outcome of implemented strategies for injury prevention and control programs within the trauma system.	1	<p>1. No computer/technology systems or analytical tools are available to the lead agency or other stakeholders to facilitate the monitoring of, or reporting on, the outcome of the implemented strategies for injury prevention and control within the trauma system.</p> <p>2. There are integrated computer/technology systems, but the development and use of those systems for analytical monitoring and reporting has not yet begun.</p> <p>3. The lead agency is using the computer/technology systems and analytical tools available to assist in monitoring the injury prevention and control programs of the trauma system. The evaluation of injury prevention and control programs is in its formative stages.</p> <p>4. The lead agency has integrated the use of new computer/ technology systems and analytical tools in the monitoring of injury prevention and control programs within the trauma system.</p> <p>5. The trauma system participants, under the leadership of the trauma lead agency, have been trained in the use of the computer/technology systems and analytical tools. These tools are used routinely to monitor and report on the outcome of implemented strategies and on the effectiveness of injury prevention and control programs within the trauma system. A process is in place to facilitate the access to data for evaluation and research.</p>
Benchmark		
302. The trauma system is supported by an EMS system that includes communications, medical oversight, prehospital triage, and transportation; the trauma system, EMS system, and public health agency are well integrated.		
Essential Service: Link To Provide Care		
Indicator		Scoring
302.1 There is well-defined trauma system medical oversight integrating the specialty needs of the trauma system with the medical oversight for the overall EMS system. Note: The EMS system medical director and the trauma medical director may, in fact, be the same person.	2	<p>1. There is no medical oversight for EMS providers within the trauma system.</p> <p>2. EMS medical oversight for all levels of prehospital providers caring for the trauma patient is provided, but such oversight is provided outside of the purview of the trauma system.</p> <p>3. The EMS and trauma medical directors have integrated prehospital medical oversight for prehospital personnel caring for trauma patients.</p> <p>4. Medical oversight is routinely given to EMS providers caring for trauma patients. The trauma system has integrated medical oversight for prehospital providers and routinely evaluates the effectiveness of both on-line and off-line medical oversight.</p> <p>5. The EMS and trauma system fully integrate the most up-to-date medical oversight and regularly evaluate program effectiveness. System providers are included in the development of medical oversight policies.</p>
Essential Service: Link To Provide Care		
Indicator		Scoring
302.2 There is a clearly defined, cooperative, and ongoing relationship between the trauma specialty physician leaders (e.g., trauma medical director within each trauma center) and the EMS system medical director.	3	<p>1. The trauma specialty physician leaders and the EMS system medical director provide conflicting medical oversight to emergency care providers.</p> <p>2. There is no formally established, ongoing relationship between the trauma medical director (within each trauma center) and the EMS system medical director; there is no evidence of informal efforts to cooperate and communicate.</p> <p>3. There is no formally established, ongoing relationship between the trauma medical director (within each trauma center) and the EMS system medical director; however, the trauma medical director and the EMS system medical</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

	<p>director meet or visit informally to resolve problems, "to plan strategies," and to coordinate efforts.</p> <p>4. There is a formal, written procedure delineating the responsibilities of the trauma medical director (within each trauma center) and the EMS system medical director and specifying the formal method by which they work together. However, there is no evidence that the system is regularly used.</p> <p>5. There is a formal, written procedure delineating the responsibilities of the trauma medical director (within each trauma center) and the EMS system medical director and specifying the formal method by which they work together. There is written documentation including, for instance, meeting minutes indicating this relationship is regularly used to coordinate efforts.</p>
--	--

Essential Service: Link To Provide Care

Indicator	Scoring
302.3 There is clear-cut legal authority and responsibility for the EMS system medical director including the authority to adopt protocols, to implement a performance improvement system, to restrict the practice of prehospital care providers, and to generally ensure medical appropriateness of the EMS system.	<p>1. There is no EMS system medical director.</p> <p>2. There is an EMS system medical director with a written job description; however, the individual has no specific legal authority or time allocated for those tasks.</p> <p>3. There is an EMS system medical director with a written job description, but with no specific legal authority. The system medical director has adopted protocols, has implemented a performance improvement program, and is generally taking steps to improve the medical appropriateness of the EMS system.</p> <p>2</p> <p>4. There is an EMS system medical director with a written job description and whose specific legal authorities and responsibilities are formally granted by law or by administrative rule.</p> <p>5. There is an EMS system medical director with a written job description and whose specific legal authorities and responsibilities are formally granted by law or by administrative rule. There is written evidence that the system medical director has, consistent with the formal authority, adopted protocols, implemented a performance improvement program, is restricting the practice of prehospital care providers, and is making significant efforts to improve the medical appropriateness of the EMS system and to fully integrate EMS into the trauma care system.</p>

Essential Service: Ensure Competent Workforce

Indicator	Scoring
302.4 The trauma system medical director is actively involved with the development, implementation, and ongoing evaluation of system dispatch protocols to ensure they are congruent with the trauma system design. These protocols include, but are not limited to, which resources to dispatch, for example, Advanced Life Support (ALS) versus Basic Life Support (BLS), air-ground coordination, early notification of the trauma care facility, pre-arrival instructions, and other procedures necessary to ensure resources dispatched are consistent with the needs of injured patients. Note: The trauma system medical director and the EMS system medical director may be the same person. However, specific	<p>1</p> <p>1. There are no trauma system dispatch protocols.</p> <p>2. Trauma system dispatch protocols have been adopted, but without regard to the design of the trauma system.</p> <p>3. Trauma system dispatch protocols have been adopted and are not in conflict with the trauma system design, but there has been no effort to coordinate the use of protocols with the lead agency or trauma center.</p> <p>4. Trauma system dispatch protocols have been developed in close coordination with the trauma system medical director and are congruent with the trauma system design.</p> <p>5. Trauma dispatch protocols have been developed in close coordination with the trauma system medical director and are congruent with the trauma system design. There are established procedures to involve the dispatchers and their supervisors in trauma system performance improvement and a "feedback loop" to change protocols or to update dispatcher education when appropriate.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

responsibility for, and oversight of, the trauma system must be ensured.		
--	--	--

Essential Service: Evaluation

Indicator		Scoring
302.5 The retrospective medical oversight of the EMS system for trauma triage, communications, treatment, and transport is closely coordinated with the established performance improvement processes of the trauma system.	1	<p>1. There is no retrospective medical oversight procedure for trauma triage, communications, treatment, and transport.</p> <p>2. There is a retrospective medical oversight procedure for trauma triage, communications, treatment, and transport by both the trauma system and the EMS system, but the two processes are in conflict with each other or use different review criteria.</p> <p>3. There is a retrospective medical oversight procedure for trauma triage, communications, treatment, and transport by the performance improvement processes of the trauma system or by the EMS system; however, this procedure is not coordinated.</p> <p>4. By the performance improvement processes of the trauma system, there is retrospective medical oversight for trauma triage, communications, treatment, and transport that is coordinated with the EMS system retrospective medical direction, or by performance improvement processes of the EMS system that are coordinated by the trauma system.</p> <p>5. There is retrospective medical oversight of the trauma triage, communications, treatment, and transport that is coordinated with the EMS system retrospective medical direction. There is evidence this procedure is being regularly used to monitor system performance and to make system improvements.</p>

Essential Service: Link To Provide Care

Indicator		Scoring
302.6 There are mandatory system-wide prehospital triage criteria to ensure that trauma patients are transported to an appropriate facility based on their injuries. These triage criteria are regularly evaluated and updated to ensure acceptable and system-defined rates of sensitivity and specificity for appropriately identifying the major trauma patient.	3	<p>1. There are no mandatory universal triage criteria to ensure trauma patients are transported to the most appropriate hospital.</p> <p>2. There are differing triage criteria guidelines used by different providers.</p> <p>3. Appropriateness of triage criteria and subsequent transportation are not evaluated for sensitivity or specificity.</p> <p>3. Universal triage criteria are in the process of being linked to the management information system for future evaluation.</p> <p>4. The triage criteria are used by all prehospital providers. There is system-wide evaluation of the effectiveness of the triage tools in identifying trauma patients and in ensuring that they are transported to the appropriate facility.</p> <p>5. System participants routinely evaluate the triage criteria for effectiveness. There is linkage with the trauma system, and sensitivity and specificity (over- and under-triage rates) of the tools used are regularly reported through the trauma lead authority. Updates to the triage criteria are made as necessary to improve system performance.</p>

Essential Service: Link To Provide Care

Indicator		Scoring
302.7 There is a universal access number for citizens to access the EMS/trauma system, with dispatch of appropriate medical resources. There is a central communication system for the EMS/trauma system to ensure field-to--facility bidirectional communications, interfacility dialogue, and all-hazards response communications among all	1	<p>1. There is no universal access number (9-1-1) for easy citizen access to the EMS/trauma system and no coordinated communication system for triage, treatment, and transport of trauma patients for either single or multiple patient encounters.</p> <p>2. There is a universal access number (9-1-1) for quick citizen access to care. However, there is no coordinated communication system within a jurisdiction to allow for communications to occur among system participants either routinely or during all-hazards events.</p> <p>3. There are a universal access number (9-1-1) and a central communication</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

<p>system participants. Note: In some systems with limited resources, for example, rural, the available resources are, at least initially, the “appropriate resources.”</p>	<p>system for quick citizen access to care. A communication plan for the trauma system has been completed.</p> <p>4. The universal access number (9-1-1) and central communication system are integrated and communications regularly occur among dispatch, field providers, hospitals, and other system providers. The communication plan is implemented. Evaluation of the effectiveness of the communication system is done routinely, and corrective action is implemented as needed.</p> <p>5. A state-of-the-art electronic communication system is available within the jurisdiction. The trauma system communication plan is integrated with other system plans. The system is also available in all-hazards responses and can be used as a quick call system and as a paging network and is linked to public health and other nontraditional partners. Evaluation of the communication system interface with the trauma system occurs routinely.</p>
---	---

Essential Service: Link To Provide Care

Indicator	Scoring
<p>302.8 There are sufficient and well-coordinated transportation resources to ensure EMS providers arrive at the scene promptly and expeditiously transport the patient to the correct hospital by the correct transportation mode.</p>	<p>1</p> <p>1. There is no coordination of transportation resources within a jurisdiction. Multiple ambulances or aeromedical providers, or both, can all arrive on scene unannounced.</p> <p>2. There is a priority dispatch system in place that sends transportation resources to the scene.</p> <p>3. There is a priority dispatch system that ensures appropriate resources arrive on scene promptly and transport patients to the hospital. A plan for transporting trauma patients from the field to the hospital has been completed.</p> <p>4. There is a priority dispatch and transportation system that ensures appropriate system resources for prompt transport of trauma patients to trauma centers. A trauma transportation plan has been implemented. System issues are evaluated, and corrective plans are implemented as needed.</p> <p>5. The transportation system has a priority dispatch system; it regularly assesses its ability to get the right resources to the scene and to transport patients by using the correct mode of transportation. The transportation system is part of the overall EMS, trauma, and all-hazards response system.</p>

Essential Service: Link To Provide Care

Indicator	Scoring
<p>302.9 There is a procedure for communications among medical facilities when arranging for interfacility transfers including contingencies for radio or telephone system failure.</p>	<p>1. There are no specific communication plans or procedures to ensure communications among medical facilities when arranging for interfacility patient transfers.</p> <p>2. Interfacility communication procedures are generally included in the patient transfer protocols for each medical facility, but there is no system-wide procedure.</p> <p>3. There are uniform, system-wide procedures to facilitate communications among medical facilities when arranging for interfacility patient transfers, but there are no redundant procedures in the event of power or other communication system failures.</p> <p>2</p> <p>4. There are uniform, system-wide procedures for communications among facilities when arranging for interfacility patient transfers, and there are redundant procedures in the event of power or other communication system failures.</p> <p>5. There are uniform, system-wide procedures for communications among facilities when arranging for interfacility patient transfers. There are redundant procedures in the event of power or other communication system failures. The effectiveness of these procedures is regularly reviewed and changes made, if necessary, during the performance improvement process.</p>

Essential Service: Link To Provide Care

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

Indicator	Scoring
302.10 There are established procedures for EMS and trauma system communications in an all-hazards or major EMS incident that are effectively coordinated with the overall all-hazards response plan for the jurisdiction.	<p>1. There are no written procedures for EMS and trauma system communications in the event of an all-hazards incident.</p> <p>2. Local EMS systems have written procedures for EMS communications in the event of an all-hazards or major EMS incident. However, there is no coordination among the local jurisdictions.</p> <p>3. There are statewide or regional EMS communication procedures in the event of an all-hazards or major EMS incident. These plans do not involve other jurisdictions and are not coordinated with the overall all-hazards response plan and incident management system.</p> <p>2 4. There are statewide or regional EMS communication procedures in the event of an all-hazards or major EMS incident that are coordinated with other jurisdictions, with the overall all-hazards response plan, and with the incident management system.</p> <p>5. There are statewide or regional EMS communication procedures in the event of an all-hazards or major EMS incident that are coordinated with other jurisdictions, with the overall all-hazards response plan, and with the incident management system. There are one or more communication system redundancies. These procedures are regularly tested in simulated incident drills, and changes are made in the procedures, when necessary, based on the results of these drills.</p>

Benchmark

303. Acute care facilities are integrated into a resource-efficient, inclusive network that meets required standards and that provides optimal care for all injured patients.

Essential Service: Link To Provide Care

Indicator	Scoring
303.1 The trauma system plan has clearly defined the roles and responsibilities of all acute care facilities treating trauma and of facilities that provide care to specialty populations (e.g., burn, pediatric, spinal cord injury, and others).	<p>1. There is no trauma system plan that outlines roles and responsibilities of all acute care facilities treating trauma and of facilities that provide care to special populations.</p> <p>2. There is a trauma system plan, but it does not address the roles and responsibilities of licensed acute care and specialty care facilities.</p> <p>3. The trauma system plan addresses the roles and responsibilities of licensed acute care facilities or specialty care facilities, but not both.</p> <p>4. The trauma system plan addresses the roles and responsibilities of licensed acute care facilities and specialty care facilities.</p> <p>5. The trauma system plan clearly defines the roles and responsibilities of all acute care facilities treating trauma within the system jurisdiction. Specialty care services are addressed within the plan, and appropriate policies and procedures are implemented and tracked.</p>

Essential Service: Link To Provide Care

Indicator	Scoring
303.2 The trauma system lead agency should ensure that the number, levels, and distribution of trauma centers required to meet system demand are available.	<p>1. There is no trauma system plan to identify the number, levels, and distribution of trauma centers required to meet system demand.</p> <p>2. There is a trauma system plan, but it does not identify the number, levels, or distribution of trauma centers needed for the jurisdiction served.</p> <p>3. There is a trauma system plan that identifies the number, levels, and distribution of trauma centers needed for the jurisdiction. The plan, however, is not based on available data.</p> <p>4. There is a trauma system plan that identifies the number and levels of trauma centers needed based on actual available data. However, this plan is not used to make decisions about trauma facility designations.</p> <p>5. There is a trauma system plan that identifies the number and levels of trauma centers based on needs identified through the needs assessment process. The</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

		plan is used to make decisions about trauma center designations and should account for facility resources and their geographic distribution, population densities, injured patient volumes, and transportation resource capabilities and times. The plan is reviewed and revised periodically.
--	--	--

Essential Service: Evaluation

Indicator		Scoring
303.3 The trauma lead authority ensures that trauma facility patient outcomes and quality of care are monitored. Deficiencies are recognized and corrective action is implemented. Variations in standards of care are minimized, and improvements are made routinely.	5	<ol style="list-style-type: none"> 1. There is no requirement for trauma facilities to monitor patient outcomes and quality of care. 2. Designated trauma facilities are required to maintain a trauma registry including patient outcomes, but they are not required to regularly monitor these outcomes, or quality of care, and are required to report those findings to the lead trauma authority. 3. Designated trauma facilities are required to maintain a trauma registry and to use data from the registry in an ongoing performance improvement program to monitor and to improve the quality of care and patient outcomes. 4. Designated trauma facilities are required to maintain a trauma registry including patient outcomes, to use these data in an ongoing performance improvement program, to provide regular comparisons to local trauma system standards, and to report those findings to the lead trauma authority. 5. Designated trauma facilities are required to maintain a trauma registry including patient outcomes, to use these data in an ongoing performance improvement program. Deficiencies in meeting the local trauma system standards are recorded, and corrective action plans are instituted. Results of comparisons with State or national norms are regularly provided to the trauma agency, along with an explanation for significant variations from these norms, and a written plan to reduce these variations.

Essential Service: Link To Provide Care

Indicator		Scoring
303.4 When injured patients arrive at a medical facility that cannot provide the appropriate level of definitive care, there is an organized and regularly monitored system to ensure the patients are expeditiously transferred to the appropriate, system-defined trauma facility.	2	<ol style="list-style-type: none"> 1. There is no system to regularly review the conformity of interfacility transfers within the trauma system according to pre-established procedures. 2. There is a fragmented system, usually event based, to monitor the interfacility transfer of trauma patients. 3. The system for monitoring interfacility transfers is new, the procedures are in place, but training has yet to occur. 4. There is an organized system of monitoring interfacility transfers within the trauma system. 5. The monitoring of interfacility transfers of trauma patients has been integrated into the overall program of system performance improvement. As the system identifies issues for correction, a plan of action is implemented.

Essential Service: Link To Provide Care

Indicator		Scoring
303.5 The specific needs of unique populations, for example, English As a Second Language (EASL), socially disadvantaged, migrant/transient, remote, rural, and others, are accommodated within the existing trauma system.	2	<ol style="list-style-type: none"> 1. There has been no consideration of the specific needs of unique populations, for example, EASL in making an impact on the patient's access to care within the trauma system. 2. The lead agency and stakeholders are beginning to consider the specific needs of unique populations in implementing the trauma system. 3. The lead agency has, within the trauma system plan, identified the unique populations that may require special accommodations with the trauma system to effectively meet their needs. 4. The lead agency has, within the trauma system plan, accommodations for unique populations that allow them to effectively access trauma care. Monitoring processes are in development.

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

	5. The trauma system has accommodated the specific needs of unique populations by allowing them to effectively access trauma care. Routine monitoring, review, and reporting of these populations are incorporated into the evaluation of trauma system effectiveness.
--	--

Benchmark

304. The jurisdictional lead agency, in cooperation with other agencies and organizations, uses analytical tools to monitor the performance of population-based prevention and trauma care services.

Essential Service: Evaluation

Indicator	Scoring
304.1 The lead agency, along with partner organizations, prepares annual reports on the status of injury prevention and trauma care in State, regional, or local areas. Note: Annual reports may be distributed electronically rather than, or in addition to, printed copies.	1 1. No annual reports are available on the status of injury prevention or trauma care in State, regional, or local areas. 2. Annual reports are prepared but are not based on input from providers and other key stakeholders. 3. Annual reports are written by the lead agency with input from the trauma centers. 4. Annual reports are written by the lead agency in conjunction with the trauma centers and other stakeholders. Multiple sub-reports on the status of trauma care and injury prevention in State, regional, or local areas are distributed throughout the year. 5. There is an integrated annual reporting system that is electronically available to stakeholders. The lead agency, along with partner organizations, prepares and disseminates regular annual reports on the status of injury prevention and trauma care in State, regional, or local areas.

Essential Service: Evaluation

Indicator	Scoring
304.2 The trauma system MIS database is available for routine public health surveillance. There is concurrent access to the databases (emergency department, trauma, prehospital medical examiner, and public health epidemiology) for the purpose of routine surveillance and monitoring of health status that occurs regularly and is a shared responsibility. Note: All legal requirements for confidentiality and safeguarding of patient information must be met when sharing data between or among agencies.	2 1. There is no sharing of databases between emergency department, trauma, prehospital, medical examiner, or public health epidemiology. 2. The databases can be accessed by only the owner of the data, and sharing of information goes through a formal request process. 3. There is concurrent access to the databases (emergency department, trauma, prehospital medical examiner, and public health epidemiology) but no sharing of databases that would support public health surveillance. 4. The databases are shared among emergency department, trauma, prehospital, medical examiner, and public health epidemiology. Access issues have been resolved, and epidemiologic monitoring is beginning to routinely monitor the data for unusual events. 5. The databases of emergency departments, trauma, prehospital, medical examiner, and public health epidemiology are shared files. The epidemiology staff can review all the databases and registries for routine surveillance and unusual occurrences. Concurrent review by the respective groups is used to ensure the effectiveness of the injury prevention and trauma system.

Benchmark

305. The lead agency ensures that its trauma system plan is integrated with, and complementary to, the comprehensive mass casualty plan for both natural and man-made incidents, including an all-hazards approach to planning and operations.

Essential Service: Link To Provide Care

Indicator	Scoring
305.1 The EMS, the trauma system, and the all-hazards medical response system have operational trauma and all-hazards response plans and have established an ongoing cooperative working relationship to ensure trauma system readiness to all-	3 1. There is no system for integration between the EMS, the trauma system, and the all-hazards response system. 2. There have been some discussions between the EMS, the trauma system, and the all-hazards medical response system, but no formal plans have been developed. 3. Formal plans for the EMS, the trauma system, and the all-hazards medical

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

hazards events.	3	<p>response systems integration are in development and have started the approval process. Working relationships have formed and cooperation is evident.</p> <p>4. There are plans in place to ensure that the EMS, the trauma system, and the all-hazards medical response system are integrated and operational. All-hazards exercises and simulated incident drills have the cooperation and participation of the trauma system.</p> <p>5. The EMS, the trauma system, and all-hazards response plans are integrated and operational. Routine working relationships are present with cooperation and sharing of information to improve trauma system readiness for all-hazards responses.</p>
-----------------	---	--

Essential Service: Evaluation

Indicator	Scoring
305.2 All-hazards events routinely include situations involving natural (e.g., earthquake), unintentional (e.g., school bus crash), and intentional (e.g., terrorist explosion) trauma-producing events that test expanded response capabilities and surge capacity of the trauma systems.	<p>2</p> <p>1. All-hazards training is not a routine part of the trauma system.</p> <p>2. Training in response to all hazards is solely the responsibility of the EMS and of emergency management agencies. Trauma response has not been integrated into the system.</p> <p>3. All-hazards exercises are conducted routinely and include both trauma and EMS response capabilities.</p> <p>4. The trauma, EMS, and public health stakeholders have begun exercises in an all-hazards approach to mass casualty incidents.</p> <p>5. Exercises and training in all-hazards responses including testing of facility/clinic surge capacity are regularly conducted with trauma, EMS, and public health stakeholders. Debriefing sessions occur after each drill or event.</p>

Essential Service: Link To Provide Care

Indicator	Scoring
<p>305.3 The trauma system, through the lead agency, has access to additional equipment, materials, and personnel for large-scale traumatic events.</p> <p>Note: The lead agency will work with other appropriate national, State, regional, and local agencies to secure these additional resources.</p>	<p>2</p> <p>1. There is no surge capacity (prehospital, hospital, clinic, or coroner) built into the system for either smaller multi-patient events or mass casualty incidents.</p> <p>2. The trauma system has begun to identify additional equipment, materials, and personnel needed to respond to all-hazards events in light of new threats and emergencies.</p> <p>3. The lead agency, working with the trauma stakeholders, has in place additional equipment and materials for mass casualty incidents. A process to utilize additional personnel resources is in development. Testing of newly acquired equipment, material, and personnel resources has not yet been completed.</p> <p>4. The lead agency, in conjunction with the trauma stakeholders, has begun to test a method of deploying additional equipment, materials, and personnel during all-hazards events.</p> <p>5. The lead agency has acquired additional equipment and materials for both the prehospital and hospital response to all-hazards events. Deployment issues have been resolved. A mechanism to share personnel resources has been developed and tested in both the prehospital and hospital setting (e.g., mutual aid, precertification of practitioners, and rapid assignment of privileges). The system routinely tests its capabilities in this area.</p>

Benchmark

306. The lead agency ensures that the trauma system demonstrates prevention and medical outreach activities within its defined service area.

Essential Service: Link To Provide Care

Indicator	Scoring
306.1 The trauma system has developed mechanisms to engage the general medical	<p>1. There is no evidence that the trauma system reaches out to the general medical community at large to integrate it into trauma system improvements.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

community and other system participants in their research findings and performance improvement efforts.	2	<p>2. There is some evidence of general medical community interface with the trauma centers, but it is sporadic and not well coordinated.</p> <p>3. The trauma system can demonstrate routine interface with the general medical community regarding trauma care updates and performance improvements.</p> <p>4. The trauma system has a formal mechanism to discuss trauma care, system improvements, and research results with the general medical community within its jurisdiction.</p> <p>5. There is strong evidence of active participation between the trauma system and the general medical community. Routine discussions are held; performance updates are shared; and research results are integrated within the medical care system.</p>
---	---	---

Essential Service: Link To Provide Care

Indicator		Scoring
306.2 The trauma system is active within its jurisdiction with the evaluation of community-based activities and injury prevention and response programs.	1	<p>1. There is no active participation by the trauma system in the evaluation of community-based activities and injury prevention and response programs.</p> <p>2. There is some activity by the trauma system in the evaluation of community-based activities and injury prevention and response programs.</p> <p>3. The trauma system evaluates community-based activities and injury prevention and response programs.</p> <p>4. The trauma system is an active participant in community activities and in injury prevention and response programs, including the evaluation of program effectiveness.</p> <p>5. The trauma system has integrated community-based activities and injury prevention and response programs with similar efforts within the community. Outreach efforts are well coordinated and duplication of effort is avoided. Ongoing evaluation is routine, and data are used to make program improvements.</p>

Essential Service: Evaluation

Indicator		Scoring
306.3 The effect or impact of outreach programs (both medical community training/support and prevention activities) is evaluated as part of a system performance improvement process. Note: "Evaluation" implies both informal evaluation processes and more structured research.	1	<p>1. There is no effort by the lead agency to review the efforts of the trauma centers in either medical community training/support or prevention activities.</p> <p>2. There is no routine evaluation of medical community training/support or prevention activities accruing within the jurisdiction.</p> <p>3. Trauma centers do internal monitoring and evaluations of their efforts in medical community training/support and prevention activities.</p> <p>4. The lead agency participates with trauma centers in evaluating their efforts in medical community training/support and prevention activities. The outreach programs are regularly assessed for effectiveness.</p> <p>5. The lead agency and trauma centers routinely use the data both to implement outreach programs and to communicate trauma system outcomes and performance to the medical community through its annual report. Evaluation processes are institutionalized and used to enhance future outreach programs.</p>

Benchmark

307. To maintain its State, regional, or local designation, each hospital will continually work to improve the trauma care as measured by patient outcomes.

Essential Service: Evaluation

Indicator		Scoring
307.1 The trauma system engages in regular evaluation of all licensed acute care facilities that provide trauma care to trauma patients and designated trauma hospitals. Such evaluation involves	1	<p>1. There is no ongoing mechanism for the trauma system to assess or evaluate the quality of trauma care delivered by all licensed acute care facilities that provide trauma care to trauma patients and designated trauma hospitals.</p> <p>2. There is a mechanism for the trauma system to evaluate trauma care services in designated trauma hospitals through internal performance improvement</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

independent external reviews.		processes. 3. There is a mechanism to evaluate trauma care services across the entire trauma care system through performance improvement processes. 4. Review of trauma care quality is both internal (through routine monitoring and evaluation) and external (through independent review during redesignation or reverification of trauma centers). 5. Quality of trauma care is ensured through both internal and external methods. Internal review is regular, and participation is routine for trauma stakeholders. External independent review teams provide further assurance of quality trauma care within all licensed acute care and trauma facilities treating trauma patients.

Essential Service: Evaluation

Indicator		Scoring
307.2 The trauma system implements and regularly reviews a standardized report on patient care outcomes as measured against national norms. Note: This process may include clinical and bench research.	1	1. There is no evidence that the trauma system engages in any review of patient care outcome data to evaluate its performance against national norms. 2. There is some standardized measurement of outcomes for trauma patients within the trauma system and applied to the trauma centers. 3. Through the lead agency, trauma centers use a national standardized measurement tool to assess the quality of trauma patient care outcomes and to regularly report trends in performance improvement committee reports. 4. The trauma system has established standardized measurements of trauma patient care outcomes based on national norms and routinely uses the report to highlight improvements in trauma patient care or to identify patient care issues needing remedial action. 5. The trauma system has completed an assessment of trauma care outcomes based on national norms and implements any corrective action noted. Routine measurements of quality are carried out, and regular reporting is accomplished with improvements instituted, trends reported, and highlights acknowledged as necessary.

Benchmark

308. The lead agency ensures that adequate rehabilitation facilities have been integrated into the trauma system and that these resources are made available to all populations requiring them.

Essential Service: Link To Provide Care

Indicator		Scoring
308.1 The lead agency has incorporated, within the trauma system plan and the trauma center standards, requirements for rehabilitation services including interfacility transfer of trauma patients to rehabilitation centers.	1	1. There are no written standards or plans for the integration of rehabilitation services with the trauma system or with trauma centers. 2. The trauma system plan has incorporated the use of rehabilitation services, but the use of those facilities for trauma patients has not been fully realized. 3. The trauma system plan has incorporated requirements for rehabilitation services. The trauma centers routinely use the rehabilitation expertise although written agreements do not exist. 4. The trauma system plan incorporates rehabilitation services throughout the continuum of care. Trauma centers have actively included rehabilitation services and their programs in trauma patient care plans. 5. There is evidence to show a well-integrated program of rehabilitation is available for all trauma patients. Rehabilitation programs are included in the trauma system plan, and the trauma centers work closely with rehabilitation centers and services to ensure quality outcomes for trauma patients.

Essential Service: Evaluation

Indicator		Scoring
308.2 Rehabilitation centers and out-patient rehabilitation services provide		1. There is no requirement for the rehabilitation centers or out-patient rehabilitation services to contribute data on trauma patient outcomes.

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

data on trauma patients to the central trauma system registry that include final disposition, functional outcome, and rehabilitation costs and also participate in performance improvement processes.	2	<p>2. Rehabilitation centers and out-patient rehabilitation services are integrated into the trauma plan, but there is no requirement for them to submit data on trauma patients to the central trauma system registry.</p> <p>3. Rehabilitation centers and out-patient rehabilitation services are integrated into the trauma plan, and rehabilitation care begins early in the patient's treatment plan within the acute care hospital. Data submission to the central trauma system registry is yet to be realized.</p> <p>4. Some trauma centers and rehabilitation facilities and out-patient rehabilitation services have close links, and integration of services is routine. Data sharing between individual trauma centers and rehabilitation centers and services is accomplished, and some integration with the central trauma system registry is ongoing. Rehabilitation personnel participate in trauma system performance improvement processes.</p> <p>5. The trauma plan integrates rehabilitation centers and out-patient rehabilitation services. Trauma centers integrate rehabilitation care early in the patient's treatment plan. Rehabilitation data, including final disposition, functional outcome, and rehabilitation costs, are collected. These data are routinely submitted to trauma centers and to the central trauma system registry for inclusion in system evaluation reports. Rehabilitation personnel are fully integrated into trauma system performance improvement processes.</p>
---	---	---

309. The financial aspects of the trauma systems are integrated into the overall performance improvement system to ensure ongoing "fine-tuning" and cost-effectiveness.

Essential Service: Evaluation

Indicator		Scoring
309.1 Cost data are collected and provided to the trauma system registry for each major component including prevention, prehospital, acute care, all-hazards response planning, and rehabilitation.	1	<p>1. No cost data are collected.</p> <p>2. Administrative and program cost data are collected and included in the annual trauma system report.</p> <p>3. In addition to administrative and program costs, clinical charges and costs are included in one or more major component areas and are provided to the trauma system registry for inclusion in the annual trauma system report.</p> <p>4. The costs associated with individual system components, for example, prehospital, can be determined and are provided to the trauma system registry for inclusion in the annual trauma system report.</p> <p>5. The cost of an aggregate system can be determined and is provided to the trauma system registry for inclusion in the annual trauma system report.</p>

Essential Service: Evaluation

Indicator		Scoring
309.2 Collection and reimbursement data are submitted by each agency or institution on at least an annual basis. Common definitions exist for collection and reimbursement data and are submitted by each agency.	1	<p>1. Collection and reimbursement data are not gathered, nor do common definitions exist.</p> <p>2. Common definitions exist, and collection and reimbursement data are available and reported to the lead agency for one or more clinical components.</p> <p>3. Common definitions exist. Collection and reimbursement data are available and reported to the lead agency for one or more clinical components, and are compared to cost data for those components.</p> <p>4. Common definitions exist. Collection and reimbursement data are available and reported to the lead agency for all clinical components, and are compared to cost data for those components.</p> <p>5. Common definitions exist. Collection and reimbursement data are available and reported to the lead agency for all clinical components, are compared to cost data for those components, and are reported in an aggregate form in the annual trauma system report.</p>

Essential Service: Evaluation

Indicator		Scoring
-----------	--	---------

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

309.3 Cost, charge, collection, and reimbursement data are aggregated with other data sources including insurers and data system costs and are included in annual trauma system reports. Note: "Outside" financial data means costs that may not routinely be captured in trauma center or registry data, for example, transportation, communications, training, infrastructure, and the overall cost of readiness.	1	1. No outside financial data are captured. 2. Outside financial data are collected from one or more sources (e.g., Medicaid or private insurers). 3. Extensive financial data, for example, cost, charge, collection, and reimbursement, are collected from one or more sources. Sufficient expertise is available to the trauma system to analyze and report complex fiscal data. 4. Outside financial data are combined with internal trauma system data and are used to estimate total system costs. 5. Outside financial data are combined with internal trauma system data and are used to estimate total system costs. These financial data are described in detail in the annual trauma system report.
--	---	--

Essential Service: Evaluation

Indicator	Scoring
309.4 Financial data are combined with other cost, outcome, or surrogate measures, for example, years of potential life (YPLL), quality—adjusted life years (QALY), and disability—adjusted life years (DALY); length of stay; length of Intensive Care Unit (ICU) stay; number of ventilator days; and others, to estimate and track true system costs and cost-benefits.	1 1. No nonfinancial burden of disease costs and outcome measures are collected or modeled. 2. Estimated savings using various burdens of disease costs or outcome measure models are calculated for all injury prevention programs. 3. Estimated savings using various burdens of disease costs or outcome measure models are calculated for actual system costs. 4. Estimated savings using various burdens of disease costs or outcome measure models are calculated for all injury prevention programs and are combined with actual system cost data to determine costs and savings of the total system. 5. Estimated savings using various burdens of disease costs or outcome measure models are calculated for all injury prevention programs, are combined with actual system cost data to determine costs and savings of the total system, and are described in detail in the annual trauma system report.

Benchmark

310. The lead trauma authority ensures a competent workforce.

Essential Service: Ensure Competent Workforce

Indicator	Scoring
310.1 In cooperation with the prehospital certification and licensure authority, set guidelines for prehospital personnel for initial and ongoing trauma training including trauma-specific courses and those courses that are readily available throughout the State.	5 1. There are no trauma training guidelines for prehospital personnel as part of initial or ongoing certification or licensure. 2. Trauma training is incorporated into initial prehospital training programs following the National Highway Traffic Safety Administration (NHTSA) curricula. 3. Prehospital personnel are offered trauma training during their initial education, and specialty trauma continuing education courses are available periodically. 4. Prehospital trauma continuing education courses are regularly scheduled throughout the State. 5. Prehospital personnel receive trauma training as part of their initial certification and licensure. Routine continuing education in prehospital trauma care is provided. Such additional certifications as Basic Trauma Life Support (BTLS) and Pre-Hospital Trauma Life Support (PHTLS) are offered regularly throughout the State.

Essential Service: Ensure Competent Workforce

Indicator	Scoring
310.2 In cooperation with the prehospital certification and licensure authority, ensure that prehospital personnel who routinely provide care to trauma patients have a current trauma training certificate, for example, PHTLS, BTLS, and others, or that trauma training needs are driven by	4 1. There is no mechanism to ensure that prehospital personnel, for example, Emergency Medical Technicians (EMTs) routinely providing care to trauma patients are certified in PHTLS and BTLS or have completed other trauma training. 2. There is a requirement for EMTs routinely providing care to trauma patients to complete a certification course in trauma; however, no mechanism to ensure compliance has been instituted.

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

the performance improvement process. <i>NOTE: 8 HOURS OF TRAUMA CONTINUING ED ARE NOT TIED TO TRAUMA PI; ALSO CONTINUING TRAUMA ED NOT A CERTIFICATION</i>		<p>3. There is a requirement for EMTs providing care to trauma patients to complete a prehospital trauma course. Compliance with training requirements is the responsibility of the employing agency as part of the quality assurance process.</p> <p>4. Requirements for EMT trauma training are provided by the trauma centers, the lead agency, or other educational training institutions. Monitoring compliance with meeting the requirement is beginning.</p> <p>5. Regular EMT trauma training is conducted through a variety of venues. Other trauma training as identified through the performance improvement process is completed in cooperation with the appropriate authorities (e.g., trauma center, lead agency, and licensing body) to ensure a collectively competent prehospital workforce in issues of trauma care.</p>
---	--	---

Essential Service: Ensure Competent Workforce

Indicator		Scoring
310.3 As part of the established standards, set appropriate levels of trauma training for nursing personnel who routinely care for trauma patients in acute care facilities.	1	<p>1. There are no trauma training standards for nursing personnel who routinely care for trauma patients in acute care facilities, for example, Advanced Trauma Care for Nurses (ATCN), Trauma Nursing Core Course (TNCC), Advanced Trauma Life Support (ATLS), or any national or State-recognized trauma nurse verification course.</p> <p>2. There are trauma training standards for nursing personnel but no requirement for them to attend courses or to achieve certifications.</p> <p>3. There are trauma training standards for nursing personnel written into the trauma plan.</p> <p>4. There are trauma training standards (and associated rules/regulations) for nursing personnel written into the trauma plan, and nurses who care for trauma patients attend trauma training courses.</p> <p>5. Nursing personnel working in acute care facilities that see trauma patients receive initial and ongoing trauma training, including updates in trauma care, continuing education, and trauma nurse certifications, as appropriate. Outcome data are monitored for performance improvement and subsequent training opportunities.</p>

Essential Service: Ensure Competent Workforce

Indicator		Scoring
310.4 Ensure that appropriate, approved trauma training courses are provided for nursing personnel on a regular basis.	1	<p>1. There is no mechanism to provide appropriate, approved trauma training courses for nursing personnel throughout the jurisdiction.</p> <p>2. There is a process to provide appropriate, approved trauma training courses for nursing personnel, but courses are sporadic and uncoordinated with needs.</p> <p>3. There are appropriate, approved trauma training courses for nursing personnel throughout the jurisdiction.</p> <p>4. Appropriate trauma training courses for nursing personnel have been approved and are provided regularly. There are initial trauma courses and opportunities for special courses as needed.</p> <p>5. Appropriate trauma training courses for nursing personnel have been approved and are provided regularly throughout the jurisdiction and within the trauma centers. Courses are open to nurses from any facility that treats trauma patients and are matched to needs identified in the performance improvement process.</p>

Essential Service: Ensure Competent Workforce

Indicator		Scoring
310.5 In cooperation with the nursing licensure authority, ensure that all nursing personnel who routinely provide	1	1. There is no mechanism to ensure that nurses providing care to trauma patients are certified in an ATCN, TNCC, or any national or State trauma nurse verification course.

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

care to trauma patients have a current trauma training certificate (e.g., ATCN, TNCC, or any national or State trauma nurse verification course). As an alternative after initial trauma course completion, training can be driven by the performance improvement process.		<p>2. There is a requirement for nurse verification in trauma; however, no mechanism to ensure compliance has been instituted.</p> <p>3. There is a requirement for nurse verification in trauma for nursing personnel who routinely provide care to trauma patients. Compliance with training requirements is the responsibility of the trauma center as part of the quality assurance process.</p> <p>4. Requirements for nurse verification in trauma are provided by the trauma centers and the lead agency. Monitoring compliance with meeting the requirement is beginning.</p> <p>5. Courses for nurse verification in trauma are conducted. Other trauma training as identified through the performance improvement process is completed in cooperation with the appropriate authorities (e.g., trauma center, lead agency, or licensing body). Compliance is documented and forwarded to the appropriate oversight body to ensure a collectively competent nursing workforce in issues of trauma care.</p>
--	--	---

Essential Service: Ensure Competent Workforce

Indicator		Scoring
<p>310.6 As part of the established standards, set appropriate levels of trauma training for physicians who routinely care for trauma patients in acute care facilities.</p> <p><i>NOTE: ACS-VERIFIED TRAUMA CENTERS HAVE CONTINUING ED REQUIREMENT FOR DOCS, BUT THERE ARE NO REQUIREMENTS FOR ACUTE CARE HOSPITALS</i></p>	1	<p>1. There are no trauma training standards for physicians who routinely care for trauma patients in acute care facilities.</p> <p>2. There are physician trauma training standards but no mechanism to ensure course attendance or successful completion.</p> <p>3. There are physician trauma training standards written into the trauma plan.</p> <p>4. There are physician trauma training standards written into the trauma plan, and physicians who care for trauma patients participate in trauma training.</p> <p>5. Physicians working in acute care facilities that see trauma patients receive initial and ongoing trauma training, including updates in trauma care, continuing education, and certifications, as appropriate.</p>

Essential Service: Ensure Competent Workforce

Indicator		Scoring
<p>310.7 Ensure that appropriate, approved trauma training courses are provided for physicians on a regular basis.</p>	1	<p>1. There is no mechanism to approve or provide appropriate trauma training courses for physicians throughout the jurisdiction.</p> <p>2. There is a process to provide appropriate, approved trauma training courses for physicians, but courses are sporadic and uncoordinated with needs.</p> <p>3. There are appropriate, approved trauma training courses provided regularly for physicians.</p> <p>4. Trauma courses appropriate for physicians have been approved and are provided regularly. There are initial trauma courses and opportunities for special courses as needed.</p> <p>5. Trauma courses for physicians are provided regularly throughout the jurisdiction and within the trauma centers. Courses are open to physicians from any facility that treats trauma patients and are matched to needs identified in the performance improvement process.</p>

Essential Service: Ensure Competent Workforce

Indicator		Scoring
<p>310.8 In cooperation with the physician licensure authority, ensure that physicians who routinely provide care to trauma patients have a current trauma training certificate of completion, for example, Advanced Trauma Life Support (ATLS) and others. Alternatively,</p>	1	<p>1. There is no mechanism to ensure that physicians who routinely provide care to trauma patients are certified in ATLS.</p> <p>2. There is a requirement for ATLS for physicians who provide trauma care; however, no mechanism to ensure compliance has been instituted.</p> <p>3. There is a requirement for ATLS for physicians who provide trauma care. Compliance with trauma course completion is the responsibility of the trauma center as part of the quality assurance process.</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

physicians may maintain trauma competence through continuing medical education programs after initial ATLS completion.		<p>4. Requirements for ATLS and other trauma training for physicians are provided by the trauma centers and the lead agency. Monitoring compliance with meeting the requirements is beginning.</p> <p>5. Regular ATLS, and other trauma training as identified through the performance improvement process, is completed in cooperation with the appropriate authorities (e.g., trauma center, lead agency, or licensing body) to ensure a collectively competent physician workforce in issues of trauma care.</p>
--	--	---

Essential Service: Ensure Competent Workforce

Indicator		Scoring
310.9 Conduct at least one multidisciplinary trauma conference annually that encourages system and team approaches to trauma care.	1	<p>1. There are no multidisciplinary trauma conferences conducted within geographic boundaries of the trauma system.</p> <p>2. There are sporadic multidisciplinary trauma conferences conducted.</p> <p>3. Multidisciplinary trauma conferences are conducted occasionally, and attendance by trauma practitioners is monitored and reviewed.</p> <p>4. Multidisciplinary trauma conferences are conducted at least annually.</p> <p>5. Multidisciplinary (EMS, physicians, nurses, physiatrists, policy makers, consumers, and others) trauma conferences are conducted regularly; new findings from quality assurance and performance improvement processes are shared; and the conferences are open to all practitioners within the system. Regular attendance is required.</p>

Essential Service: Ensure Competent Workforce

Indicator		Scoring
310.10 As new protocols and treatment approaches are instituted within the system, structured mechanisms are in place to inform all personnel in those changes in a timely manner.	1	<p>1. There is no structured mechanism to inform or educate personnel in new protocols or treatment approaches within the jurisdiction.</p> <p>2. A structured mechanism is in place to inform or educate personnel in new protocols or treatment approaches, but it has not been tried or tested.</p> <p>3. A structured mechanism is in place to inform personnel in new protocols or treatment approaches as changes in the system are identified.</p> <p>4. A structured mechanism is in place to educate personnel in new protocols and treatment approaches.</p> <p>5. A structured mechanism exists to educate personnel in new protocols and treatment approaches in a timely manner, and there is a method to monitor compliance with new procedures as they are instituted.</p>

Essential Service: Ensure Competent Workforce

Indicator		Scoring
<p>310.11 There are mechanisms within the system performance improvement processes to identify and correct systemic personnel deficiencies within the trauma system.</p> <p>Note: Systemic personnel deficiencies are those that cut across multiple agencies and institutions and impact the system as a whole. For example, if trauma triage protocols are not being adhered to by most prehospital providers from multiple agencies, then it is a systemic problem that could involve communication, training, medical direction, or performance improvement issues.</p>	1	<p>1. There is no mechanism to identify, through performance improvement processes, systemic personnel deficiencies within the trauma system.</p> <p>2. The trauma system has begun to identify systemic personnel deficiencies.</p> <p>3. The trauma system has a mechanism to identify systemic personnel deficiencies and is working on a process for corrective action.</p> <p>4. The trauma system has a mechanism to identify systemic personnel deficiencies and is instituting corrective actions across the system.</p> <p>5. Trauma stakeholders, including trauma centers and the lead agency, monitor and correct personnel deficiencies as identified through quality assurance and performance improvement processes. A method of corrective action has been instituted, and appropriate follow up is occurring. Monitoring of system deficiencies and corrective actions is ongoing.</p>

Essential Service: Ensure Competent Workforce

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM

Consensus Conference

Indicator	Scoring
310.12 There are mechanisms in place within agency and institutional performance improvement processes to identify and correct deficiencies in trauma care practice patterns of individual practitioners (e.g., EMTs, paramedics, nurses, physicians, and others) within the trauma system.	<p>1</p> <p>1. There is no mechanism in place to routinely assess the deficiencies in trauma care practice patterns of individual practitioners (e.g., EMTs, paramedics, nurses, physicians, and others) within the trauma system.</p> <p>2. The trauma system has begun a process to evaluate deficiencies in trauma care practice patterns of individual practitioners.</p> <p>3. A mechanism is in place to monitor and report on deficiencies in practice patterns of individual practitioners within the trauma system. The process is evolving as part of the quality assurance and performance improvement processes.</p> <p>4. There is a well-defined process to assess care provided by practitioners within the trauma system. The quality assurance and performance improvement processes identify deficiencies, and corrective action plans are instituted.</p> <p>5. Practice patterns of individual practitioners performing outside the standards of care are routinely assessed by the trauma centers and the local, regional, or State lead agency. Corrective actions (training, additional education, and disciplinary), as appropriate, are instituted, and trends are monitored and reported to the lead agency or other licensing agency.</p>

Essential Service: Ensure Competent Workforce

Indicator	Scoring
310.13 There is authority for a trauma medical director, and a clear job description, including requisite education, training, and certification, for this position. Note: The trauma medical director and the EMS system medical director may be the same person.	<p>1</p> <p>1. There is no requirement for a trauma medical director, and no job description has been developed.</p> <p>2. There is authority for a trauma medical director, but no job description has been developed.</p> <p>3. There is authority for a trauma medical director, and a job description is under development. Approval to hire is pending.</p> <p>4. There is authority for a trauma medical director. The plan to hire one has been developed along with a comprehensive job description, including requisite education, training, and certification.</p> <p>5. There is authority for a trauma medical director, and the job description, including requisite education, training, and certification, for the trauma medical director is clear. A physician appropriately credentialed has been hired, and the job classification is routinely assessed for appropriateness of the duties required.</p>

Benchmark

311. The lead agency acts to protect the public welfare by enforcing various laws, rules, and regulations as they pertain to the trauma system.

Essential Service: Enforce Laws

Indicator	Scoring
311.1 The lead agency works in conjunction with the prehospital regulatory agency to ensure that prehospital care is provided by licensed agencies that are in compliance with any rules, regulations, or protocols specific to prehospital trauma delivery (e.g., taking patients to the correct facility in accordance with pre-existing destination protocols). Note: In many cases, the lead agency and the prehospital regulatory agency are the same entity.	<p>1</p> <p>1. There is no evidence that the lead agency and the prehospital regulatory agency work together to ensure appropriate provider agency licensure and compliance.</p> <p>2. The lead agency refers complaints concerning issues of prehospital agency performance to the prehospital regulatory agency.</p> <p>3. The trauma system lead agency and the prehospital regulatory agency work together to resolve complaints involving prehospital agencies that relate to trauma system performance.</p> <p>4. The trauma system and the prehospital regulatory agency work together to monitor compliance of prehospital provider agencies with any rules, regulations, or protocols specific to prehospital trauma delivery.</p> <p>5. The prehospital regulatory agency, working cooperatively with the lead agency, is involved in ongoing trauma system performance improvement processes and prehospital compliance with any rules, regulations, or protocols specific to prehospital trauma delivery (e.g., taking patients to the correct facility in accordance with pre-existing destination protocols).</p>

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

Essential Service: Enforce Laws		
Indicator		Scoring
311.2 The lead agency refers issues of personnel noncompliance with trauma laws, rules, and regulations to appropriate boards or licensure authorities.	1	<p>1. Individual personnel performance is not monitored.</p> <p>2. Complaints about individual personnel noncompliance with trauma laws, rules, and regulations go directly to appropriate boards or licensure authorities.</p> <p>3. Trauma authority personnel collaborate actively with licensure authorities to resolve complaints involving individual personnel noncompliance with trauma laws, rules, and regulations.</p> <p>4. Individual personnel performance issues are addressed within trauma performance improvement processes unless they involve breaches of State or Federal statute.</p> <p>5. Appropriate boards or licensure authorities are involved in the system performance improvement processes addressing individual personnel performance issues.</p>
Essential Service: Enforce Laws		
Indicator		Scoring
311.3 The lead agency enforces laws, rules, and regulations concerning the verification of trauma centers, including the ability to de-designate trauma facilities for matters of noncompliance.	1	<p>1. The lead agency does not have the authority to de-designate trauma facilities for matters of noncompliance.</p> <p>2. The lead agency has the authority to de-designate trauma facilities for matters of noncompliance but does not monitor facility performance.</p> <p>3. The lead agency has the authority to de-designate trauma facilities for matters of noncompliance and monitors facility performance.</p> <p>4. The lead agency has the authority to de-designate trauma facilities for matters of noncompliance, monitors facility performance, and has taken one or more administrative actions to bring noncompliant facilities into compliance.</p> <p>5. Facilities are represented in the system performance improvement process and benchmark their performance against local and national standards. Issues of noncompliance are monitored and addressed as part of the performance improvement process. De-designation is reserved only as a final public health safeguard.</p>
Essential Service: Enforce Laws		
Indicator		Scoring
311.4 Laws, rules, and regulations are routinely reviewed and revised to continually strengthen and improve the trauma system.	4	<p>1. There is no process for examining laws, rules, or regulations. 2. Laws, rules, and regulations are reviewed and revised only in response to a "crisis" (e.g., malpractice insurance costs).</p> <p>3. Laws, rules, and regulations are reviewed and revised on a periodic schedule (e.g., every 5 years).</p> <p>4. Laws, rules, and regulations are reviewed by agency personnel on a continuous basis and are revised as needed.</p> <p>5. Laws, rules, and regulations are reviewed as part of the performance improvement process involving representatives of all system components and are revised as they negatively impact system performance.</p>
Essential Service: Enforce Laws		
Indicator		Scoring

HRSA MTPSE SCORE FOR THE STATE OF OHIO TRAUMA SYSTEM Consensus Conference

311.5 The lead agency routinely evaluates all system components to ensure compliance with various laws, rules, and regulations pertaining to their role and performance within the trauma system.	1	<p>1. The lead agency does not have the authority to evaluate all system components (e.g., prehospital).</p> <p>2. Complaints concerning individual component performance within the trauma system go directly to the licensure agency responsible for that component.</p> <p>3. Trauma agency personnel collaborate actively with licensure agencies to resolve complaints involving component performance within the trauma system.</p> <p>4. Deficiencies in individual system components are addressed as part of the trauma system performance improvement process.</p> <p>5. System components are equitably represented in the trauma system improvement process and work to improve individual component compliance and overall trauma system performance. De-designation, or revocation of licenses or certifications, is used only as a course of last resort to safeguard public health.</p>
Essential Service: Enforce Laws		
Indicator		Scoring
311.6 Incentives are provided to individual agencies and institutions to seek State or nationally recognized accreditation in areas that will contribute to overall improvement across the trauma system, for example, Commission on Accreditation of Ambulance Services (CAAS) for prehospital agencies, Council on Allied Health Education Accreditation (CAHEA) for training programs, and American College of Surgeons (ACS) verification for trauma facilities.	1	<p>1. There are no incentives for outside review and accreditation.</p> <p>2. Accreditation processes are generally encouraged but are not specifically acknowledged; for example, no special dispensation is offered to agencies or institutions completing such accreditation.</p> <p>3. Accreditation processes are strongly encouraged, and some incentives are provided, for example, extension of EMS agency review from 2 years to 3 years after CAAS accreditation.</p> <p>4. Incentives are provided to agencies that successfully complete outside accreditation processes, for example, acceptance of CAAS accreditation instead of local EMS agency review.</p> <p>5. As part of the system performance improvement process, the impact of outside review and accreditation on various agencies and institutions is monitored, and incentives are provided as appropriate.</p>

OHIO DEPARTMENT OF PUBLIC SAFETY
State Board of Emergency Medical Services



Ohio EMS 2015 Strategic Plan

Foreword

James E. Davis, Chairman, Ohio Emergency Medical Services Board

As chair of the State Board of Emergency Medical Services, I am proud to introduce our strategic plan for the advancement of the EMS system in the state of Ohio. This Ohio EMS 2015 document provides a platform to work from for the next four years. It is based off of the Japanese concepts of Hoshin Kanri - meaning direction, policy, and management. It is based on the principles of plan, do, check, and adjust, as well as Kaizen which translates to continuous improvement.



As we celebrate the ten year anniversary of a dedicated statewide trauma system in Ohio, the trauma committee working with community stakeholders completed a project to identify gaps that exist in trauma care. The National Highway Transportation Safety Administration (NHTSA), who oversees EMS at the federal level, also completed a statewide assessment of EMS in Ohio in February 2011. These two assessments allowed the EMS Board through specific committees to analyze the strengths, weaknesses, opportunities, and threats (SWOT) regarding EMS in Ohio.

The success of this implementation is only possible through the development of people. As legendary Ohio State football coach Woody Hayes stated, “You win with people”. Without the quality efforts and dedication of so many people this key directional document would have never become a reality. I want to thank the Department of Public Safety and Director Tom Charles for his support and encouragement. Appreciation also goes to the State EMS office, EMS Board, as well as to the many friends of EMS for their tireless pursuit of excellence.

The completion of this Ohio EMS 2015 document is where the work really begins. In the face of shrinking budgets and increased responsibilities, these goals will only be accomplished through creativity and open-mindedness. We must always challenge each other by asking the questions “why?”, “what-if?”, and “why can’t we?”. We must always appreciate that this is not a race but a journey. The end goal is to bring value added processes and policies to Ohio fire/EMS agencies and their EMS providers to benefit all of Ohio. Each objective in our plan will be assigned a group responsible for the task and metrics. A dashboard will be employed to gauge our collective progress. Policy decisions made by the staff and EMS Board will be guided by these benchmarks. While it is true that this strategic plan and its initiatives are EMS Board driven, it will take everyone with an interest in EMS in Ohio to make it a reality. I encourage you to get involved.

Yours in public safety,

James E. Davis – Chair

Ohio State Board of Emergency Medical Services

December 2011

Table of Contents

Ohio EMS Overview	1
Vision	1
Mission	2
Values	2
Decision Priorities	3
Acknowledgements	3
Goal Areas and Strategies	4

GOAL AREAS AND STRATEGIES

Regulation and Policy	4
Resource Management	4
Human Resources and Education	5
Transportation	6
Facilities	6
Communications	7
Public Information and Education	8
Medical Direction	8
Trauma Systems	9
Evaluation	9
Preparedness	10
Appendix A (EMS Board Committees)	12
Appendix B (“A Framework for Improving Ohio’s Trauma System”)	13

EMS in Ohio

An Overview of EMS in Ohio.

As the nation's seventh most populous state, Ohio has plenty of demand for emergency medical services. The State's 11.5 million people depend on their EMS system to respond promptly and effectively to time-critical diagnoses. This system has evolved over the past fifty or more years to include basic and advanced care available in all areas of the State.

Despite substantial progress, the job of building Ohio's EMS system remains far from completion. The State's lead agency does not have clear uniform regulatory authority over all forms of EMS agencies and vehicles. The increased use of safety belts and corresponding

State Board of EMS Mission

The State Board of EMS is dedicated to saving lives and minimizing disability to Ohio's citizens and visitors by developing and continually enhancing a statewide, comprehensive, systematic response to injury, illness and fire, primarily through education, training, certification and strategic planning.

decrease in revenues from fines are threatening the financial viability of the EMS system infrastructure. The State holds a rich repository of EMS and trauma care data that has not yet been fully transformed into useful information for guiding further policy development.

While there are notable gaps in the system, a great deal has been accomplished that has provided a foundation for future improvements. Partnerships exist between essential stakeholders at all levels. EMS education is well-established

and continues to support the growth of Paramedic availability statewide. Trauma triage criteria have been implemented statewide. Following the events of September 11, 2001, EMS has been integrated into a number of Ohio preparedness initiatives. Wireless 9-1-1 system access has almost been fully implemented statewide. There are a variety of public information and education initiatives aimed at preparing the public to prevent injuries and take action when an emergency confronts them. The needs of children are being considered as system decisions are being made.

The Ohio EMS 2015 strategic plan serves as the guidebook to meet our Mission, Vision and Values.

Vision

Ohio's EMS system will provide optimal pre-hospital care to its citizens and visitors. It will be nationally recognized for innovation, responsive leadership, and superior quality and service.

Mission

Provide a comprehensive emergency medical services (EMS) system to ensure that persons incurring medical and trauma emergencies receive prompt and appropriate emergency medical care from properly trained and certified personnel. The entire EMS system will be data-driven and medically directed with clearly defined, and publicly available, responsibilities, authorities, and accountabilities. The State EMS system will help assure consistent quality local emergency care as well as a regionalized, accountable emergency care system.

Values

Diversity: The EMS system will provide public service delivery and support professional recruitment and retention that encompasses every sector within our society.

Excellence: The EMS system will utilize continuous improvement and evaluation to achieve the highest level of performance.

Integrity: The EMS system will be based on individuals and agencies taking the appropriate actions in all aspects of their responsibilities to the citizens of Ohio.

Leadership: The EMS system will stand on a foundation of responsive leadership to achieve and maintain quality results, accountability, and outcomes; through guidance, direction, encouragement, and reinforcement.

Lifelong Learning: The EMS system will provide and nurture ongoing education and professional development that enhances the provision of pre-hospital care.

Partnership: The EMS system will be based on key stakeholders collaborating to solve problems, make decisions, and achieve the common goal of assuring the best EMS service for the State of Ohio.

Decision Priorities for State Board of EMS/ Division of EMS

1. **Patients** / Citizens
2. The EMS System
3. Partners / State of Ohio

Acknowledgements

This document and the strategies, vision, and direction it puts forth for the future of EMS in Ohio, would not have been possible without the cooperation of and input from our partner organizations. It is through the teamwork and partnership that is illustrated by the creation of this Strategic Plan, which will lead to an improved EMS System for 2015 and beyond. The Ohio Board of Emergency Medical Services and the Division of EMS acknowledges and thanks the following organizations for providing input and advice from their representatives to the EMS Strategic Planning Committee:

Ohio Association of Emergency Medical Services
Ohio Association of Professional Fire Fighters
Ohio Chapter of the American College of Emergency Physicians
Ohio Children's Hospital Association
Ohio Department of Health
Ohio Emergency Management Agency
Ohio Emergency Nurses Association
Ohio Fire Chief's Association
Ohio Hospital Association
Ohio Medical Transportation Board
Ohio Nurses Association
Ohio Society of Trauma Nurse Leaders
Ohio State Firefighters Association

Goal Areas and Strategies

1. REGULATION AND POLICY

Seek comprehensive enabling legislation, and develop operational regulations, policies and procedures to provide an effective state-wide system of emergency medical and trauma care.

1.1 LEADERSHIP/GOVERNANCE

- 1.1.1 Seek legislation to assure that the Division of EMS and State EMS Board have the necessary authority to enforce existing or future statutory and regulatory requirements for the provision of EMS and the development of a statewide EMS System.

1.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

- 1.2.1 Develop recommended models for legislature that can be used as a foundation to establish lead agency authority to improve the care of patients with trauma, stroke, STEMI and other time-critical conditions.
- 1.2.2 Structure State EMS Board committee structure to support the implementation of the EMS Strategic.

1.3 FUNDING/RESOURCES

- 1.3.1 Develop proposal for the legislature to identify a stable and ongoing source of funding to adequately support all of the functions assigned to the EMS Board and the Division of EMS.
- 1.3.2 Redefine the EMS grant program to appropriately prioritize funding that will support system-wide development activities and strategic plan initiatives at the state, regional, and local levels with priority given to rural and underdeveloped EMS and trauma system components.

2. RESOURCE MANAGEMENT

Develop a method to identify, categorize, and coordinate resources necessary for establishment and operation of regionalized, accountable EMS and trauma systems.

2.1 LEADERSHIP/GOVERNANCE

- 2.1.1 Develop regulations and policies to ensure equal access to basic emergency care statewide.

2.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

- 2.2.1 Re-evaluate the current map and functions of the Regional Physician Advisory Board (RPAB) regions in Ohio to determine if there can be improvements by redefining roles and aligning with the State's Homeland Security regions or other functional model.
- 2.2.2 Develop a mechanism to review, evaluate and report emerging issues, new techniques, equipment and applications for providers in the field.
- 2.2.3 Establish a program to improve pre-hospital pediatric equipment in the field.

2.3 FUNDING/RESOURCES

- 2.3.1 Seek legislation and authority to establish a shared purchasing program for EMS equipment and supplies.

3. HUMAN RESOURCES AND EDUCATION

Ensure the EMS system has essential trained and certified/licensed persons to perform required tasks. Provide a comprehensive statewide plan for assuring a stable EMS workforce including consistent EMS training and recruitment/retention programs with effective local, regional and state support.

3.1 LEADERSHIP/GOVERNANCE

- 3.1.1 Champion diversity and cultural competency by developing appropriate educational material for primary EMS training programs and develop enrollment measures for minorities.
- 3.1.2 Continue to implement the EMS Education Agenda for the Future including the National EMS Scope of Practice Model as a foundation for the Ohio authorized EMS scope of practice, National EMS Education Standards, and national EMS education program accreditation.
- 3.1.3 Determine minimum service expectations and requirements for all areas of Ohio.
- 3.1.4 Develop programs to ensure the health and safety of all EMS personnel.

3.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

- 3.2.1 Conduct a formal needs assessment of the numbers, levels, and placements of EMS personnel required for optimal system performance as part of the current focus on recruitment and retention.
- 3.2.2 Develop certification total number goals by level for EMS to meet regional and State of Ohio needs based on accepted provider to population ratios.
- 3.2.3 Expand and increase the use of resources that help training institutions deliver high-quality, relevant education programs for our certificate holders.

3.3 FUNDING/RESOURCES

- 3.3.1 Seek grant funding opportunities to support the development of programs to increase diversity through EMS training programs.

4. TRANSPORTATION

Provide for a safe, reliable, and coordinated EMS transportation system, which incorporates regionalized, accountable systems of emergency care and which provides for the systematic delivery of patients to the most appropriate specialty care facilities.

4.1 LEADERSHIP/GOVERNANCE

4.1.1 Develop a plan for legislative action combining the current functions, authorities and resources for licensing and regulation of all EMS patient transport resources in a single agency in Ohio.

4.1.2 Establish a statewide standardized air medical activation guideline.

4.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

4.2.1 Implement regulatory changes that will require that all EMS patient transport services and EMS patient transport resources, regardless of ownership or service provision model, to undergo inspection and licensure.

4.2.2 Establish statute that requires that all ambulance drivers must be trained in emergency vehicle operations.

4.3 FUNDING/RESOURCES

[No Strategies Established at this time.]

5. FACILITIES

Ensure the seriously injured (or ill) patient is delivered in a timely manner to the closest appropriate facility, through a statewide and medically accountable system, including protocols and medical direction.

5.1 LEADERSHIP/GOVERNANCE

5.1.1 Establish an emergency department categorization system for pediatrics.

5.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

5.2.1 Develop and maintain a comprehensive database of EMS and trauma system resources that provides an accurate accounting of personnel, equipment, and services throughout Ohio.

5.3 FUNDING/RESOURCES

5.3.1 Seek funding to support and expand the current EMS and trauma system.

6. COMMUNICATIONS

Develop an effective communications system for EMS operations and provide the means by which emergency resources can be accessed, mobilized, managed, and coordinated.

6.1 LEADERSHIP/GOVERNANCE

- 6.1.1 Develop a plan for legislative action that provides authority to develop dispatch center and emergency medical dispatcher certification standards.
- 6.1.2 Seek statute that creates a dispatch subcommittee under a single state authority to establish medical priority dispatching standards and emergency medical dispatcher certification standards via standardized EMD training for dispatchers.

6.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

- 6.2.1 Develop a statewide communications plan to provide for an interoperable system that enables communications from dispatch to EMS transport resource, EMS transport resource to EMS transport resource, EMS transport resource to hospital, hospital to hospital, and EMS transport resource to public safety communications.

6.3 FUNDING/RESOURCES

- 6.3.1 Seek support through wireless 9-1-1 funds to counties and/or the EMS grants program for standardized EMD training for dispatchers.
- 6.3.2 Seek funding to support statewide interoperable communications for EMS.

7. PUBLIC INFORMATION AND EDUCATION

Develop a public awareness and education program about the EMS system, that addresses the components and capabilities of an EMS system; the public's role in the system; the public's ability to access the system; what to do in an emergency (e.g., bystander care training); and prevention issues (e.g., alcohol or other drugs, occupant protection, speeding, motorcycle and bicycle safety).

7.1 LEADERSHIP/GOVERNANCE

- 7.1.1 Educate citizens on critical policy issues (e.g., quality and patient safety,) and the advocacy process so they can be effective advocates for the profession and our patients.
- 7.1.2 Promote the EMS profession to high school students and undergraduate students through training institutions.
- 7.1.3 Continue meaningful collaboration/partnership with other organizations on behalf of the EMS profession.
- 7.1.4 Require recipients of EMS grant funds to report on the effectiveness of their injury prevention programs.

7.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

- 7.2.1 Develop plan to utilize social networks like Twitter and Facebook, to educate the public and EMS service providers regarding preparedness, injury prevention, and other aspects of the EMS and trauma system.

7.3 FUNDING/RESOURCES

- 7.3.1 Seek funding from the Office of Traffic Safety, the Office of Rural Health or other source to support a train-the-trainer course for a bystander care program.

8. MEDICAL DIRECTION

Develop an EMS system in which physicians are involved in all aspects of patient care, through planning, protocols, quality improvement programs and licensing/discipline.

8.1 LEADERSHIP/GOVERNANCE

- 8.1.1 Partner with physicians in all aspects of our pre-hospital healthcare system including strategy, management, oversight and implementation.
- 8.1.2 Develop plan for Legislature to expand the role of RPAB from an advisory role to an authoritative role under direction of the EMS Board and the State Medical Director.
- 8.1.3 Support the Ohio Chapter of the American College of Physicians (ACEP) in updating and enhancing the Ohio EMS Medical Director course.
- 8.1.4 Expand the mission of RPABs to include all time-critical diagnoses and require the development of regional triage criteria for STEMI, stroke, post-cardiac arrest, and pediatrics.

8.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

- 8.2.1 Seek liability protection and civil immunity for the RPABs to enable the provision of regional medical direction.
- 8.2.2 Seek statutory authority to develop and require medical director certification for all agency medical directors
- 8.2.3 Develop a statewide database to ensure compliance with minimum standards and increase medical director communication and require verification of medical director registration for all EMS agencies.

8.3 FUNDING/RESOURCES

- 8.3.1 Seek funding to support RPABs.
- 8.3.2 Develop a financial resource needs plan for Board consideration.

9. TRAUMA SYSTEMS

Develop and maintain a fully functional trauma system to provide a high quality, effective patient care system.

By vote of the EMS Board at its August 17, 2011 meeting, the goals established in “A Framework for Improving Ohio’s Trauma System” (as approved by the EMS Board, October 20, 2010) are incorporated into this document as Appendix B.

9.1 LEADERSHIP/GOVERNANCE

9.1.1 Refer to Goal 1 within “A Framework for Improving Ohio’s Trauma System.”

9.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

9.2.1 Refer to Goal 1 through 10 within “A Framework for Improving Ohio’s Trauma System.”

9.3 FUNDING/RESOURCES

9.3.1 Refer to Goal 1 through 10 within “A Framework for Improving Ohio’s Trauma System.”

10. EVALUATION

Implement a comprehensive evaluation program to effectively assess and to improve a statewide EMS system.

10.1 LEADERSHIP/GOVERNANCE

10.1.1 Develop collaboration with the Ohio Department of Health on data linkages and injury prevention priorities.

10.1.2 Evaluate the statewide availability of EMS and trauma resources to ensure that these resources are adequately matched to the evolving needs of the EMS and trauma system.

10.1.3 Develop quarterly dashboard to measure success and produce annual reporting mechanism for stakeholders.

10.1.4 Define and improve quality outcomes to “Best in Nation” for pre-hospital care.

10.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

10.2.1 Deploy action plan to fully use the Ohio Trauma Registry and EMS Incident Reporting System data to support statewide and national quality assurance and prevention efforts and to support future trauma system maturation.

10.2.2 Utilize data to review, modify, and monitor state and regional use of Ohio trauma triage guidelines, including over-triage and under-triage rates and make improvement recommendations to provide for the specialized triage and emergency care needs of children and the elderly.

10.3 FUNDING/RESOURCES

- 10.3.1 Develop financial resource needs plan for Board consideration.

11. PREPAREDNESS

Building upon the day-to-day capabilities of the EMS system, ensure that EMS resources are effectively and appropriately dispatched and pre-hospital triage, treatment, transport, tracking of patients and documentation of care appropriate for the incident is provided, while maintaining the capabilities of the EMS system for continued operations.

11.1 LEADERSHIP/GOVERNANCE

- 11.1.1 Establish regulations that clearly define the role of the State Division of EMS in preparedness planning and disaster response.
- 11.1.2 Improve state disaster planning to address the needs of children.
- 11.1.3 Support the Ohio Department of Health in the continued development of hospital preparedness planning.

11.2 PATIENT CARE/SERVICE EXCELLENCE/SYSTEM DEVELOPMENT

- 11.2.1 Develop a comprehensive data base of EMS resources to be utilized during multiple casualty or mass casualty incident.
- 11.2.2 Create policies defining the role of emergency medical services in public health surveillance and response.
- 11.2.3 Identify strategies and develop programs to protect the EMS workforce and their families during a disaster.
- 11.2.4 Develop guidance for Crisis Standards of Care.

11.3 FUNDING/RESOURCES

- 11.3.1 Promote the effective use of Hospital Preparedness Program and other grant funds targeted to increase medical facility surge capabilities.

APPENDIX A

2012 EMS Board Committee Structure

EMS System Development

Chair: Dr. John Pakiela

Staff Liaison: Ellen Owens

Responsibilities: Strategic Plan / Dashboard; database oversight (Ohio Trauma Registry and EMS Incident Reporting System); Goals Area # 4 – Transportation; Goal Area # 6 – Communications; Goal Area # 10 – Evaluation and Goal Area # 11 – Preparedness.

Policy and Regulations

Chair: Jim Davis

Staff Liaison: Melissa Vermillion

Responsibilities: Goal Area # 1- Regulation and Policy; legislative initiatives for EMS system development (in conjunction with ODPS legislative personnel); administrative rules; position statements; and policy related issues.

Resource Management

Chair: Daryl McNutt

Staff Liaison: Alan Boster

Responsibilities: Goal Area # 2 – Resource Management; Goal Area # 7 – Public Information and Education; grants.

Human Resources and Education

Chair: Pam Bradshaw

Staff Liaison: Linda Mirarchi

Responsibilities: Goal Area # 3 – Human Resources and Education; recruitment and retention; certification; accreditation; and training related issues.

Medical Oversight

Chair: Dr. Brian Springer

Staff Liaison: Sue Morris

Responsibilities- Goal Area # 5 – Facilities; Goal Area # 8 - Medical Direction; Scope of Practice issues; research.

Trauma System

Chair: Dr. Jonathan Saxe (elected by committee as outlined in Revised Code)

Staff Liaison: Tim Erskine

Responsibilities: Goal Area # 9 – Trauma Systems (implementation of goals established in “A Framework for Improving Ohio’s Trauma System”).

EMS-Children

Chair: Dr. Wendy Pomerantz

Staff Liaison: Joseph Stack

Responsibilities: Implementation of performance measures as established by federal EMS-C and included in the EMS-C grant; and work with other committees on EMS-C related action items from the Strategic Plan.

Firefighter and Fire Safety Inspector Training

Chair: Jim Steele (elected by committee as outlined in Revised Code)

Staff Liaison: Doug Orahood

Responsibilities: Provide advice and counsel to the Executive Director on Firefighter and Fire Safety Inspector training and certification issues.

APPENDIX B

“A Framework for Improving Ohio’s Trauma System”

**OHIO STATE BOARD OF EMERGENCY MEDICAL SERVICES
TRAUMA COMMITTEE**

**A FRAMEWORK FOR IMPROVING
OHIO'S TRAUMA SYSTEM**



Final Version
Approved by Ohio State Board of EMS
October 20, 2010

Purpose of the Document

This document is intended to serve as a reference for planning in regards to Ohio's statewide trauma system. Public, governmental and healthcare stakeholders should view this document as a guideline to ameliorate gaps that exist in the current trauma system. The work described in this document is not an attempt to undo any of the trauma system components created by House Bill 138 (123rd General Assembly).

Table of Contents

<u>Section</u>	<u>Pages</u>
Acknowledgements.....	4-5
Ohio Trauma System Vision and Values.....	6-7
Trauma System Introduction.....	8-9
Ohio Trauma Facts and System Accomplishments.....	10
Ohio's Trauma System Assessment	11-12
Trauma System Plan.....	14-35
Goal 1: Leadership.....	14
Goal 2: Injury Prevention.....	18
Goal 3: Emergency/Disaster Preparedness Plan.....	20
Goal 4: Prehospital Care.....	22
Goal 5: Definitive Care – Acute Care Hospitals and Trauma Centers.....	24
Goal 6: Definitive Care – Rehabilitation.....	26
Goal 7: Evaluation, Quality Management & Performance Improvement.....	28
Goal 8: Trauma System Registry Infrastructure.....	29
Goal 9: Professional Education and Public Information.....	31
Goal 10: People With Functional Needs.....	33
Glossary.....	36-43
Appendix A.....	44

Acknowledgements

Acknowledgement and thanks are given to the countless individuals and organizations whose dedication and tireless efforts helped create Ohio's trauma system. It is through these efforts that a system of care for injured patients continues to evolve in Ohio.

Ohio Trauma Committee members are:

Nancie Bechtel, RN – Emergency Nurse
John Crow, MD – Pediatric Trauma Surgeon – Chair of the Ohio Trauma Committee
William Crum – Victim Advocate
David Degnan, EMT-P – EMS Provider
Mark Gebhart, MD – Emergency Medicine Physician
Todd Glass, MD – Pediatric Emergency Medicine Physician
Vickie Graymire, RN – Trauma Center Administrator
Kathy Haley, RN – Trauma Nurse – Vice Chair of the Ohio Trauma Committee
Brian Kuntz, RN, EMT-P – Representative of a Non-Trauma Center Hospital
Edward Michelson, MD – Non-Trauma Center Hospital Administrator
Sidney Miller, MD – Burn Surgeon
Debra Myers, RN – Trauma Registrar
Greg Nemunaitis, MD – Physical Medicine and Rehabilitation Physician
Jennifer Piccione, RN – Representative of a Non-Trauma Center Hospital
David Pohlman, EMT-P – Operator of an Ambulance Company
Kevin Pugh, MD – Orthopedic Surgeon
John Ross, EMT-P – Fire Chief
Jonathan Saxe, MD – Trauma Surgeon
Michael Shannon, MD – Neurosurgeon
Diane Simon, RN – Trauma Center Administrator
Howard Werman, MD – Chief Air Medical Officer
Richard Ziegler, DDS – Oral and Maxillofacial Surgeon

Liaisons to the Committee:

Forrest Smith, MD – Ohio Department of Health
Carol Jacobson, RN – Ohio Hospital Association
Amy Wermert, MPH – Ohio Injury Prevention Partnership

Committee members and trauma stakeholders involved in the subcommittee for trauma system planning include:

Nancie Bechtel, RN
David Degnan, EMT-P
Gary Englehart, FACHE
Todd Glass, MD
Vickie Graymire, RN – Co-chair
Kathy Haley, RN – Chair
Anne Moss, RN
Deb Myers, RN
Jonathan Saxe, MD
Lynn Haas, RN – Co-chair
Diane Simon, RN
Amy Wermert, MPH
Patty Wilczewski, RN

Committee members and others who assisted in the development of this document:

Nancie Bechtel, RN – Co-editor
Carla Coffey, RN
Gary Englehart, FACHE
Tim Erskine – Ohio Department of Public Safety, Division of EMS
Todd Glass, MD
Vickie Graymire, RN
Kathy Haley, RN – Editor
Sid Miller, MD
Anne Moss, RN
Deb Myers, RN
Jonathan Saxe, MD
Lynn Haas, RN – Co-editor
Diane Simon, RN
Amy Wermert, MPH
Patty Wilczewski, RN

A complete list of participants in the March 12, 2008 trauma system assessment can be found in Appendix A.

OHIO TRAUMA SYSTEM VISION AND VALUES

Vision

The vision for the Ohio trauma system is a statewide system of high quality, cost effective trauma care for all adult and pediatric residents and visitors in the state. The system targets the prevention of unnecessary death and disability and improves the delivery of medical services throughout the trauma care continuum. To assure this capability, an inclusive statewide network exists that encompasses prehospital agencies, state-designated trauma centers and acute care facilities. The system is formally organized, integrated, and includes the elements of a comprehensive system including injury prevention and control; public information and education; trauma data systems and research; prehospital services including patient care resources; hospital patient care resources including medical rehabilitation; and ongoing system evaluation and improvement processes. The system of care is statewide in design, and state- and regionally-implemented. The system is led and monitored by the Lead Trauma Agency (LTA) which collaborates with all appropriate stakeholders to accomplish the goals of the trauma system. The system's participants and the LTA are accountable to each other.

Values

Ongoing stakeholder involvement from across the health care continuum, the general public and regional trauma systems is paramount to the success of a comprehensive state trauma system.

Problem Statement

As of 2010, Ohio has components of an effective trauma system but lacks a comprehensive system plan that ensures optimal care for injured patients. The current state trauma system is deficient in key aspects consistent with effective public health models. These aspects include:

- Clear oversight
- Accountability among system participants
- Ongoing assessment of risk-factors and gaps
- Universal (statewide) and consistent provision of care/services to victims
- Evaluation & regulation of existing services
- Reassessment

Goal

The overall goal of the Ohio trauma system is to deliver high quality, cost-effective care to trauma patients. The state trauma system shall encompass state and regional coordination of a formal, organized and inclusive network of trauma care providers in order to:

- Provide leadership and direction for system development, ongoing evaluation, and improvement;
- Prevent unnecessary death and disability; improve and enhance the delivery of trauma services to residents and visitors in Ohio;
- Pursue funding mechanisms for trauma system implementation and maintenance;
- Pursue public awareness and prevention activities to decrease the incidence of injury;
- Develop consistent, relevant and accessible trauma education resources statewide;
- Design an integrated system of care from event recognition to full patient recovery, including medical rehabilitation;
- Improve and enhance the delivery of prehospital EMS and hospital trauma services to residents and visitors in Ohio;
- Establish standards for Ohio trauma system participation and mechanisms to ensure continuing compliance with system standards;
- Coordinate the trauma system with surrounding states;
- Assure accountability, objectivity, and relevance of the trauma system through integrated systems, data and quality management processes;
- Develop a system for trauma related evidence-based research;
- Ensure that special needs and high-risk populations are identified and their specific needs accommodated;
- Ensure integration of the trauma system plan with the state disaster plan;
- Assess educational needs of the constituents of the trauma system assuring there is a cohesive educational plan that addresses the needs of stakeholders, care providers and the public.

TRAUMA SYSTEM INTRODUCTION

What does a trauma system mean to the public?

For severely injured patients, the trauma system engages participants to get to the “right hospital, in the right manner, in the right amount of time.” These three factors optimize chances for trauma patient survival while minimizing chances for severe disabilities and death. Trauma is *the* leading cause of death for persons between the ages of 1 and 44 years of age and is a leading cause of death and disability among all age groups.

Multiple research studies and experience in other state trauma systems have demonstrated a person’s chances of dying or suffering a severe, lifelong disability are reduced if they are injured in a state with an organized trauma system.

History of trauma system development

The development of comprehensive emergency care systems for the ill and injured began in the United States over forty years ago. Ohio’s trauma system development has been ongoing for over three decades. An initial focus on the development of prehospital emergency service capacity has evolved to a view that encompasses comprehensive and integrated emergency medical services (EMS) and trauma systems. Key national and state development events include the following.

- In 1966, the National Academy of Science’s “White Paper” titled *Accidental Death and Disability: The Neglected Disease of Modern Society* identified the need for a system of trauma care including prehospital and hospital care.
- In 1973, the *National Emergency Medical Services Act* (PL 93-154) was enacted to stimulate the development of EMS systems. Fifteen system elements were identified as essential elements of an EMS system.
- The *National Trauma Care Systems Planning and Development Act* of 1990 (PL 101-590) encouraged state governments to develop, implement and improve trauma systems. States were charged with developing a trauma care plan delivered via a system approach. As of 2010, over 40 states have components of a statewide trauma system.
- Ohio’s EMS development can be traced to 1969 when the Heartmobile was pioneered. This vehicle was the first in the U.S. specifically designed as a mobile coronary care unit. The Heartmobile helped initiate the beginnings of advanced prehospital care across the nation.
- In the 1980’s, Ohio hospitals were included in a voluntary, loosely coordinated trauma system: larger urban hospitals self-identified themselves as regional trauma centers. There was no formal verification of trauma care among hospitals.
- In 1990, the National Highway Traffic Safety Administration (NHTSA) was invited to conduct a review of the Ohio EMS system and developed recommendations for future state system development that included trauma care.
- In 1992, the Division of Emergency Medical Services was established within the Ohio Department of Public Safety, and the State Board of Emergency Medical Services was

created by the passage of Senate Bill 98, to improve comprehensive development and implementation of prehospital systems of care.

- In 1999, the Ohio Trauma Registry was established within the Division of Emergency Medical Services. Hospitals caring for injured patients who meet defined inclusion criteria are required to submit data to the Ohio Trauma Registry.
- In July 2000, a bill introduced in the House of Representatives (HB 138, 123rd General Assembly) was signed into law by Governor Taft. This established a legally mandated statewide trauma system, created a statewide trauma committee called the Ohio Trauma Committee, defined “trauma victim,” and set official verification standards for trauma centers. The Ohio Trauma Committee was charged with assisting the State Board of Emergency Medical Services in developing rules and guidelines on a variety of trauma system elements including prehospital triage of victims to trauma centers; restrictions on admission of trauma patients by non-trauma centers’ physicians; and oversight of EMS quality of care and provider education.
- In addition to establishing the state trauma system, HB 138 created two commissions to study injury prevention and post-critical trauma care. It also mandated seven special studies to examine trauma care in the state as it existed at that time.
- From 2000-2002, the Ohio Trauma Committee developed recommendations for field triage to trauma centers and trauma registry risk adjustment. These recommendations were promulgated as rules in the Ohio Administrative Code by the State EMS Board.
- In 2002, the Director of the Department of Health directed a workgroup to focus on recommendations for the creation of a trauma center designating authority in Ohio. A provisional trauma center designation process was implemented.
- In 2005, a trauma rehabilitation registry was established with the Division of Emergency Medical Services as a module of the Ohio Trauma Registry. This registry was the first of its kind in the nation and was developed to track and understand longer-term outcomes of trauma victims.
- In 2007, the Ohio Department of Health convened the Ohio Injury Prevention Partnership (OIPP) with funding from the Centers for Disease Control and Prevention. The OIPP is a statewide group of professionals representing a broad range of agencies and organizations concerned with building Ohio’s capacity to address the prevention of injury.
- In 2008, the Ohio Trauma Committee conducted a wide-ranging assessment of the statewide trauma system in order to more effectively carry out its legislative mandate of advising and assisting the State Emergency Medical Services Board in matters related to trauma care. The Model Trauma System Planning and Evaluation document created by the federal government was used as the method for conducting this assessment.
- In 2009, a workgroup was formed by the Ohio Trauma Committee to develop a strategic plan for Ohio’s trauma system based on the results of the system assessment. The workgroup first met in February, 2009.
- In May 2009, a stakeholder meeting was held to evaluate the state trauma system and serve as the foundation for the remainder of this document. Details of the process are described in the subsequent section, *Ohio’s Trauma System Assessment*.

OHIO TRAUMA FACTS AND SYSTEM ACCOMPLISHMENT

(AS OF JULY 2010)

- Ohio has forty-three verified trauma centers as of July 2010. These include seventeen Level III trauma centers, twelve Level II trauma centers, and fourteen Level I centers. Six of the Level I and II trauma centers are pediatric-specific.
- The state has statewide trauma triage protocols that require EMS providers to transport severely injured patients directly to verified trauma centers. Certain conditions allow transports to non-trauma centers at the discretion of EMS providers. Variants to these trauma triage protocols have been created to adjust for regional differences.
- Acute care hospitals are required to have protocols that address the emergency care of trauma patients and their appropriate transfer to a trauma center. Trauma centers have transfer agreements with acute care facilities to ensure continuity of care and appropriate trauma patient transfers.
- Some EMS agencies have begun trauma performance improvement (PI) and peer review activities in order to continuously improve trauma care in the prehospital setting. There is no external oversight for EMS agencies' PI activities.
- Continuing education standards for EMS providers have been updated to place more emphasis on the educational needs for trauma care. With every certification renewal cycle, emergency medical technicians at the basic, intermediate and paramedic levels in the state are required to have eight hours of documented trauma education including the State of Ohio's trauma triage criteria.
- The seven special studies required by HB 138 are complete. These reports are available at <http://ems.ohio.gov>.
- The EMS and Trauma Grants program that had been funding EMS training and equipment since the early 1990's has expanded to include funding of trauma-related research in three areas: injury prevention, trauma rehabilitation, and trauma medical procedures. These research grants have resulted in numerous publications in peer-reviewed journals.
- Two temporary commissions set up by the Ohio Department of Health to study injury prevention and post-critical trauma care have since completed their reports. These two reports are available at <http://ems.ohio.gov> and are foundational documents for further improvements in the trauma system, specifically in areas of injury prevention and rehabilitation.
- In 2008, the Ohio Trauma Committee evaluated the special needs of the geriatric trauma patient and made recommendations to triage geriatric patients with specific indicators to trauma centers. These were incorporated in to O.A.C. 4765-14.

OHIO'S TRAUMA SYSTEM ASSESSMENT

Summary of Work

On March 12, 2008, the Ohio Trauma Committee convened to assess Ohio's statewide trauma system. A general assessment was conducted on the system's current strengths and weaknesses, as well as potential opportunities and threats to future development. The Committee reviewed the *Model Trauma Systems Planning and Evaluation* document (MTSPE) created by the Health Resources and Services Administration of the U.S. Department of Health and Human Services. The MTSPE contains 113 indicators by which a state trauma system may be evaluated. The MTSPE has been used by twenty-five other states and many regions within states to evaluate their trauma systems. It was adopted by the American College of Surgeons' Committee on Trauma (ACS-COT) as a tool for assessing trauma systems. (The ACS is the verifying body for Ohio's trauma centers.) The Ohio Trauma Committee made the decision to utilize the MTSPE to assess Ohio's trauma system. The eventual goal was to produce a comprehensive guidance document for further development of Ohio's trauma system in order to advance the care of trauma victims.

In November 2007, at the request of the Ohio Trauma Committee, the Ohio Society of Trauma Nurse Leaders (OSTNL) met to design an assessment process for Ohio utilizing the MTSPE. The OSTNL developed a template that evaluated Ohio's current trauma system against the MTSPE. This served as the foundation for a multi-stakeholder assessment using the MTSPE, which was conducted in a day-long retreat with the Ohio Trauma Committee and OSTNL. Other participating stakeholders included members from the Ohio COT, the Ohio Department of Health, the Ohio Emergency Management Agency, and the Ohio Hospital Association. Scoring on the MTSPE was accomplished by consensus of the stakeholders present at the retreat.

Over the next several months, the MTSPE assessment was a major agenda item for work at bimonthly meetings of the Ohio Trauma Committee. This work was completed by multiple stakeholders from a variety of agencies and involved a step-by-step process that provided the following:

- An evaluation of the implications of the scores for each section against the individual indicators of the MTSPE
- Categorization of each indicator by importance or priority
- Ranked relative ease of accomplishment
- Ranked anticipated cost

An additional outcome of this phase of the assessment was the recognition that a significant amount of dedicated work would be required to reach the project goal of producing a comprehensive guidance document that would drive specific aspects of improving the trauma system, both in the near-term and longer-term future. To address the amount of work required, the OSTNL took the lead on reviewing the assessment information and organized it according to MTSPE sections. This document was provided to the Ohio Trauma Committee as a recommended template for a future stakeholder meeting.

The next step for the Ohio Trauma Committee was the development of a dedicated steering subcommittee. The steering committee was comprised of volunteers from the Ohio Trauma Committee and included various professional backgrounds: physicians, nurses, hospital

executives, and others representing different constituencies of the Ohio Trauma Committee. This group, along with occasional invited guests, met on a bi-monthly basis, starting in January 2009. In addition, at several points, input was solicited for specific sections of the assessment and plan from other stakeholders within the state.

With the specific goal of this subcommittee being the development of a written Trauma System Plan for Ohio, an additional directive by the Ohio Trauma Committee was to review other states' trauma system plans known to be developmentally advanced relative to Ohio. This research was used to draft an outline of an Ohio Trauma System Plan by the subcommittee. The intent was to integrate the MTSPE indicators with functional components of a trauma system.

The result of this work is a document divided into eight major goals. Each goal lists the current and desired status of that goal's subject matter. Within the plan of action specific MTSPE indications are identified according to priority. Each indicator is associated with timeframes, leadership, partners, and funding to be determined by the work group during finalization. Each strategy has a measure of success to ensure appropriate outcomes are reached. The major goals are identified below.

- Goal 1: Leadership
- Goal 2: Injury Prevention
- Goal 3: Emergency/Disaster Preparedness Plan
- Goal 4: Prehospital Care
- Goal 5: Definitive Care – Acute Care Hospitals and Trauma Centers
- Goal 6: Definitive Care – Rehabilitation
- Goal 7: Evaluation, Quality Management & Performance Improvement
- Goal 8: Trauma System Registry Infrastructure
- Goal 9: Professional Education and Public Information
- Goal 10: People with Functional Needs

This Trauma System Plan for Ohio has been reviewed and approved by the membership of the Ohio Trauma Committee. The utility of this document is that it summarizes the information available from a wide range of topic experts across the State of Ohio. It explicitly defines overarching goals that have been identified nationally as key to the development of a robust and responsive trauma system. It incorporates a ranking system that allows the opportunity for leaders and policy makers to strategically plan for development and implementation of the various goals. Additionally, it is constructed to provide a resource to the experts and leadership in the various organizations and agencies across the state responsible for each goal area. It is intentionally non-prescriptive to avoid constraining innovation and development within current programs.

TRAUMA SYSTEM PLAN

Key components of an integrated state trauma system are described as the following goals.

Goal 1: Leadership – Have a viable, active state lead agency with authority, responsibility and resources to plan, implement and evaluate an inclusive trauma system for Ohio.

Goal 2: Injury Prevention – Have a state trauma system that is an active partner in a state-coordinated system for the reduction of injury-related morbidity and mortality.

Goal 3: Emergency/Disaster Preparedness – Have a trauma system prepared to respond to emergency and disaster situations in coordination with state disaster plans.

Goal 4: Prehospital Care – Evaluate and maintain guidelines specific to the transport of trauma patients that result in timely and safe delivery to trauma care.

Goal 5: Definitive Care – Acute Care Hospitals and Trauma Centers – Establish a statewide network of trauma centers that meets minimum state standards for operation and provision of quality trauma care in coordination with all other trauma system participants.

Goal 6: Definitive Care – Rehabilitation – Establish rehabilitation centers as active participants in Ohio's trauma system resulting in coordinated post-acute care for trauma victims.

Goal 7: Evaluation, Quality Management & Performance Improvement – Establish statewide and regional system evaluation, quality management, and performance improvement process.

Goal 8: Trauma System Registry Infrastructure – Evaluate and maintain an accurate and accessible injury data system, including a trauma registry, to support trauma system evaluation, performance improvement, public health planning, injury prevention, and outcomes research.

Goal 9: Professional Education and Public Information – Integrate trauma education and public information into all aspects of the trauma system.

Goal 10: People with Functional Needs – Ensure that special needs and high-risk populations are identified and their specific needs accommodated.

Goal 1: Leadership

Have a viable, active state lead agency with authority, responsibility, resources and funding to plan, implement and evaluate an inclusive trauma system for Ohio.

Current status: The Ohio Trauma Committee serves as an advisory committee to the EMS Board with legislative mandate limited to the establishment of triage guidelines. Trauma centers must be verified by the American College of Surgeons to function as a trauma center. The State has no enforcement authority. State designation support services are not comprehensive.

Desired status: Legislative authority (statute and regulations) exists to identify the Lead Trauma Agency (LTA) and its organizational structure. The LTA plans, develops, implements, manages, evaluates and administers the funding of the trauma system and its component parts. The LTA works through all appropriate stakeholders to accomplish the goals of the trauma system. The LTA informs and educates state, regional, county and local constituencies and policy makers to foster collaboration and cooperation for system enhancement and injury control.

Plan of action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
1.1: An external assessment is conducted on the state-wide trauma system. (MTSP indicator 103.4)	TBD	TBD	TBD	TBD	<ul style="list-style-type: none">● Written document with specific recommendations on system development.
1.2: A formal assessment of the needs of the various constituencies (i.e. media, public officials, general public, insurance providers, medical community) of the trauma system has been completed. (MTSP indicator 105.2 – 105.7)					<ul style="list-style-type: none">● Plans have been developed to meet these specific needs.● An effective communication plan for each constituent group is operationalized. (MTSP indicator 207.1, 207.2, 207.4)● Publish and distribute a Trauma Annual Report. (MTSP indicator 304.1)
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
<p>1.3: Legislative authority (statute and regulations) exists to identify the Lead Trauma Agency (LTA) and its organizational structure. The LTA plans, develops implements, manages, and evaluates the trauma system and its component parts. (MTSP indicator 201.1)</p>					<p>Legislative authority exists.</p> <ul style="list-style-type: none"> ● LTA is established with a defined organizational structure. (MTSP indicator 202.1, 202.3) ● There is a state-wide Trauma Medical Director with a written job description and whose specific legal authorities and responsibilities are formally granted by law or by administrative rule. (MTSP indicator 310.13) ● There is a state-wide EMS system medical director with a written job description and whose specific legal authorities and responsibilities are formally granted by law or by administrative rule. (MTSP indicator 302.3) ● Operational policies and procedures and trauma system performance standards are in place. (MTSP indicator 201.3, 201.4) <p>Compliance is actively monitored.</p>
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
<p>1.4: Based on needs assessment, a trauma system plan has been adopted:</p> <p>1.4.1: Match resource allocation to need. (MTSP indicator 303.2, 303.5)</p> <p>1.4.2: Integrate various state and regional components of the trauma system (i.e. EMS, trauma centers, hospitals, emergency preparedness, rehabilitation) into regional trauma systems that have formal relationships. (MTSP indicator 303.2)</p> <p>1.4.3: Identify and manage personnel and equipment</p> <p>1.4.5: Identify and manage financial resources and operational budgets to support and coordinate state and regional plans.</p> <p>1.4.6: Develop an enhanced state-wide 9-1-1 system. (MTSP indicators 203.1 – 203.4; 203.7; 204.1-204.2; 204.4-204.5, 302.7)</p>					<ul style="list-style-type: none"> ● A trauma system plan has been adopted and developed with multi-agency groups and endorsed by those agencies that address our strategies.
<p>1.5: LTA, in cooperation with various licensing and certifying boards / agencies, conducts regular operational assessment of all components of the trauma system to ensure compliance with laws, rules and regulation, clinical care protocols and other responsibilities as identified in the trauma plan. (MTSP indicators 310.5, 310.5, 310.8, 311.1 – 311.3, 311.5, 311.6)</p>					<ul style="list-style-type: none"> ● A mechanism exists to evaluate individual and institutional trauma care services across the entire trauma care system through performance improvement. ● All individuals and institutions receive a report regarding status / compliance (some of these functions may be completed by relevant licensing agencies). ● A mechanism is in place for LTA to facilitate resolution of non-compliance /complaints in collaboration with appropriate agencies.
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
1.6: The LTA will analyze the trauma system function across all provider organizations in order to develop a geographically rational system of regional responsibility to facilitate communication, administration, coordination and improvement of care. (MTSP indicators 103.1, 105.2-105.7, 207.1)					<ul style="list-style-type: none"> • All counties are included in a well organized regional trauma system by a timeframe determined by the LTA.
1.7: The LTA administers the funds necessary to operate the state trauma system					<ul style="list-style-type: none"> • LTA resources match system needs • System resources match population needs • Hospital resources meet patient needs

Goal 2: Injury Prevention

Active partnership between the state trauma and injury prevention systems focusing on the reduction of injury morbidity and mortality.

Current Status: Injury prevention programs exist at the state, regional, county, and local levels, as well as at all trauma centers. These programs have a forum to meet through the Ohio Injury Prevention Partnership (OIPP). Voluntary, state-level injury prevention and control plans focused on high priority injuries are being developed. Monitoring of program outcomes and injury prevention effectiveness occurs only sporadically by local injury prevention programs. Local programs are not guided by a strategic state plan. Coordination of injury prevention programs with the state trauma system is limited.

Desired Status: The written injury prevention and control plan is fully developed and coordinated with interested agencies and community health programs. State, regional, county and local level injury plans are data driven with a focus on high priority injuries. Specific goals with measurable objectives are incorporated into the injury plan. Trauma system and injury prevention leaders regularly inform and educate policy makers on trauma system development and injury prevention. Injury coalitions and trauma-specific statewide multidisciplinary, multi-agency advisory committees are integrated and work collaboratively to inform the community and to educate community leaders. The trauma system participants have been trained in the use of effective injury prevention strategies and analytical tools. These tools are used routinely to monitor and report on the outcome of implemented strategies and on the effectiveness of injury prevention and control programs within the trauma system. A process is in place to facilitate access to data for evaluation and research.

Plan of Action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
2.1: The development of statewide injury prevention plans on high priority injuries. (MTSP Indicators 101.6 & 203.5) (OIPP Infrastructure Goal #2)	TBD	TBD	TBD	TBD	● Injury plans are data driven with a focus on evidence-based programs. Specific goals with measurable objectives constitute the plans. Stakeholders will participate in the implementation and evaluation of the plan.
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
2.2: The trauma system and public health system have established linkages with an emphasis on population-based public health programs, surveillance and evaluation of acute and chronic traumatic injury and primary and secondary injury prevention programs. (MTSP Indicators 101.4 & 101.6, 208.1) (OIPP Infrastructure Goal #5)					<ul style="list-style-type: none"> ● Sharing of data between systems exists at regularly scheduled intervals as deemed appropriate by participating groups. (MTSP Indicator 208.1)
2.3: Evidence-based injury prevention strategies are utilized at the state, regional, county and local trauma system levels. (MTSP Indicator 306.2) (OIPP Infrastructure Goal #4)					<ul style="list-style-type: none"> ● The trauma system is an active participant in community activities, evidence-based injury prevention and control programs and the evaluation of program effectiveness. ● Evidence-based injury prevention resources are distributed.
2.4: Increase the knowledge and skills (capacity) of injury prevention personnel. (OIPP Infrastructure Goal #4)					<ul style="list-style-type: none"> ● Injury prevention training is developed with incorporation throughout the state.
2.5: Support public health policies designed to advance injury and violence prevention in Ohio. (OIPP Infrastructure Goal #2)					<ul style="list-style-type: none"> ● Position statements developed for injury prevention policies are available and utilized.
2.6: Injury prevention programs use trauma data to develop intervention strategies. (MTSP Indicator 205.4) (OIPP Infrastructure Goal #1)					<ul style="list-style-type: none"> ● Trauma reports on the status of injury and injury mechanisms are easily accessible and routinely available to injury prevention personnel. Trauma data is routinely used to align injury prevention programs to target the greatest need. ● Existing databases (death, risk factor, fatality review, hospital, EMS, trauma, child maltreatment, crime, traffic crash, poison control, brain injury, etc) are compiled, assessed for quality and linked (208.1).

Goal 3: Emergency/Disaster Preparedness

The trauma system is well-integrated into state, regional county and local disaster plans. The trauma system is prepared to respond to emergency and disaster situations in coordination with state, regional, county and local disaster plans.

Current Status: The Ohio Emergency Management Agency (EMA), all county EMAs, local EMAs, and many facilities have plans and procedures in place for all-hazards incidents. These plans are not integrated with the state trauma system and do not address the roles and responsibilities of trauma centers in a disaster situation. Current drills and exercises do not test the trauma system.

Desired Status: . The emergency management and trauma systems are well-integrated, and operational procedures have been implemented, tested, and evaluated for disaster operations. System participants meet regularly and are familiar with the operational plans of both areas, and data from the trauma system and from the emergency management system are shared. Roles and resources of trauma centers and acute care hospitals during disaster events are well-defined and incorporated into state, regional, county and local plans.

Plan of Action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
3.1: Create plans to ensure the EMS, trauma and the all-hazards medical response systems are integrated and operational within existing individual, county, regional and statewide disaster plans. (MTSP indicator 305.1)	TBD	TBD	TBD	TBD	<ul style="list-style-type: none">• All-hazards exercises and simulated incident drills have the cooperation and participation of the trauma system or trauma centers at the local, regional and state levels.• Interactions of the lead trauma agency and emergency management agencies are addressed. Close coordination with clearly defined roles, goals and objectives are included in plans. (MTSPE Indicator 203.6)• The trauma system is actively involved in the support of ESF-8
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
3.2: All-hazards exercises routinely include trauma-producing events (natural, unintentional and intentional) that test the capabilities of the trauma system. (MTSP Indicator 305.2, 208.2)					Exercises and training in all-hazards responses which test and evaluate trauma center, acute care hospital, and trauma system surge capacity are conducted regularly. <ul style="list-style-type: none"> • Roles of trauma centers and non-centers during a disaster events are well defined and incorporated into the regional/local plan.
3.3: The lead trauma agency has access to additional materiel and personnel for large-scale traumatic events. (MTSPE indicator 305.3)					<ul style="list-style-type: none"> • The lead trauma agency has worked with national, state, regional, county and local agencies to create caches of equipment and materials for use in prehospital and hospital care in large-scale traumatic events. Plans for utilizing additional personnel in these events are also in place. • Caches of supplies, equipment and pharmaceuticals are available to trauma centers and acute care hospitals when needed.

Goal 4: Prehospital Care

Evaluate and maintain guidelines specific to the transport of trauma patients that result in timely and safe delivery to trauma care.

Current status: The emergency medical system exists within the state of Ohio with regional variability. A well-established EMS Board exists with authority over licensure for emergency medical services and fire personnel, protocol development, prehospital triage criteria, and other priorities. There is an identified State EMS Medical Director, Regional Physician Advisory Boards, and trauma-specific triage and transport guidelines. There is trauma-specific prehospital education. There are highly variable regional linkages between EMS and trauma systems. There is no state trauma system medical director actively involved with the development, implementation, and evaluation of protocols. There is no organized trauma EMS performance improvement process at the state level.

Desired status: The trauma system is supported by the EMS system that includes communication, medical oversight, prehospital triage and transportation. The trauma system, EMS system and public health agencies are well integrated with a sophisticated trauma / EMS performance improvement system. There is a designated state trauma medical director.

Plan of action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
4.1: There is a well-defined trauma system with medical oversight integrating the specialty needs of the trauma system with the medical oversight for the overall EMS system. (MTSP indicator 302.1)	TBD	TBD	TBD	TBD	<ul style="list-style-type: none">● Formal, written procedure exists delineating the responsibilities and relationship of the state trauma medical director and the state EMS medical director.● In cooperation with the prehospital certification and licensure authority, guidelines exist for prehospital personnel for initial and ongoing trauma education and training; including trauma-specific courses and those courses that are readily available throughout the State. (MTSP indicator 310.1)
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
<p>4.2: The trauma system medical director is actively involved with the development, implementation, and ongoing evaluation of EMS system protocols to ensure they are congruent with the trauma system design. (MTSP indicator 302.4)</p>					<ul style="list-style-type: none"> ● Development of EMS / Trauma system protocols, with clear collaboration between the trauma system medical director and the state EMS medical director, with protocols congruent with the trauma system plan. ● Local, regional and state medical oversight exists. Effective performance improvement process of the EMS system for trauma triage, communications, treatment, and transport is in place. (MTSP indicator 302.5) ● Sufficient and well-coordinated transportation resources exist to ensure EMS providers arrive at the scene promptly and expeditiously transport the patient to the correct hospital by the correct transportation mode. (MTSP indicator 302.8)
<p>4.3: There is clearly defined, cooperative, and ongoing relationship between the hospital trauma medical directors and local / regional EMS directors (MTSP indicator 302.2).</p>					<ul style="list-style-type: none"> ● A formal organizational structure exists at the local and regional level, supporting the collaboration and medical oversight of trauma triage, education, communication, treatment and transport.

Goal 5: Definitive Care – Acute Care

Establish a statewide and regional network of trauma care to include trauma centers and acute care facilities. These would meet minimum state standards for operation and provision of quality trauma care in coordination with all other trauma system participants.

Current Status: There are a large number of trauma centers, verified by the ACS or operating under provisional designation, in the state. Trauma center status is voluntary and no authority exists to control the placement of trauma centers. Coordination among trauma centers and between trauma centers and non-trauma centers is not standardized and non-systematized. Physicians at non-trauma center hospitals are prohibited from admitting trauma victims as defined by the Ohio Revised Code. Secondary triage of trauma victims is facility determined and there is no mandatory review of the criteria. There is no regulatory oversight of trauma care in trauma centers or in non-trauma centers and performance improvement is not mandated. Some voluntary, cooperative regionalization of care occurs in the state.

Desired Status: Acute care facilities, regardless of trauma designation, are integrated into a resource-efficient, inclusive network that meets required standards and provides optimal care for all injured patients. There are clearly defined roles and responsibilities of all acute care facilities treating trauma and facilities that provide care to specialty care populations. A network of comprehensive regional trauma systems exists.

Plan of Action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
5.1: Assure an inclusive trauma network which recognizes the contribution of all acute care hospitals in the treatment of the trauma victim. 5.2: Trauma center development is encouraged and enabled in resource poor regions.	TBD	TBD	TBD	TBD	<ul style="list-style-type: none">• Continued verification of Ohio trauma centers.• Written and approved process exists for non-trauma center designation.
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
5.4: There is a procedure for communications among medical facilities when arranging for interfacility transfers including contingencies for radio or telephone system failure. (MTSPE Indicator 302.9)					<ul style="list-style-type: none"> • All hospitals, trauma centers and acute care hospitals provide standardized care in the first 30 minutes after patient arrival. • Development of a standardized reporting form with regional reporting and monitoring. • Regional performance improvement process exists that involves all hospitals within a regional system. • Bi-directional, closed loop communication exists regarding follow up to transferring facilities in regards to patient care and outcome.
5.5: When injured patients arrive at a medical facility that cannot provide the appropriate level of definitive care, there is an organized and regularly monitored system to ensure the patients are expeditiously transferred to the appropriate, system-defined trauma facility.					<ul style="list-style-type: none"> • An organized system of monitoring inter-facility transfers exists within the trauma system (MTSPE Indicator 303.4).
5.6: Assess and ensure that injury trauma and severity are matched to resources available for timeliness and quality of care.					<ul style="list-style-type: none"> • Over- and under-triage reaches acceptable levels in standardized statewide methodology across the state. • Statewide feedback mechanism for correction of over- and under-triage is established and functional. (MTSPE Indicator 303.1)
5.7: Set appropriate education standards for physicians and nurses who routinely participate in trauma care.					<ul style="list-style-type: none"> • Baseline standards of education for nurses and physicians exist across the state. • A statewide performance improvement process to monitor the achievement of the education standards exists. (MTSPE Indicator 310.3 through 310.7)

Goal 6: Definitive Care – Rehabilitation

Establish rehabilitation centers as active participants in Ohio's trauma system resulting in coordinated post-acute care for trauma victims.

Current status: Rehabilitation is available to most trauma patients. Trauma centers work with rehabilitation programs on an individual, non-standardized basis without a systematized approach. Some in-patient rehabilitation data is submitted to the Ohio Trauma Registry, but outpatient data is not. The data has not been validated, nor is it routinely used in system evaluation reports.

Desired status: A well-integrated program of rehabilitation is available for all trauma patients. Rehabilitation programs are included in the trauma system plan, and trauma centers work closely with rehabilitation centers and services to ensure quality outcomes for trauma patients. The trauma plan integrates rehabilitation centers and outpatient rehabilitation services. Trauma centers integrate rehabilitation care early in the patient's treatment plan. Rehabilitation data, including final disposition, functional outcome, and rehabilitation costs, are collected. These data are routinely submitted to trauma centers and to the Ohio Trauma Registry for inclusion in system evaluation reports. Rehabilitation personnel are fully integrated into trauma system performance improvement processes.

Plan of Action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
6.1: Establish leadership for rehabilitation services within the inclusive trauma system. (MTSP Indicator 308.1) 6.2: Review, revise, and implement the recommendations of the 2003 Post Critical Trauma Commission Report. 6.3: Maintain standard of care and ensure continual improvement of rehabilitation services.	TBD	TBD	TBD	TBD	<ul style="list-style-type: none"> ● A rehabilitation oversight body is present, meeting at least twice a year, by end of year 2. ● Rehabilitation services in the state are congruent with the needs of the trauma victims. Specific measurements to be defined. ● OTR-Rehabilitation data is used to evaluate post-traumatic rehabilitation care and patient outcomes. ● Formal written transfer agreement between all trauma centers and inpatient rehabilitation facilities.
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
<p>6.4: Rehabilitation centers and outpatient rehabilitation services provide quality data on trauma patients (MTSP Indicator 308.2).</p> <p>6.5: Rehabilitation oversight body to define and oversee the rehabilitation database.</p> <p>6.6: Development of a comprehensive rehabilitation database that is integrated within the Ohio Trauma System Registry.</p>					<ul style="list-style-type: none"> ● Oversight body defines the staging of facilities that care for a post-injury rehabilitation patient who will be reporting data. ● Ohio trauma rehabilitation data is used to evaluate post-traumatic rehabilitation care and patient outcomes with an annual report submitted to the LTA.

Goal 7: Evaluation, Quality Management & Performance Improvement

Establish statewide and regional system evaluation, quality management, and performance improvement process throughout the continuum of care.

Current status: Reports on varying aspects of injury prevention and clinical care are created in isolation at state, regional and local levels. These are not integrated at any level. Analysis is fragmented, uncoordinated and largely unshared with other stakeholders.

Desired status: Processes exist to evaluate the performance of all aspects of the trauma system. These include analysis of the outcomes of population-based injury prevention services; access to and availability of services, with emphasis on special populations; quality of services across the full spectrum of trauma care providers; and outcomes of care. Evidence-based performance improvement indicators exist and performance goals have been set. Detailed feedback on quality and performance is provided to pertinent stakeholders, including the LTA. Overall assessments of the trauma system are provided to the public and the media.

Plan of action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
7.1: Establish a performance improvement body which is multidisciplinary in nature and oversees all aspects of the trauma system's quality and performance.	TBD	TBD	TBD	TBD	<ul style="list-style-type: none"> • Regular meetings, analysis of data and reports are created providing feedback to all trauma system components. • System performance outcome goals have been created based on the baseline analyses which are time-specific, quantifiable and measurable. (MTSPE Indicators 202.4, 306.1, 306.3, 307.2, 309.4, 310.11, 310.12) • Inventory and a gap analysis are completed and reported to stakeholders and the public (MTSPE Indicators 103.2). • Trauma data reports are generated and are disseminated to system leaders and stakeholders to evaluate and improve system performance effectiveness. (MTSPE Indicator 105.1) • Develop process of integrating outcome of trauma-related research into clinical care and trauma system refinement improvement.

Goal 8: Trauma System Registry Infrastructure

Evaluate and maintain an accurate and accessible trauma registry to support trauma system evaluation, performance improvement, public health planning, injury prevention, and outcomes research.

Current Status: Injury data is collected from EMS, acute care hospitals, and inpatient rehabilitation facilities. Data from hospitals and rehabilitation facilities is limited to serious injuries (i.e. hospitalization greater than 48 hours). Currently, financial and death certificate/coroner's data are not collected. There is limited data regarding emergency department and hospital discharge. Data has been linked probabilistically but relevant data (i.e., Social Security number, patient name) to make deterministic linkage is not collected. At the system level, collected data is available to support trauma system evaluation, performance improvement, public health planning, injury prevention, and outcomes research; however, the frequency of these data analyses is low. A comprehensive injury surveillance system does not exist.

Desired Status: There is a comprehensive and standardized trauma management information system. The trauma system registry will include all aspects of care: prehospital, acute care, rehabilitation, coroner, financial. All data systems are deterministically and probabilistically linked. There is a process in place to evaluate and ensure the quality, timeliness, completeness, and confidentiality of the data. The trauma system registry will be made widely available for research, injury surveillance and system performance assessment. Data is provided to outside sources in an aggregate and de-identified format and is consistent with confidentiality requirements.

Plan of action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
8.1: Develop a comprehensive, standardized trauma system registry.	TBD	TBD	TBD	TBD	<ul style="list-style-type: none">● System has the ability to compare injury mortality. (MTSPE Indicator 101.3)● System has the ability to describe the epidemiology of injury. (MTSPE Indicator 101.1)● All databases are probabilistically and deterministically linked. (MTSPE Indicator 102.3)
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
8.2: Develop standardized, dynamic reporting tools to allow individuals to access specific views and information.					<ul style="list-style-type: none"> ● Existence of a web-based reporting system allows monitoring of injury data by the full scope of injury stakeholders. (MTSPE Indicator 102.2, 301.4, 304.2)
8.3: Develop rules and regulations that ensure quality, timeliness, completeness and confidentiality of data.					<ul style="list-style-type: none"> ● Policies and procedures exist that ensure quality trauma data is readily available. (MTSPE Indicator 102.4)
8.4: Establish a method of collecting trauma financial data from a variety of sources.					<ul style="list-style-type: none"> ● Financial data is used for annual strategic and budgetary planning. (MTSPE Indicator 102.5, 205.1) ● Definitions for financial trauma data are a component of the data dictionary and are reported to the trauma system registry. (MTSPE Indicator 309.1, 309.2, 309.3)

Goal 9: Professional Education and Public Information

Integrate trauma education and public information into all aspects of the trauma system.

Current Status: Trauma education requirements are not well-defined. There is no trauma educational plan for the state. Sporadic educational requirements exist. The Division of EMS mandates education to all certified prehospital personnel. There are no specific nursing and physician trauma education requirements. General public trauma information, including information generated for the stakeholders and constituents, is scattered and diffuse.

Desired Status: Professional trauma education plan exists for all care providers. There is a public information plan related to trauma. Both plans are well-defined, monitored, evaluated and revised as needed.

Plan of Action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
9.1: Establish a public information plan.	TBD	TBD	TBD	TBD	<ul style="list-style-type: none">• Public officials and the general public are included and involved in trauma information directives.• An assessment of public officials, general public, and medical community on their level of understanding regarding trauma system has been conducted• Information resources for dissemination to the general public and public officials have been developed. (MTSP indicator 105.4, 105.5)
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
<p>9.2: Establish a professional trauma education plan.</p>					<ul style="list-style-type: none"> • An educational needs assessment of the medical community (including pre-hospital, nursing, physicians and allied health) regarding trauma patient care has been conducted. (MTSP Indicator 105.6, 105.7) • Trauma care providers will be knowledgeable on trauma care and the trauma system function. • Information resources for dissemination to the broad medical community have been developed. (MTSPE indicator 205.5) • Guidelines exist for prehospital, nursing, physician and allied health personnel for initial and ongoing trauma training. (MTSPE indicator 310.1, 310.2, 310.3, 310.10)

Goal 10: People with Functional Needs

Ensure that individuals with functional needs achieve the same benefits from the trauma system as the general population.

Current Status: Pediatrics and geriatrics are the only special populations which are identified in law or rule; their own triage criteria are integrated into the state's triage rules. There are pediatric trauma centers in the largest metropolitan areas with effective catchment areas covering the entire state, but the roles and responsibilities of other acute care facilities are not formalized. Beyond triage, the needs of the geriatric population have not been addressed at the system level. No assessments have been done to identify and determine the needs of other special populations, including physical and mental disability, limited English proficiency, cultural/ethnic or rural/remote location. The Joint Commission, the accrediting body for hospitals in Ohio, mandates that hospitals have processes to address gaps in hospital care for persons with functional needs.

Desired Status: The trauma system plan addresses the needs of persons with functional needs including but not limited to those with the following circumstances:

- **Dependency status** (i.e. children of all ages and those adults with significant behavioral, cognitive and/or physical disabilities);
- **Communication barriers** to seeing, hearing and/or understanding the spoken or written word (i.e. people with illiteracy, non-English-speaking, and/or those lacking the ability to see, hear or speak);
- **Access to care barriers** (i.e. those who do not have access to public or private transportation and/or who live so remotely that they do not have access to medical care and/or injury prevention programming); and
- **Acute, chronic and/or co-morbid medical conditions** including obesity that may complicate trauma medical care.

Plan of Action:

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
10.1: Establish strategies in all previous goal categories that acknowledge the needs of persons with dependency status, communication barriers, access to care barriers, and/or acute, chronic, and co-morbid medical conditions.	TBD	TBD	TBD	TBD	<ul style="list-style-type: none">• The Trauma System Plan addresses people's functional needs along the trauma care continuum.
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
10.1: <u>LEADERSHIP</u>: Include a representative from the Governor's Council on People with Disabilities (or equitable organization) on the governance board of the Lead Trauma Agency.					<ul style="list-style-type: none"> ● Functional needs are discussed on an ongoing basis and are integrated in to future-developed aspects of the State Trauma Plan.
10.2: <u>INJURY PREVENTION PROGRAMS</u>: Establish injury prevention programs targeted to persons with functional needs. The injury prevention programming should be based on trended state injury data.					<ul style="list-style-type: none"> ● State trauma data will demonstrate a decrease in injury rates (trended) among persons with functional needs after injury prevention programming is implemented.
10.3: <u>EMERGENCY / DISASTER PREPAREDNESS PLANNING</u>: Establish plans that mitigate access-to-care barriers and promote communications for persons with functional needs in disasters.					<ul style="list-style-type: none"> ● Procedures to address system gaps during disasters for persons with functional needs are integrated into local, regional and state plans.
10.4: <u>PREHOSPITAL CARE</u>: Establish evidence-based prehospital trauma triage protocols for persons with functional needs whose condition(s) makes field assessment by EMS more difficult. 10.4.1: Establish statewide prehospital protocols for equipment and transport that promote the safe care of pediatric and bariatric patients, as well as the EMS providers caring for them.					<ul style="list-style-type: none"> ● Under-triage rates of trauma patients with functional needs are comparable via state data to patients without functional needs. ● Properly-sized equipment and safe transport processes expedite the timely transfer of pediatric and bariatric trauma patients to trauma centers. These safe and timely methods also help to reduce injuries and maximize out-of-service times for EMS providers.
Continued...					

STRATEGY	TIMEFRAME	LEADERSHIP	PARTNER(S)	FUNDING	MEASURES OF SUCCESS
10.5: <u>DEFINITIVE CARE/ACUTE CARE</u>: Establish processes in which hospitals' best practices related to caring for patients with functional needs are shared across the state.					<ul style="list-style-type: none"> ● All hospitals have access to processes that will improve care to patients with functional needs.
10.6: <u>DEFINITIVE CARE/REHABILITATION</u>: Include recommendations specific to persons with functional needs in the updated 2003 Post-Critical Trauma Commission Report.					<ul style="list-style-type: none"> ● Rehabilitation services for trauma patients with functional needs are comparable via state data to patients without functional needs.
10.7: <u>EVALUATION, QUALITY MANAGEMENT & PERFORMANCE IMPROVEMENT</u>: Include significant information on persons with functional needs in state trauma data reports. 10.7.1: Develop programs to address gaps in care for persons with functional needs.					<ul style="list-style-type: none"> ● Gaps in care for persons with functional needs are highlighted in state trauma reports. ● Trauma patients with functional needs receive care equitable to that received by patients without functional needs.
10.8: <u>TRAUMA SYSTEM REGISTRY INFRASTRUCTURE</u>: Establish data elements in state trauma-related databases that identify persons with functional needs so that aggregate data can be trended to demonstrate achievement of care and system gaps for improvement.					<ul style="list-style-type: none"> ● Data elements in the Ohio Trauma Registry (OTR), the EMS Incident Reporting System (EMSIRS), and the Trauma Rehab Registry identify persons with functional needs who are trauma victims in Ohio. This data drives evaluation, quality management and performance improvement in the care of trauma patients in the state.

GLOSSARY

Accountability – Obligation of an individual or organization to account for its activities, accept responsibility for them, and to disclose the results in a transparent manner.

Acute Care Facility – In the context of this document, a hospital that is not a trauma center.

Adult Trauma Victim – A trauma victim between the ages of 16 and 69 years. (See also geriatric trauma victim, pediatric trauma victim)

Agency – A division of government with a specific function offering a particular kind of assistance.

All-Hazards Care – A standardized, integrated, coordinated and trained response for the provision of care during all types of incidents.

American College of Surgeons (Committee on Trauma) – A scientific and educational association of surgeons; the entity which sets the standards for and conducts the trauma center verification program.

Assessment – The regular systematic collection, assembly, analysis, and dissemination of information on the health of the community. These data, from a variety of sources, will assist in determining the status and cause of a problem and will identify potential opportunities for interventions.

Compliance – The process of performing acts according to what is expected or required. In the context of trauma systems, doing those things as required by the State to achieve trauma center status.

Comprehensive Trauma System – A coordinated inclusive system of care for the injured that encompasses all phases of care, from the prehospital setting to rehabilitation services and follow-up care. Such systems include data systems for injury surveillance and prevention as well as for performance measurement and improvement.

Continuum of Care – The concept of care including intentional and unintentional injury prevention, emergency medical services (EMS) 9-1-1/dispatch and medically supervised trauma care intervention, ground and air transportation, emergency department (ED) trauma care, trauma center-organized teams, surgical intervention, intensive and general in-hospital care, rehabilitative services, and mental health and social services.

Cost – The expenses and revenues incurred during the planning, implementation, and evaluation of the trauma system.

Data Systems – A collection of information from which one may make conclusions or inferences. In the context of trauma systems, data sources aid in describing the epidemiology of injury, care and outcome data, as well as cost of system and care, and provide a tool for quality

measurement in the system jurisdiction using population-based data, clinical databases, and accounting data. Such sources may include vital statistics and these types of data: EMS, ED, trauma center and hospital discharge, State police, medical examiner, trauma registry, rehabilitation facilities, and mental health and social services.

Definitive Care – Actions taken or implemented to ensure the needs of the patient are met.

Designation (facility) – The identification of capabilities or status based upon predetermined criteria. In the context of trauma systems, the identification of trauma centers based upon the meeting of specific predetermined criteria.

Deterministic Data Linkage – Data that are linked with direct patient identifiers such as name, Social Security number or medical record number.

Disaster – An unexpected natural or man-made catastrophe of substantial extent causing significant physical damage or destruction, loss of life or sometimes permanent change to the natural environment.

Emergency – In the context of trauma systems, the occurrence of critical or life-threatening injury requiring triage and transportation to resuscitation resources found in trauma centers and acute care hospitals.

Emergency Medical Services – A branch of emergency services which provides prehospital medical care and/or transport of patients with illnesses or injuries to definitive care.

Enabling Legislation – Legislation that provides appropriate officials the authority to implement or enforce the law.

Epidemiology – The study of causes, distribution and control of disease in a population.

ESF (Emergency Support Function) – Used by State Emergency Management Agency as the primary mechanism to organize and provide assistance to local jurisdictions. ESFs align categories of resources and provide strategic objectives for their use. ESF-8 supports public health and medical services.

Evidence-based – Characterized by methods of diagnosis and treatment that are based on demonstrable evidence, that is, their effectiveness has been demonstrated by well-designed, peer-reviewed studies.

Functional Outcome – The use of valid and reliable measurement tools, that is, Functional Inventory Measurement (FIM) and Wee-FIM, functional inventory measurement for pediatric patients, to assess the impact of disease and medical treatment on the lives of affected individuals. Domains assessed include mobility, activities of daily living, and cognitive capabilities.

Gap Analysis – The difference between trauma system standards and the compliance of the trauma system with those standards that result in the identification of system needs.

Geriatric Trauma Victim – Trauma victims age 70 years or older.

High-Risk Populations – Groups of people with unique anatomic and physiologic differences which predispose them to certain types of injuries and may also require a specialized approach to trauma care.

Incidence – The degree or range of occurrence or effect.

Incident – An event that requires an emergency response to protect life or property. Incidents may include major disasters, emergencies, terrorist attacks, wild land and urban fires, floods, hazardous material spills, nuclear accidents, aircraft accidents, earthquakes, hurricanes, tornadoes, tropical storms, war-related disasters, public health and medical emergencies, and other occurrences requiring an emergency response.

Inclusive Trauma System – A system that includes all health care facilities to the extent that their resources and capabilities allow and where the patient's needs are matched to hospital resources and capabilities. An inclusive trauma system encompasses all injuries: minor, moderate, and major. Patients with relatively minor injury need not go to a Level 1 or 2 trauma center, and access to a facility equipped to provide optimal care for injury is available and organized. If the facility is not prepared to provide care needed, there is a well orchestrated plan for expeditious patient transfer to a level of care commensurate with injury

Indicator – A measurable variable or characteristic that can be used to determine the degree of adherence to a standard or the level of quality achieved.

Infrastructure – Basic physical and organization structures needed for the operation of an entity or enterprise. In the context of trauma systems, the identified lead agency within the State; State trauma manager; trauma advisory committee; and supporting legislative language, that is, rules/regulations; trauma data system; identified resource care facilities (e.g., levels of trauma centers and burn centers); workforce; and other essential components to facilitate the implementation, monitoring, and performance improvement of care provided to severely injured people.

Injury – Physical harm or damage to the body resulting from the transfer of or exposure to mechanical, thermal, electrical, or chemical energy or from the absence of such essentials as heat or oxygen.

Interfacility Transfer – Movement of a patient from one care facility to another. In the context of trauma systems, interfacility transfer usually occurs in an effort to move an injured patient to a higher level of care where necessary resources optimize recovery.

Lead Agency / Lead Trauma Agency – A rule-making regulatory body whose membership is analogous to the EMS Board’s Trauma Committee with authority, responsibility and resources to lead development, operations and evaluation of the state trauma system.

Legislative Authority – Statute and regulations. A statutory provision establishing and continuing a government agency, activity, or program.

Level I Trauma Center – Level I trauma center is the highest level of trauma center and a regional resource center. It has a full range of surgical and medical specialists with resources available 24 hours a day and is required to admit a minimum required annual volume of severely injured patients. Additionally, a Level I center has a program of research and is a leader in trauma education and injury prevention.

Level II Trauma Center – Level II trauma center has a full range of surgical and medical specialists with resources available 24 hours a day. It provides comprehensive trauma care, regardless of severity of the injury. A Level II does not have volume requirements or the research obligation; however, it provides trauma education, outreach and injury prevention.

Level III Trauma Center –A Level III trauma center does not have the full availability of surgical and medical specialists, but does have resources for emergency resuscitation, surgery, and intensive care of most trauma patients. A Level III center has transfer agreements with Level I or Level II trauma centers that provide back-up resources for the care of exceptionally severe injuries. Example: Rural or community hospitals

Management Information System (MIS) – This comprehensive system is the collection of data from different sources to enable the review of the entire trauma system. It includes trauma registry, EMS, incident after-action reports, death certificates, crash reports, and cost information. The purpose of the system is to identify and evaluate system best practices, identify and evaluate gaps, review the utilization of trauma resources, track patient outcomes, develop performance standards, and measure system performance against similar systems (benchmarking).

Medical Oversight – The responsibility of supervising actions related to, involving, or used in medicine or treatment.

Morbidity – The relative incidence of disease, the condition of being diseased and the ratio of sick to well persons in a community.

Mortality – The relative incidence of death in a population.

Multidisciplinary – Composed of or combining several fields of expertise.

Ohio Administrative Code – Written statements of law adopted by an administrative agency pursuant to authority granted by the General Assembly to carry out the policies and intent of a statute enacted by the General Assembly. Also known as “Administrative Rules” or simply “Rules”. (See also Ohio Revised Code)

Ohio Revised Code – The laws of the State of Ohio.

Ohio Trauma Registry – Ohio’s trauma system registry. See Trauma System Registry.

Patients with Special Needs / Special Populations – Those individuals who have or are at risk for chronic physical, developmental, behavioral, or emotional conditions and who also require health and related services of a type or amount beyond that required generally.

Pediatric Trauma Victim – A trauma victim under the age of 16.

Performance Improvement (PI) – Methodology for evaluating and improving processes that employs a multidisciplinary approach and that focuses on data, benchmarks, and components of the system being evaluated.

Policy Makers – A person or organization with power to influence or determine laws, rules, policies and practices.

Population-Based – Interventions that are targeted toward populations to promote the overall health status of the community by preventing disease, injury, disability, and premature death.

Prehospital Care – Treatment provided to the trauma victim by emergency medical services before reaching the hospital.

Preparedness – The state of being prepared for specific or unpredictable events or situations.

Primary Injury Prevention – Activities implemented to completely avoid the occurrence of an injury or injury-producing event. Actions taken in anticipation of potential injury events that eliminate or reduce the risk for injury.

Probabilistic Data Linkage – A method of linking data between two or more sources using a computerized judgment process where specific data fields are statistically analyzed in order to conclude that the two records belongs to the same individual. Besides merging databases, this process can also be utilized to remove duplicate records from one database.

Protocol – Standard procedure for the triage, transport, resuscitation, and eventual definitive care of the injured patient.

Public Health (Model) – The science of health promotion and disease / injury prevention with emphasis on population level interventions rather than at the individual level.

Public Health Model – A proven, systematic method for identifying and solving problems. Improvements in the public health system, in partnership with the health care system, can be accomplished through informed, strategic, and deliberate efforts to positively affect health.

Regional / Regional Trauma System – A regional trauma system exists when these neighboring stakeholders formally organize into a structured entity for trauma system development specific to their area. These regions may overlap with other regional systems that exist for other purposes.

Rehabilitation – Services that seek to return an injured individual to the fullest physical, psychological, social, vocational, and cognitive levels of functioning of which he or she is capable, consistent with physiological or anatomical impairments and environmental limitations.

Resources – Somebody or something that assists with trauma development. Examples include but are not limited to the following: personnel, equipment, data, information, facilities.

Regulation – A rule or an order having force of law issued by the executive authority of the government. The term “regulation” is often used interchangeably with “rule.”

Risk Assessment – Information or report that evaluates and summarizes an organization’s vulnerabilities with comparison against benchmarks or regional, state or national standards.

Rule – A statement issued by an authoritative body of what to do in a specific situation. It clarifies or interprets a law. The term “rule” is often used interchangeably with “regulation.”

Secondary Injury Prevention – Initiative used to minimize the severity of an injury at the time of occurrence, such as through the use of safety devices.

Standards – Rules established as a basis of comparison for measuring or judging capacity, quantity, content, extent, value, and quality of services provided. In the context of trauma systems, rules defining resource availability determining trauma and burn care capabilities of hospitals.

Specialty Care Facility – An acute care facility that provides specialized services and specially trained personnel to care for a specific portion of the injured population, such as pediatric, burn injury, or spinal cord injury patients.

Special Populations – Groups of people with unique differences, which include but are not limited to age, physical and mental disability, limited English proficiency, cultural/ethnic or rural/remote location, that create a need for an atypical approach to trauma care.

Stakeholder – A person or group of individuals with a direct interest, involvement, or investment in a matter. In the context of trauma, an individual with interest in trauma care or trauma system development. (e.g., trauma surgeon, trauma program manager, epidemiologist, EMS, ED director, or hospital administrator).

Surge Capacity – A health care system’s ability to rapidly expand beyond normal services to meet the increased demand for qualified personnel, medical care, and public health in the event of bioterrorism or other large-scale public health emergencies or disasters.

Injury Surveillance System – The ongoing and systematic collection, collation, analysis, and interpretation, of information to understand the context in which specific injuries occur. A comprehensive injury surveillance system can be used not only to define and prioritize injury problems but also to support policy and intervention efforts.

Trauma (traumatic injury) – Tissue or organ injury, or both, sustained by the transfer of environmental energy. When a person is “hurt” vs. “sick”.

Trauma Center – A specialized hospital with the immediate availability of specially trained health care personnel who provide emergency care on a 24/7 basis for the severely injured. These specially trained personnel are immediately available to treat patients with ready operating rooms, special equipment, and necessary supplies. They are also committed to continuous quality improvement, education, injury prevention, and research. These hospitals have been verified by the American College of Surgeons by meeting established criteria for either adult or pediatric trauma care. A hospital may function as a Level I, II or III, depending on the depth of resources available.

Trauma System Registry – A collection of data on patients who receive hospital care for certain types of injuries. Such data are primarily designed to ensure quality trauma care and outcomes in individual institutions and trauma systems, but have the secondary purpose of providing useful data for the surveillance of injury morbidity and mortality.

Trauma System Plan – A document which serves as a blueprint for the design, implementation, and ongoing development of a trauma system tailored to meet the unique needs of an individual state. The plan identifies the essential components of its jurisdiction and is designed to meet the needs of all injured persons. All levels of providers will be incorporated into the plan. The plan will provide direction and function as a communication tool so that all components within the system are functioning as a unit. It outlines the organizational structures, system components, basis for system standards, specific objectives of the system, and a means of evaluating and improving system performance, while developing a vision of trauma care for the future.

Trauma System – An organized, inclusive approach to facilitating and coordinating a multidisciplinary system response to preventing injuries and providing care to the injured. A trauma system encompasses a continuum of care delivery and is inclusive of injury prevention and control, public health, EMS field intervention, ED care, surgical interventions, intensive and general surgical in-hospital care, and rehabilitative services, along with the social services and the support groups that assist the injured and their significant others with their return to society at the most productive level possible.


Trauma System Manager – The entity who is responsible for the management, coordination, facilitation, and evaluation of the trauma system. This position may be filled by an individual, a person under the auspices of a larger organization or agency, or a board of trauma experts and professionals.

Trauma Victim – A person who has suffered injuries caused by an external force that pose a threat to life or limb, or that may cause permanent, significant disability or disfigurement.

Triage – The sorting and determining priority on the basis of need or likely benefit. In the context of trauma systems, a process for sorting patients by types and severity of injury to determine transport to facilities where appropriate resources will exist to ensure optimal outcome.

Triage Protocols – Established, written plans for sorting and setting priorities. In the context of this document, protocols are written plans, often backed by rules/regulations that use severity of injury and hemodynamic stability as a criterion for the determination of patient prioritizing and transfer to appropriate facilities.

Verification – An objective process by which trauma care capability and performance of an institution is evaluated by experienced on-site reviewers.



APPENDIX A

List of participants in the March 12, 2008 Trauma System Assessment (an 8-hour facilitated meeting)

Trauma Committee

Nancie Bechtel, RN
John Crow, MD – Chair
Gary Englehart, FACHE
Mark Gebhart, MD
Todd Glass, MD
Vickie Graymire, RN
Kathy Haley, RN – Vice Chair
Jason Kinley, EMT-P
Brian Kuntz, RN, EMT-P
Edward Michelson, MD
Sidney Miller, MD
Greg Nemunaitis, MD
Jennifer Piccione, RN
Kevin Pugh, MD
Jane Riebe
Jonathan Saxe, MD
Michael Shannon, MD
Diane Simon, RN
Richard Ziegler, MD

Trauma Committee Liaisons

Carol Cunningham, MD – State Medical Director, Ohio Department of Public Safety, Division of Emergency Medical Services
Jonathan Groner, MD – State Board of EMS
Virginia Haller, MD – Ohio Department of Health
F. Barry Knotts, MD – Chair, Trauma Registry Advisory Subcommittee

Ohio Department of Public Safety Staff

China Dodley – Public Information Officer
Tim Erskine – Chief, Trauma Systems and Research
Heather Frient – Legal Counsel
Sue Morris – Data Analyst

Participating Guests

Christy Beeghly – Ohio Department of Health, Injury Prevention Program
Jim Dwertman – Ohio Emergency Management Agency
David Evans – Miami Valley Hospital
Scott Highly – Ohio Fire Chiefs Association
Carol Jacobson – Ohio Hospital Association
Herb de la Porte – Ohio Ambulance and Medical Transportation Association

Facilitators – Ohio Society of Trauma Nurse Leaders

Lynn Haas, RN
Patty Wilczewski, RN

State Board of Emergency Medical Services

**Preliminary Report
November 3, 2001**



Ohio Legislative Service Commission

Staff Research Report No. 148

OHIO LEGISLATIVE SERVICE COMMISSION
STATE HOUSE
COLUMBUS, OHIO 43215

SENATE MEMBERS

Richard H. Finan
Chairman

Greg L. DiDonato

Randy Gardner

Bill Harris

Leigh Herington

Jay Hottinger

Doug White

HOUSE MEMBERS

Larry Householder
Vice-Chairman

Gary Cates

Patricia Clancy

Ray Miller

Jon M. Peterson

James P. Trakas

Charles A. Wilson, Jr.

Robert M. Shapiro

Director

RESEARCH STAFF

Rebecca R. Fitzwater, Research Associate

Kathryn E. Likely, Research Associate

Alan Van Dyne, Research Associate

Bob Bennett, Research Associate

Lauren Nicholson, Staff Attorney

Ralph Clark, Attorney

Lynda Meinke, Research Associate

Lis Gorenstein, Senior Analyst

Shelagh Baker, Health and Human Services Division Chief

This publication is a report of the research staff of the Legislative Service Commission. The report consists solely of information relating to the subject matter as prepared by the research staff. It does not purport to represent the findings and opinions of the Legislative Service Commission.

The Legislative Service Commission authorized its staff to prepare and publish the report pursuant to the mandate of Am. Sub. H.B. 138 of the 123rd General Assembly, but the Commission has taken no position in regard to the material contained in the report.

TABLE OF CONTENTS

I.	Introduction	1
II.	A Brief History of Emergency Medical Services Law in Ohio	5
III.	Duties of the Board	11
	Training and issuance of Certificates	11
	Overseeing quality of services	16
	Statewide planning	19
	Emergency medical services funding	24
	Information gathering systems	27
	Government and public liaison activities	32
	Trauma duties under H.B. 138 of the 123rd General Assembly	34
IV.	EMS Board meetings	37
	Glossary	42
	Appendix – A through H	

INTRODUCTION

The Emergency Medical Services Board (EMS Board), which is within the Division of Emergency Medical Services in the Department of Public Safety, has a variety of duties under the Ohio Revised Code. Am. Sub. House Bill 138 of the 123rd General Assembly requires Legislative Service Commission staff, subject to the Commission's approval, to evaluate the effectiveness of the Board and its staff in fulfilling the Board's duties and to prepare two reports. This, the first of the two, is a preliminary report that describes the Board's duties as specified in the Revised Code and the actions the Board is taking to fulfill those duties.

Although H.B. 138 makes reference to LSC staff findings and recommendations, this report is more limited. As explained at the Commission's meeting on October 10, 2001, making recommendations would place the staff in the role of policymaker with regard to the delivery of emergency medical services in Ohio. The Commission is considering appointing a joint legislative committee to consider the Board's activities and make recommendations. Those recommendations will be included in the second report.

This report starts with a brief history of the licensing of emergency medical services performed in Ohio. It then considers the duties of the EMS Board, including licensing procedures, oversight of quality of services, statewide planning, administration of grant programs, information gathering, government and public liaison activities, and trauma system duties. The report concludes with a description of issues addressed by the Board as identified in Board meeting minutes. There is also an appendix containing information pertaining to the Board's duties and activities and a glossary of terms used in the report.

EMS Board membership

The Board is composed of 20 members, 19 of whom are appointed by the Governor. The other member is a Department of Public Safety staff person appointed by the Director of Public Safety.¹ The Board members appointed by the Governor must include:

(1) One physician certified by the American Board of Emergency Medicine or the American Osteopathic Board of Emergency Medicine who is active in the practice of emergency medicine and is actively involved with an emergency medical association;

(2) One physician certified by the American Board of Surgery or the American Osteopathic Board of Surgery who is active in the practice of trauma surgery and is actively involved with emergency medical services;

¹ Revised Code section 4765.02.

(3) One physician certified by the American Academy of Pediatrics or American Osteopathic Board of Pediatrics who is active in the practice of pediatric emergency medicine and actively involved with an EMS organization;

(4) One administrator of an adult or pediatric trauma center;

(5) One administrator of a hospital that is not a trauma center;

(6) One registered nurse who is in the active practice of emergency nursing;

(7) One chief of a fire department that is also an EMS organization in which more than 50% of the persons who provide emergency medical services are full-time paid employees;

(8) One chief of a fire department that is also an EMS organization in which more than 50% of the persons who provide emergency medical services are volunteers;

(9) One person who is certified by the Board to teach an EMS training program or an EMS continuing education program;

(10) One person who is an emergency medical technician-basic (EMT-basic) nominated by the Ohio Association of Professional Fire Fighters or the Northern Ohio Fire Fighters;

(11) One person who is an EMT-Intermediate (EMT-I) nominated by the Ohio Association of Professional Fire Fighters or the Northern Ohio Fire Fighters;

(12) One person who is an EMT-Paramedic (paramedic) nominated by the Ohio Association of Professional Fire Fighters or the Northern Ohio Fire Fighters;

(13) One person who is an EMT-basic nominated by the Ohio State Firefighter's Association;

(14) One person who is an EMT-I nominated by the Ohio State Firefighter's Association;

(15) One person who is a paramedic nominated by the Ohio State Firefighter's Association;

(16) One person who is an EMT-basic, EMT-I, or paramedic nominated by the Ohio Association of Emergency Medical Services;

(17) One person who is an EMT-basic, EMT-I, or paramedic affiliated with an EMS organization;

(18) One person who is a member of the Ohio Ambulance Association;

(19) One physician certified by the American Board of Surgery, American Board of Osteopathic Surgery, American Osteopathic Board of Emergency Medicine, or American Board of Emergency Medicine who is the chief medical officer of an air medical agency and is currently active in providing emergency medical services.

Each Board member serves a term of three years. Board members serve without compensation but are reimbursed for expenses incurred in fulfilling their duties as Board members. The chair and vice-chair of the Board are selected annually from among its members. The Board meets at least four times annually and at the call of the chair. The following is the roster of current Board members and the organization or occupation each member represents.

EMS Board Membership 2001	
James Augustine, M.D. American College of Emergency Physicians, Ohio Chapter Dayton, OH	Amy Lynn Northern Ohio Fire Fighter's Association Mentor, OH
Mark R. Burgess Ohio Fire Chief's Association Ashland, OH	Martin Mace Northern Ohio Fire Fighter's Association Rocky River, OH
Ed Close Ohio Association of Emergency Medical Services Beverly, OH	Charlene Mancuso Administrator of Hospital with Adult or Pediatric Trauma Center Cleveland, OH
William H. Cotton, M.D. American Academy of Pediatricians, Ohio Chapter Gahanna, OH	Mark R. Mankin Ohio State Firefighter's Association Reynoldsburg, OH
David B. Fiffick Ohio Ambulance Association/Member of the OAA Clemente-McKay Ambulance Struther, OH	Mark Marchetta EMT-Paramedic, Affiliated with an EMS organization Akron, OH
Richard Fratiante, M.D. American College of Surgeons, Ohio Chapter Metro Health Center Cleveland, OH	Mark N. Resanovich Ohio State Firefighter's Association Uniontown, OH
Kathryn Haley Ohio State Council of Emergency Nurses Worthington, OH	Merle Stewart Ohio State Firefighter's Association East Palestine, OH
Andrew Hawk Ohio Association of Critical Care Transport Dayton, OH	Joseph Toth Ohio Emergency Medical Technician Instructors Association Medina, OH
Carl Jordan Ohio Association of Professional Fire Fighters Massillon, OH	Raymond Walendzak Ohio Fire Chief's Association Oregon Fire Department Oregon, OH
Lt. Gary Lewis Ohio State Highway Patrol Ohio Department of Public Safety Columbus, OH	Larry Willard Ohio Association for Hospitals and Health Systems Hocking Valley Community Hospital Logan, OH

The Director of Public Safety is required to appoint a full-time executive director for the Board who is knowledgeable in emergency medical services and trauma care. The executive director serves as the chief executive officer of the Board and as the executive director of the Division of Emergency Medical Services. Laura L. Tiberi is the executive director.

The Board is required to appoint a medical director who is a physician certified by the American Board of Emergency Medicine or the American Osteopathic Board of Emergency Medicine who is active in the practice of emergency medicine and has been actively involved with an EMS organization for at least five years prior to being appointed. The medical director is required to direct the executive director and advise the Board with regard to adult and pediatric trauma and EMS issues. Dr. John Drstvensek is the Board's medical director.

A BRIEF HISTORY OF EMERGENCY MEDICAL SERVICES LAW IN OHIO

The General Assembly has enacted much legislation in the last quarter century regulating the provision of emergency medical services. In general, entities providing training in emergency medical services and individuals providing those services have been required to obtain certificates. The entity or entities responsible for regulating the training and services has changed over the years as have the duties regulated and the titles of the service providers.

Am. Sub. H.B. 832 of the 111th General Assembly

(Effective 08-31-76)

H.B. 832 authorized the Board of Regents to issue certificates of accreditation to training programs for emergency medical technicians-paramedic (paramedics). The State Board of Education was authorized to issue a certificate of accreditation to training programs for emergency medical technicians-ambulance (EMT-As). The act required the Board of Regents to adopt rules for administration of the accreditation process for paramedic training programs and the State Board of Education to adopt rules for administration of the accreditation process for EMT-A training programs.²

Accredited EMT-A training programs were authorized to issue certificates of competency to EMT-As, and the State Board of Education was given the duty of renewing the certificates. Accredited paramedic training programs were authorized to issue certificates of competency to paramedics, and the Board of Regents authorized to renew the certificates.³

H.B. 832 created the Emergency Medical Services Advisory Council. The council consisted of two public members and seven members representing the following: (1) physicians, (2) hospital associations, (3) volunteer fire and ambulance emergency medical services, (4) volunteer rescue emergency medical services not operated in conjunction with a volunteer fire service, (5) public professional emergency medical services, (6) private emergency medical services, and (7) funeral businesses or associations engaged in ambulance services. The council was required to prepare a plan for the statewide regulation of emergency medical services during periods of disaster and prepare and recommend standards for the operation of ambulance and emergency medical services.⁴

² R.C. 4731.83.

³ R.C. 4731.86.

⁴ R.C. 4731.93.

Am. Sub. H.B. 1092 of the 112th General Assembly

(Effective 07-21-78)

Under H.B. 1092, the Board of Regents was authorized to issue certificates of accreditation to training programs for advanced emergency medical technicians-ambulance (ADV EMT-As).⁵ Accredited ADV EMT-A training programs were authorized to issue certificates of competency to ADV EMT-As, and the Board of Regents was authorized to renew the certificates.⁶

Am. Sub. H.B. 222 of the 116th General Assembly

(Relevant provisions effective 05-15-86)

H.B. 222 was the first major revision of the law regulating emergency medical services. The act created the Ohio Emergency Medical Services Agency in the Department of Education.⁷ The authority of the State Board of Education and the Board of Regents to issue certificates of accreditation to EMT-A, ADV EMT-A, and paramedic training programs was transferred to the agency. The Board of Regents' rule-making authority regarding administration of the accreditation process for ADV EMT-A and paramedic training programs was transferred to the State Board of Education.⁸

The act transferred the authority of accredited training programs' to issue EMT-A, ADV EMT-A, and paramedic certificates to the Ohio Emergency Medical Services Agency, but the agency was required to issue a certificate on recommendation of an accredited training program. The authority of the State Board of Education and Board of Regents to renew EMT-A, ADV EMT-A, and paramedic certificates was also transferred to the agency. The State Board of Education was required, however, to adopt rules establishing requirements for renewal of the certificates and permitted to adopt rules establishing grounds for revocation of the certificates and for other disciplinary actions against EMT-As, ADV EMT-As, and paramedics.⁹

The Ohio Emergency Medical Services Board was created, consisting of 26 voting members and 11 nonvoting members. The voting members were the Director of Health, Chairperson of the Emergency Medical Services Advisory Council, Chancellor of the

⁵ R.C. 4731.83.

⁶ R.C. 4731.86.

⁷ R.C. 3303.09.

⁸ R.C. 3303.11.

⁹ R.C. 3303.15 and 3303.201.

Board of Regents, five physicians, two hospital administrators, a nurse, three fire chiefs, a physician advisor to a fire department's emergency medical system, three volunteer firefighters, three paid firefighters, a private provider of emergency medical services, a public provider of emergency medical services, a representative of the Ohio Funeral Directors Association, an instructor in a vocational school instruction program for EMT-As, and an instructor in a post-secondary or hospital training program for ADV EMT-As or paramedics. The nonvoting members were the Director of Highway Safety, President of the State Board of Pharmacy, Adjutant General, a representative of the Ohio Nurses Association, a representative of the public, three representatives of the interests of health care consumers, a fire department EMS training officer, a private EMS training officer, and a training officer of a public EMS agency. The Board was required to: (1) approve or disapprove a proposed statewide EMS plan, and any revisions to the plan, prepared by the Ohio Emergency Medical Services Agency, (2) advise applicants for state or federal EMS funds and review and comment on applications for those funds, (3) serve as a statewide clearinghouse for discussion, inquiry, and complaints concerning emergency medical services, (4) advise and make recommendations to the Ohio Emergency Medical Services Agency on all aspects of its responsibilities, (5) advise and make recommendations to the State Board of Education on rules and standards for emergency medical services, and (6) make recommendations to the General Assembly on legislation to improve the delivery of emergency medical services.¹⁰

H.B. 222 required the State Board of Education to submit its proposed rules regarding emergency medical services to the Ohio Emergency Medical Services Board and authorized that board to disapprove the rules by a two-thirds vote.¹¹

Am. Sub. S.B. 98 of the 119th General Assembly

(Effective 11-12-92)

S.B. 98 was the next major revision of the law governing emergency medical services. The act created the major features of the currently existing law.

The Ohio Emergency Medical Services Board was replaced with the State Board of Emergency Medical Services (EMS Board), which exists today. The EMS Board was created in the Division of Emergency Medical Services of the Department of Public Safety. It originally consisted of the following 18 members: (1) three physicians, (2) a hospital administrator, (3) a registered nurse, (4) two chiefs of fire departments that were also EMS organizations, (5) a person certified to teach emergency medical services, (6) two EMT-As, (7) two ADV EMT-As, (8) two paramedics, (9) two individuals who

¹⁰ R.C. 33093.10.

¹¹ R.C. 3309.101.

are an EMT-A, ADV EMT-A, or paramedic, (10) a member of the Ohio Ambulance Association, and (11) an employee of the Department of Public Safety.¹²

The EMS Board was required to perform, in a modified manner, the Ohio Emergency Medical Services Board's duties to: (1) advise applicants for state or federal EMS funds and review and comment on applications for those funds, (2) serve as a statewide clearinghouse for discussion, inquiry, and complaints concerning emergency medical services, and (3) make recommendations to the General Assembly on legislation to improve the delivery of emergency medical services.¹³

S.B. 98 abolished the Ohio Emergency Medical Services Agency and required the EMS Board to perform, in a modified manner, the agency's duties to: (1) issue certificates of accreditation to EMS training programs, (2) issue EMT-A, ADV EMT-A, and paramedic certificates, and (3) prepare a statewide EMS plan.¹⁴

The EMS Board was authorized to issue: (1) certificates of approval to EMS continuing education programs and (2) certificates to teach in an EMS training program or an EMS continuing education program.¹⁵

The State Board of Education's EMS rule-making responsibilities were terminated. The EMS Board was required to adopt rules, subject to the Director of Public Safety's approval, regulating emergency medical services.¹⁶

S.B. 98 also abolished the Emergency Medical Services Advisory Council and provided for the EMS Board to perform, in a modified manner, the council's duties of preparing a plan for the regulation of emergency medical services during periods of disaster and recommendations for the operation of ambulance and EMS organizations.¹⁷ The EMS Board was required to establish: (1) a curriculum and textbook advisory group,

¹² R.C. 4765.02.

¹³ R.C. 4765.10.

¹⁴ R.C. 4765.03, 4765.08, and 4765.15. Unlike the Ohio Emergency Medical Services Agency, the EMS Board was not required to issue an EMT-A, ADV EMT-A, or paramedic certificate on the recommendation of an accredited EMS training program. However, S.B. 98 provided for accredited training programs and approved continuing education programs to issue certificates of completion. The EMS Board was required to provide for the examination of applicants for EMT-A, ADV EMT-A, and paramedic certificates. (R.C. 4765.24 and 4765.29.)

¹⁵ R.C. 4765.17 and 4765.23.

¹⁶ R.C. 4765.11, 4765.15, and 4765.24.

¹⁷ R.C. 4765.08 and 4765.09.

(2) a continuing education advisory group, (3) a trauma care advisory group, and (4) an access, delivery, and quality care advisory group.¹⁸ The act created the Subcommittee of the EMS Board for Firefighter and Fire Safety Inspector Training to provide the EMS Board's executive director advice and counsel regarding the regulation of fire service training programs established by the state or a local government for firefighters and fire safety inspectors.¹⁹

The act gave the EMS Board the following additional duties: (1) divide the state into pre-hospital EMS regions and appoint either a physician to serve as the regional director or a physician advisory board to serve as the regional advisory board, (2) establish an EMS incidence reporting system and a trauma system registry, (3) establish a grant program, (4) maintain a toll-free long distance telephone number for responding to questions about emergency medical services, (5) work with the State Fire Marshal in coordinating the training of firefighters and EMS personnel when possible, (6) provide a liaison to the State Emergency Operation Center during Governor-declared disasters, and (7) make a semiannual report on its activities to the Joint Legislative Committee on Emergency Medical Services Oversight.²⁰

Am. Sub. S.B. 150 of 121st General Assembly

(Effective 11-24-95)

S.B. 150, which mainly concerned the certificate of need program, retitled EMT-As as emergency medical technicians-basic (EMTs-Basic) and ADV EMT-As as emergency medical technicians-intermediate (EMTs-I).²¹

Sub. H.B. 405 of the 121st General Assembly

(Effective 10-01-96)

Under H.B. 405, the EMS Board was authorized to issue certificates to practice to first responders.²²

¹⁸ R.C. 4765.04.

¹⁹ R.C. 4765.55.

²⁰ R.C. 4765.05, 4765.06, and 4765.10. The semiannual report requirement was eliminated by Sub. H.B. 670 of the 121st General Assembly, which abolished the oversight committee.

²¹ R.C. 4765.01.

²² R.C. 4765.30.

Am. Sub. H.B. 138 of the 123rd General Assembly

(Effective 11-03-00)

H.B. 138 made a number of changes to the EMS law. It increased the membership of the EMS Board by adding an adult or pediatric trauma center administrator and another physician.²³ The EMS Board was required to establish a state trauma registry rather than a trauma system registry.²⁴

In addition to renaming the EMS Board's subcommittee concerning firefighter and fire safety inspector training,²⁵ the act created a trauma committee within the Board to advise and assist the Board in matters related to adult and pediatric trauma care and the establishment and operation of the state trauma registry. The EMS Board was authorized to appoint other committees and subcommittees as it considered necessary.²⁶

The act also changed or established a number of EMS Board duties. The act requires the Board to work with appropriate state offices, rather than the State Fire Marshal, in coordinating the training of firefighters and EMS personnel.²⁷ It is to consult with regional directors and regional physician advisory boards when developing and administering rules regulating emergency medical services.²⁸ The Board is required to develop and distribute guidelines for the care of trauma victims by EMS personnel and for the conduct of peer review and quality assurance programs by EMS organizations.²⁹ It is to establish written protocols for the triage of adult and pediatric trauma victims and is authorized to approve regional protocols for the triage of adult and pediatric trauma victims submitted by regional physician advisory boards or regional directors.³⁰

²³ R.C. 4765.02.

²⁴ R.C. 4765.06.

²⁵ The subcommittee was renamed the Firefighter and Fire Safety Inspector Training Committee.

²⁶ R.C. 4765.04 and 4765.55.

²⁷ R.C. 4765.10.

²⁸ R.C. 4765.11.

²⁹ R.C. 4765.12.

³⁰ R.C. 4765.40.

DUTIES OF THE BOARD: TRAINING AND ISSUANCE OF CERTIFICATES

The EMS Board is required to establish standards for training of EMS personnel and qualifications of instructors, accreditation of training programs, and the conduct of examinations. The Board has adopted rules regarding all these matters.

Accreditation of training programs

The EMS Board is required to administer the accreditation and approval processes for Ohio's EMS training programs.³¹ The Board has adopted by rule criteria that each training program (including fire services training programs) must meet to receive accreditation.³² Each program must, for example, employ a program coordinator and a medical program coordinator, and select an advisory committee to oversee the program.³³

To operate as an EMS training program a program must be approved and receive a certificate from the EMS Board. The Board does not charge applicants a fee for the application process or for the accreditation certificate. An applicant must submit information about the proposed program, such as the program's location and intended instructors, to the Board by completing a series of application forms. The Board may also, in the process of approving an application for accreditation, conduct inspections of sites to be utilized by an applicant's training program. A certificate of accreditation is valid for three years. In 2000, there were 122 Board-accredited EMS and firefighter schools in Ohio.³⁴

The Board may provisionally certify a training program that does not meet all the requirements. A provisional accreditation certificate is good for one year and may not be renewed. If, within a year, the applicant can demonstrate the program's compliance with the requirements, the Board will issue the program a regular certificate, good for three years.

A program may not change the content of the curriculum or the number of hours included in the curriculum without first providing notice of the proposed changes to, and receiving written approval from, the Board. If, at any time, the program's physical

³¹ R.C. 4765.17.

³² R.C. 4765.15, 4765.16.

³³ Ohio Administrative Code Chapter 4765-8.

³⁴ Laura Tiberi, EMS Board Executive Director, July 2001 (See **APPENDIX D**).

facilities, faculty, or affiliation agreements change unexpectedly, the program must inform the Board of the changes within ten days of the change.³⁵

The EMS Board also oversees the renewal process for training program accreditation certificates. By no later than 90 days prior to a certificate's expiration date, the EMS Board must mail a renewal application to each training program that holds a certificate.

EMS personnel certificates

An applicant for a certificate to practice emergency medical services who has completed approved training must register for and pass a written and practical examination.³⁶ Examination registration forms may be obtained from EMS instructors and program coordinators or from a training facility. The Board recently expanded its web site to include online examination, registration, and testing schedules. Out-of-state applicants may also register by phone.³⁷

The National Registry of EMTs grades the EMT-Basic examinations, which takes from four to five weeks. Test grades take approximately 30 days to process. Once test scores are entered into the EMS Board's examination database, certificates to practice are issued for candidates who have passed.³⁸

An applicant unable to pass the written examination in three attempts must wait a time specified by the Board before attempting the examination again. The Board may require the applicant to complete additional training before retaking the examination.³⁹

Certificate to teach

The Board administers the application and certification process for EMS instructors, specifying by rule the education requirements.⁴⁰ The Board may waive the requirements for a certificate to teach for a physician who serves as an active medical director of an EMS organization or who is recommended by the regional physician advisory board. The Board may also accept training completed in another state or

³⁵ O.A.C. 4765-7-06.

³⁶ R.C. 4765.29.

³⁷ http://www.state.oh.us/odps/division/ems/ems_local/newonlin.pdf.

³⁸ http://www.state.oh.us/odps/division/ems/ems_local/Training/ExamGuidlines.htm.

³⁹ R.C. 4765.29(B).

⁴⁰ R.C. 4765.22.

another field of study on verification that the training was substantially similar to the Ohio curriculum. All other requirements to teach must be met, including passing a written certification examination approved by the Board.⁴¹

Continuing education requirements

The Board requires certificate holders to complete continuing education requirements. It has established the requirements by rule.⁴² Continuing education credit may be offered and earned through classroom instruction, individual study, skills practicum, or other format approved by the Board. The Board also accepts as valid continuing education courses approved by any of the following: an EMS licensing agency in another state, the National Registry of Emergency Medical Technicians, the United States military, a medical or nursing licensing board of this or another state, or a course related to EMS operations or patient care offered through a journal or publication of a state or national medical, nursing, or EMS organization.⁴³

Certificate holders do not necessarily have to take a course to fulfill continuing education requirements. Instead, they may elect to re-take their certification examination.⁴⁴ The Board does not assess an examination fee for individuals who elect to take the test.

The Board may exempt an applicant for renewal of a certificate from all or part of the continuing education requirements due to active military service, unusual circumstances or special hardship, emergency, or any other cause the Board considers reasonable. The procedures are established by rule.⁴⁵

Bridge courses

In 1992, legislation was passed that altered the scope of practice for EMT-Intermediates.⁴⁶ Training in manual defibrillation and the administration of epinephrine by subcutaneous injection, which had previously been optional components of the EMT-I program, became mandatory. In 1996, the EMS Board adopted new rules

⁴¹ O.A.C. 4765-8-12(A)(4).

⁴² R.C. 4765.16; O.A.C. Chapter 4765-8.

⁴³ O.A.C. 4765-8-05.

⁴⁴ O.A.C. 4765-8-09.

⁴⁵ R.C. 4765.31; O.A.C. 4765-8-11.

⁴⁶ Sub. S.B. 98, effective 11-12-92.

that incorporated the new skills into the curriculum. Any EMT-I not certified for the additional training must complete a bridge course prior to January 1, 2002.

In 1995, Ohio also adopted new curriculum that expanded the scope of practice for EMT-Basics. By January 1, 2002, any EMT-Basic not trained in the new procedures must complete a 26 hour bridge course.

The Board requires that following successful completion of the bridge coursework, including written and practical examinations, the training program present each EMT provider with a certificate of completion stating that the EMT has successfully completed the bridge course and notify the appropriate EMS division.⁴⁷

Disciplinary actions

Standards and ethics related to emergency medical services, as well as the procedures for handling complaints and disciplinary actions, are established by rule of the EMS Board.⁴⁸ Each EMS organization must have an internal procedure in place to handle complaints relating to the provision of services by the organization, its employees, and other persons affiliated with the organization.⁴⁹ If the Emergency Medical Services Division administrator, on reviewing a complaint, decides that further investigation is needed, the Division must record and assign a number or similar identifier to the complaint. The investigation must be conducted in such a manner as to protect patient confidentiality. The Division may also notify the person who is the subject of the complaint, the director or medical director of any EMS organization by which the subject of the complaint is employed or with which the subject is affiliated, and the appropriate regional medical director or regional physician advisory board. The Division must then review all complaints received against the individual implicated by the complaint and examine any evidence that appears to show that the individual violated any provisions of the statutes and rules governing the provision of emergency medical services. Based on the findings of an investigation, the Board may initiate disciplinary proceedings.⁵⁰

With a vote of at least ten members, the Board may revoke, refuse to grant, or refuse to renew a certificate to practice emergency medical services. The Board may also issue a written reprimand, or may impose a fine not to exceed \$1,000 if it determines that the person committed fraud in passing the certification examination; committed fraud, misrepresentation, or deception in applying for or securing a certificate from the Board;

⁴⁷ http://www.state.oh.us/odps/division/ems/ems_local/Bridge/letter.pdf.

⁴⁸ O.A.C. 4765-9, 4765-10.

⁴⁹ O.A.C. 4765-10-01.

⁵⁰ R.C. Chapter 119; O.A.C. 4765-10-02.

or violated any provision of the statutes and administrative rules governing the provision of emergency medical services.⁵¹

A certificate to practice that has been suspended, limited, or revoked may be reinstated by the vote of at least ten members of the Board. In voting to reinstate a certificate, the Board may impose any limitation or conditions on the reinstatement that it deems necessary or appropriate.⁵²

Certification of firefighters and fire safety inspectors

The EMS Board is required to oversee the training and issuance of certificates to firefighters and fire safety instructors.⁵³ The process for issuing certificates is established by rule.⁵⁴ No person may provide firefighter or fire safety inspector services without possessing a certificate issued by the EMS Board. Those engaged in fire service who do not directly participate in fire fighting activities, such as dispatchers, alarm operators, and emergency medical technicians, are not required to obtain a firefighter certificate.⁵⁵ Applicants for a certificate to practice as a firefighter or fire safety inspector must present documented proof of completion of a Board-approved training course. There is no examination.⁵⁶

If the Board determines that an applicant submitted misleading, false, or fraudulent information in applying for a certificate, it may revoke the applicant's firefighter or fire safety inspector certificate. In the event that a certificate is revoked, the notice of the revocation must be published in *Siren*, the firefighters' newsletter published by the Division of Emergency Medical Services.⁵⁷

⁵¹ O.A.C. 4765-10-03.

⁵² O.A.C. 4765-10-03(C).

⁵³ R.C. 4765.55.

⁵⁴ O.A.C. 4765-11.

⁵⁵ O.A.C. 4765-11-09(E).

⁵⁶ A certificate in lieu of completion of a chartered training program may be issued to an applicant who submits evidence of service as a firefighter in the state of Ohio as (1) a volunteer firefighter with a fire department of any township, fire district, city, or village prior to July 2, 1979, or (2) a permanent full-time paid firefighter with a fire department of any city or village prior to July 2, 1970.

⁵⁷ O.A.C. 4765-11-09.

DUTIES OF THE BOARD: OVERSEEING QUALITY OF SERVICE

The EMS Board has a number of statutory duties related to overseeing the quality of service provided by those licensed by the Board. This section describes the Board's duties concerning standards of performance for EMTs and instructors and for ambulance staffing.

The Board is statutorily required to adopt rules addressing the performance of all levels of EMTs.⁵⁸ The Board is also responsible for developing detailed triage protocols,⁵⁹ making recommendations concerning the staffing of ambulances,⁶⁰ and initiating action against EMTs who practice beyond their scope of practice.

The Board has not adopted rules regarding EMT performance. According to EMS Board Executive Director Laura Tiberi, this is because the scope of practice and EMT performance standards are specified in statute.⁶¹

The Board is required to adopt rules establishing standards for the minimum qualifications, peer review, and quality improvement requirements for persons who provide medical direction to EMTs.⁶² Although the Board has not yet adopted these rules, according to Ms. Tiberi, the Board has reviewed a proposal from the Board's medical director and the regional physician advisory boards regarding the requirements for persons who provide the medical direction. Ms. Tiberi stated that the Board approved a proposal at its September meeting and anticipates that the rules process will proceed accordingly.

The Board is required to adopt rules establishing qualifications for a certificate to teach and has adopted several rules specifying the requirements for a certificate to practice as an EMS or first-responder instructor.⁶³ As required by statute, the rules designate the different levels of instructor training required to instruct each level of EMS

⁵⁸ R.C. 4765.11. There are four levels of EMTs: first responders, emergency medical technicians-basic, emergency medical technicians-intermediate, and emergency medical technicians-paramedic. R.C. 4765.11(A)(2), 4765.35-4765.39.

⁵⁹ R.C. 4765.40.

⁶⁰ R.C. 4765.09.

⁶¹ R.C. 4765.35, 4765.37 - 39.

⁶² R.C. 4765.11.

⁶³ O.A.C. 4765-8-12, 4765-8-14, 4765-12-09.

personnel. An additional certificate is provided for in rule for instruction in special topics of emergency medicine.

The Board has a statutory duty to adopt rules "establishing written protocols for the triage of adult and pediatric trauma victims."⁶⁴ The Board was given two years from the effective date of H.B. 138 of the 123rd General Assembly to develop these rules. Since H.B. 138 became effective on November 3, 2000, the rules are to be adopted by November 3, 2002. The Board has begun to develop the rules. The Trauma Committee established to work on the drafting process has draft documents of the trauma protocols on the Internet and is currently engaged in further drafting and obtaining public comment through trauma town meetings.⁶⁵

Another of the Board's duties concerns ambulance staffing. The Revised Code specifies the training each person in an ambulance is to have. It also specifies the minimum level of training each person on an ambulance must have during an emergency run. This standard is different when the ambulance is staffed by volunteers.⁶⁶ These statutes are not further addressed in Board rules.

The Board has authority regarding emergency medical technicians who have entered the emergency department of a hospital. In a hospital emergency department or while moving a patient between the emergency department and another part of the hospital, all levels of emergency medical technicians may perform emergency medical services, but only pursuant to the direction and supervision of a physician or registered nurse.⁶⁷ The Board has authority to pursue disciplinary action against an emergency medical technician who exceeds the scope of practice within a hospital. According to Ms. Tiberi, however, it is not the Board's practice to monitor the activities of emergency medical technicians within a hospital. The Board does not have the authority to monitor or discipline a physician or nurse who delegates tasks to an emergency medical technician that are outside of the emergency medical technician's scope of practice.

The Board uses its authority to investigate complaints from the public as a means of monitoring the quality of emergency medical services.⁶⁸ Ms. Tiberi explained that the Board concerns itself with the quality of emergency medical services by maintaining curricula, standards of accreditation, and continuing education. The complaint and

⁶⁴ R.C. 4765.40.

⁶⁵ http://www.state.oh.us/odps/division/ems/ems_local/trauma/DraftDoc.htm. (See **APPENDIX E.**)

⁶⁶ R.C. 4765.43.

⁶⁷ R.C. 4765.36.

⁶⁸ R.C. 4765.10(B)(1).

investigation processes serve as additional means of monitoring the quality of performance. It is the Board's policy to investigate every complaint by conducting "[f]air, impartial and consistent investigations of all complaints, problem applications or alleged rule violations brought to the attention of the Division of Emergency Medical Services, [build] public confidence and [promote] high professional standards for all associated emergency medical service organizations."⁶⁹ The public can make complaints to the Board by accessing its web site or using a toll-free telephone number. The Board publishes an explanation of its investigation process and a copy of its complaint form on its web site for public access.

If its investigation determines legal action is warranted, the Board may file a complaint with the Attorney General or a prosecuting attorney or city director of law. On receiving the complaint, the official must prosecute or seek an injunction against any person violating the law governing EMS personnel.⁷⁰

⁶⁹ Emergency Medical Services Investigation Policy. Available at http://www.state.oh.us/odps/division/ems/ems_local/Enforcement/Policy.pdf.

⁷⁰ R.C. 4765.48.

DUTIES OF THE BOARD: STATEWIDE PLANNING

Under Ohio law, the EMS Board has duties regarding statewide EMS planning. The Board must provide day-to-day planning and also planning for disaster situations.

Day-to-day EMS planning

Prehospital emergency medical services

For purposes of overseeing the delivery of adult and pediatric prehospital emergency medical services, the EMS Board is required to establish prehospital EMS regions. The term "prehospital emergency medical services" is defined in law as "an emergency medical services system that provides medical services to patients who require immediate assistance, because of illness or injury, prior to their arrival at an emergency medical facility."⁷¹ According to Ms. Tiberi, these services are emergency medical services.

For each prehospital EMS region, the EMS Board is required to appoint either a physician to serve as the regional director or a physician advisory board to serve as the regional advisory board. The Board must specify the duties of each regional director and regional advisory board. The Board has established ten regions that cover the entire state.⁷² A regional physician advisory board has been established for each region, so no regional directors have been appointed. Advisory board members serve without compensation, but must be reimbursed for actual and necessary expenses incurred in

⁷¹ R.C. 4765.05.

⁷² The regions and their constituent counties are as follows: **Region 1** (Adams, Brown, Butler, Clermont, Clinton, Hamilton, Highland, and Warren); **Region 2** (Champaign, Clark, Darke, Greene, Miami, Montgomery, Preble, and Shelby); **Region 3** (Allen, Auglaize, Hancock, Hardin, Mercer, Paulding, Putnam, and VanWert); **Region 4** (Defiance, Erie, Fulton, Henry, Huron, Lucas, Ottawa, Sandusky, Seneca, Williams, and Wood); **Region 5** (Delaware, Fairfield, Fayette, Franklin, Knox, Licking, Madison, Marion, Morrow, Pickaway, Pike, Ross, Scioto, Union, and Wyandot); **Region 6** (Athens, Belmont, Coshocton, Gallia, Guernsey, Harrison, Hocking, Jackson, Jefferson, Lawrence, Meigs, Monroe, Morgan, Muskingum, Noble, Vinton, and Washington); **Region 7** (Ashland, Carroll, Crawford, Holmes, Richland, Stark, Tuscarawas, and Wayne); **Region 8** (Portage and Summit); **Region 9** (Cuyahoga, Lake, Lorain, Geauga, and Medina); and **Region 10** (Ashtabula, Columbiana, Mahoning, and Trumbull).

Because Regions 5 and 6 are so big, the EMS Board has proposed that they be split to create an 11th region that would consist of Athens, Gallia, Hocking, Jackson, Lawrence, Meigs, Pike, Scioto, and Vinton counties. This proposal has not yet been adopted.

carrying out their duties as members. The EMS Board has adopted several administrative rules governing the organization, operations, and responsibilities of the advisory boards.

With respect to operations, the rules require each advisory board to do the following: (1) annually appoint a chairman and vice chairman from among its members and notify the EMS Board's medical director no later than February 15, (2) meet as often as needed to carry out its duties, but at least four times annually, (3) meet at least four times annually with the medical director and advise the medical director of all advisory board meetings, (4) hold at least two public forums annually on the subject of delivery of prehospital emergency medical care in the region, and (5) submit to the medical director and all EMS organizations in its region, prior to the last day of February each year, a report that documents activities, improvements, accomplishments, and problem areas in the previous calendar year.⁷³ According to Carol MacDowell, the EMS Board's Advisory Board Coordinator, the advisory boards are generally meeting the operations requirements. She acknowledges, however, that the advisory boards have not been complying with the public forum requirement. She said that the problem is being remedied. The EMS Board is requiring each advisory board to have held at least one public forum by the end of 2001 and to meet the minimum two forum requirement starting in 2002.

With respect to responsibilities, the rules require each advisory board to (1) develop and recommend written medical protocols for EMS providers, organizations, and personnel operating in the region, (2) provide services to assist in developing and maintaining appropriate emergency medical services in its region, and (3) assist all EMS organizations in its region in procuring the services of a medical director or physician advisory board (as required by law) and serve as the physician advisory board for the EMS organization until a medical director or physician advisory board can be obtained.⁷⁴

The services each advisory board is required to provide to assist in developing and maintaining appropriate emergency medical services are to (1) assist in developing EMS continuing education programs within its region, (2) assist in the organization, evaluation, and procurement of equipment for EMS organizations in its region, (3) maintain information regarding all EMS providers and organizations in the region including the name of the medical director or physician advisory board members for each, (4) maintain a listing of all EMS equipment owned by or available to each EMS provider in the region, (5) maintain a listing of all EMS training and continuing education programs in the region, (6) identify problems with the provision of emergency medical services in the region and develop strategies to address the problems, (7) facilitate agreements for

⁷³ O.A.C. 4765-3-03.

⁷⁴ O.A.C. 4765-3-04.

mutual aid and assistance between EMS organizations in the region, and (8) review any experimental procedures proposed to be included in EMS protocols within its region.⁷⁵

Ms. MacDowell said that the advisory boards are complying, or in the process of coming into compliance, with the requirements concerning their duties. However, she indicated that she is not sure what the advisory boards are doing regarding the organization, evaluation, and procurement of equipment for EMS organizations in their regions and the maintenance of listings of all EMS equipment owned by or available to each EMS provider in the regions. She also indicated that she is not aware of many reviews being conducted by advisory boards of experimental procedures proposed to be included in EMS protocols. She said the issue "doesn't come up."

Statewide planning

The EMS Board is required to prepare a statewide EMS plan and to revise it as necessary.⁷⁶ But, according to Ms. Tiberi, a plan has not yet been prepared. The reason she gave for the plan not yet being prepared is that the Board has not determined all the necessary components for such a plan. Ms. Tiberi attributes this to lack of experience and understanding engendered by the Board's relatively recent creation.⁷⁷

Ms. Tiberi explained that the first eight years of the EMS Board's existence have been focused primarily on rulemaking in order for the Board to operate as required by state law. However, Ms. Tiberi stated that the Board has recently undertaken a commitment to strategic planning by reviewing an EMS assessment that was completed in 1991 and inviting EMS professionals from around the country to conduct a reassessment of Ohio's emergency medical services under a grant from the National Highway Traffic Safety Administration. Scheduled for November 2001, this reassessment will be used to craft a five-year strategic plan at the Board's annual planning retreat in January 2002.

Recommendations for air medical, ambulance, and EMS organizations

Ohio law requires the EMS Board to prepare recommendations for the operation of air medical, ambulance, and EMS organizations. The recommendations must include (1) the definition and classification of ambulances and medical aircraft, (2) the design, equipment, and supplies for ambulances and medical aircraft (including special equipment, supplies, training, and staffing required to assist pediatric and geriatric

⁷⁵ O.A.C. 4765-3-04(B).

⁷⁶ R.C. 4765.08.

⁷⁷ The initial appointments to the EMS Board were to be made within 90 days of November 12, 1992. S.B. 98, effective on that date, established the Board.

emergency victims), (3) the minimum number and type of personnel for the operation of ambulances and medical aircraft, (4) the communication systems necessary for the operation of ambulances and medical aircraft, and (5) reports to be made to ascertain compliance with the Revised Code chapter governing emergency medical services and rules and recommendations adopted thereunder and to ascertain the quantity and quality of air medical, ambulance, and EMS organizations in the state.⁷⁸

The EMS Board has yet to adopt any recommendations, but has proposed recommendations for the operation of air medical organizations.⁷⁹ With respect to ambulance and EMS organizations, the EMS Board has not acted. According to Ms. Tiberi, the Board does not plan to act in those two areas because Board members feel that the Board does not have adequate legislative authority to regulate the organizations. Regarding ambulance service organizations specifically, Ms. Tiberi said that the EMS Board defers to the licensing requirements for those organizations that have been adopted by the Ohio Ambulance Licensing Board.

Disaster situations

"Disaster" is defined in Ohio law as "any imminent threat or actual occurrence of widespread or severe damage to or loss of property, personal hardship or injury, or loss of life that results from any natural phenomenon or act of a human."⁸⁰ To deal with disasters, the EMS Board must provide a state EMS disaster plan and work closely with the Ohio Emergency Management Agency (OEMA).

State plan for disasters

Under Ohio law, the EMS Board must prepare a plan for the statewide regulation of emergency medical services during periods of disaster. This emergency operations plan must be consistent with the statewide EMS plan and with the statewide emergency operations plan adopted by OEMA. The EMS Board must submit the plan to OEMA.⁸¹

The EMS Board has adopted a state plan for emergency medical services during periods of disaster and has submitted it to OEMA. The plan has been incorporated into

⁷⁸ R.C. 4765.09.

⁷⁹ Draft Guidelines for the Operation of Air Medical Services, June 13, 2001. See http://www.state.oh.us/odps/division/ems/ems_local/trauma/DraftDoc.htm. (See **APPENDIX G.**)

⁸⁰ R.C. 5502.21(E).

⁸¹ R.C. 4765.08. The current emergency operations plan was adopted March 20, 2001. According to Candice Sherry of OEMA, the emergency operations plan is completely revised every four years, with 25% being revised annually.

the emergency operations plan. According to Candice Sherry of OEMA, the emergency operations plan is adequate to meet disaster situations.

Relationship with OEMA

The EMS Board is required by statute and administrative rules to do the following: (1) cooperate with OEMA in any manner it considers necessary to develop and implement the emergency operations plan,⁸² (2) participate on the incident command system steering committee,⁸³ and (3) provide a liaison to the state emergency operation center during those periods when a disaster has occurred in Ohio and the Governor has declared an emergency.⁸⁴ Ms. Tiberi said that the EMS Board is meeting all of these requirements.

⁸² *Id.*

⁸³ O.A.C. 4501:3-2-05. The deputy director of OEMA is authorized to adopt an incident command system and establish a steering committee. The duties of the committee are to (1) coordinate implementation of an incident command among state agencies, (2) develop and approve training for state emergency response officials and personnel on an incident command system, (3) monitor and evaluate implementation and use of an incident command system and training by state agencies, (4) recommend local implementation of an incident command system and assist local emergency response officials and personnel in development, training, and evaluation of the incident command system, on request of local officials, and (5) develop and make available an all-risk overhead management team.

⁸⁴ R.C. 4765.10(A)(8). "Emergency" means any period during which the Congress of the United States or chief executive has declared or proclaimed that an emergency exists. R.C. 5502.21(F).

DUTIES OF THE BOARD: EMERGENCY MEDICAL SERVICES FUNDING

EMS Grants

The EMS Board has distributed funding to assist organizations in providing training, equipment, and improving availability, accessibility, and quality of their programs through a grant program that has been in place since 1995. The grants are provided from a portion of seat belt fine revenues. Previously, 50% of seat belt fine revenue was distributed to the appropriation in line item 765-637 EMS Grants. Effective November 1, 2001, however, 54% of fines are to be distributed to this fund.

There are approximately 1,500 EMS providers and agencies eligible to apply for grants in Ohio. Am. Sub. H.B. 138 of the 123rd General Assembly has expanded the pool of eligible applicants to include those who focus on research and injury prevention, especially in the area of trauma. Until the revised program required by H.B. 138 is implemented, however, eligible applicants include only:

(1) EMS organizations established or operated by a township, village, city, or county within Ohio;

(2) Non-profit EMS organizations having principal responsibility for emergency medical response within a political subdivision that provide emergency medical services under contract with that political subdivision;

(3) Private, for-profit ambulance services, or divisions of those services, that provide emergency medical services under contract with a political subdivision;

(4) EMS organizations that are established by a joint fire district, joint ambulance district, or joint township fire district.⁸⁵

Of the eligible applicants, the following table illustrates the number of applications received versus the number of applications approved by the Board. The approval rate ranges from 93% to 99% for applications received. EMS Board staff reported that the Board's intent and action has been to award every eligible applicant agency some amount of the funding requested. For example, if the total amount of funding requested is \$10 million but the actual appropriation is only \$5 million, the Board may choose to award each approved applicant 50% of the requested amount rather than deny an applicant any funds.

⁸⁵ O.A.C. 4765-5-02.

Selection criteria currently used in the grant application process includes determining whether the requested item: (1) is necessary for emergency medical care; (2) will improve patient care or the ability of the EMS organization to provide care; (3) is logical in light of current or future funding needs; (4) will improve the overall EMS system in the affected area; and (5) is a reasonable solution or approach to a problem or situation. In addition, financial hardship to the EMS organization is considered.

Comparison of Applications Received vs. Applications Approved			
Year	Applications Received	Applications Approved	Percent Approved
1995	345	321	93%
1996	650	600	92%
1997	575	543	94%
1998	526	493	94%
1999	623	512	98%
2000	600	592	99%
2001	608	603	99%
2002	813	785	97%

Additional information was provided by the EMS Board staff related to total dollars requested versus total reimbursements requested by those awarded grants. Although over 90% of eligible applicants have been awarded some level of funding, it appears that grantees have only sought reimbursement for 65% or less of the awarded funds since the grant program was created.

Grants Requested versus Grants Requested for Reimbursement (in millions of dollars)					
Year	Appropriated Dollars* for Line Item 765-637	Total Grant Dollars Requested by Applicants	Total EMS Grant Awards	Total Reimbursements Requested by Grantees	Percent Requested for Reimbursement by Grantees
1995	\$1.8	Unknown	Unknown	\$1.0	Unknown
1996	\$2.5	Unknown	Unknown	\$.22	Unknown
1997	\$3.5	\$7.0	\$3.3	\$2.2	65%
1998	\$3.0	\$6.2	\$3.0	\$1.7	56%
1999	\$3.0	\$7.4	\$3.0	\$1.3	42%
2000	\$5.0	\$8.0	\$4.8	\$1.5	31%
2001	\$5.0	\$9.4	\$4.9	\$.50	9%**
2002	\$5.7	\$28.3	\$5.6	Unknown	Unknown

* Including Controlling Board Transfers

** Note: Grantees have requested an extension and have until 12/30/01 to seek reimbursement.

EMS Board staff suggested possible reasons for the low reimbursement request rate might include the following:

(1) Cash flow issues: Because the grants require grantees to first spend the money, and then be reimbursed, many departments may not have the initial funding available for the originally intended purchase. It was noted that some equipment can cost as much as \$25,000.

(2) Training: An initial grant request may assume a certain number of staff will attend training. When grants are actually awarded, however, the number of staff who remain interested in the training may have been reduced.

(3) Staffing levels: Grant requests may include an assumption that an increase in staff may occur when, by the time the grant moneys are available, the increase has not occurred.

(4) Volunteer organizations: Paperwork may be misplaced or overlooked.

Assistance to funding applicants

The EMS Board is required to assist applicants for state or federal EMS funds. The Board must review and comment on applications for these funds and approve the use of all state and federal funds designated solely for EMS programs unless federal law requires another state agency to approve the use of all such federal funds.⁸⁶

According to Ms. Tiberi, an EMS agency seeking state funds receives assistance with the grant application if necessary. The Board maintains a toll free telephone line that may be used by local EMS agencies to receive assistance with the applications. Questions are often received about applications for funds for purchasing new equipment. The Board also monitors federal and state grants as they become available and notifies the local agencies of other sources of funding.

⁸⁶ R.C. 4765.10(A)(3).

DUTIES OF THE BOARD: INFORMATION GATHERING SYSTEMS

The EMS Board oversees and maintains two systems of data collection on the delivery of emergency medical services in Ohio: the EMS Incident Reporting System and the Trauma System Registry. Through the Incident Reporting System, the EMS Board collects data on all EMS runs in the state, both trauma and medical, with a primary focus on pre-hospital treatment of patients. The Ohio Trauma Registry (OTR) collects data from trauma cases only. While eventually the Board plans to collect more expansive information on each trauma case, currently, the Registry collects only in-patient hospital data. In the future, the EMS Board plans to link the information in the OTR and EMS Incident reporting systems to allow for a broader examination into emergency medical services in Ohio.⁸⁷

EMS Incident Reporting System

The Revised Code requires the EMS Board to establish and maintain an EMS Incident Reporting System for the collection of information regarding the delivery of emergency trauma and medical services and the frequency at which the services are provided.⁸⁸ Rules establishing the system were promulgated on June 29, 2001.⁸⁹ The information collected by the Incident Reporting System will be distributed in aggregate form by region and county levels, and will include an annual report on each.

A nine-member Incidence Run committee, appointed by the EMS Board, oversees and advises the Board on matters concerning the Incident Reporting System. Membership of the committee must represent professionals who interact with the EMS system frequently and is to include firefighters, physicians, nurses, and EMS professionals.⁹⁰

Ohio EMS organizations must report all incidents. "Incident" is defined as "any ground or air response to a call for emergency medical services by a public or private emergency medical services organization."⁹¹ Each EMS organization must submit, at a minimum, the following information on each incident:

⁸⁷ *The Register*, newsletter of The Ohio Trauma Registry, Issue 3, June 2001.

⁸⁸ R.C. 4765.06(A).

⁸⁹ http://www.state.oh.us/odps/division/ems/ems_local/rules/New/menu.html.

⁹⁰ O.A.C. 4765-13-09.

⁹¹ O.A.C. 4765-13-01.

- (1) Name and address of the EMS organization;
- (2) Time and date of the incident;
- (3) Location of the incident;
- (4) EMS personnel involved;
- (5) Patient identification (name, date of birth, etc.);
- (6) Information regarding provider assessment;
- (7) Description of the treatment provided to the patient;
- (8) Transport information.⁹²

In the event of a natural disaster or other situation resulting in mass casualties, the Board can grant exemptions from reporting the incidents.

EMS organizations that respond to less than 10,000 incidents annually must submit quarterly reports to the Board. Those that respond to more than 10,000 incidents annually must submit data to the Board in monthly reports. Reports may be filed in written form, or in an electronic submission via the EMS Board's web site.⁹³

All EMS organizations must submit any additional information the Board considers necessary for maintaining the reporting system. EMS organizations that fail to submit an incident report in a timely manner will first be notified in writing, advising the organization of the requirements and consequences of failing to report. The Board will also send a copy of the notification letter to the chief executive officer of the political subdivision or private organization and to the chairperson of the appropriate regional physician advisory board. Continued failure of the EMS organization to report to the Board can result in the organization's ineligibility for the EMS Grants Program.⁹⁴

Ohio Trauma System Registry

The Revised Code requires the EMS Board to establish the Trauma Registry Committee to oversee and maintain a state trauma system registry to collect information regarding the care of adult and pediatric trauma victims.⁹⁵ Procedures for the registry's

⁹² O.A.C. 4765-13-03.

⁹³ O.A.C. 4765-13-05.

⁹⁴ O.A.C. 4765-13-06, -07, -08.

⁹⁵ R.C. 4765.06(B).

operation have been established by rule.⁹⁶ The Committee must annually appoint a chairperson from among its members and, if necessary, may establish subcommittees to aid in certain endeavors.⁹⁷

Who must report to the registry

The registry began collecting data in 1999.⁹⁸ All health care facilities, including hospitals, nursing facilities, county homes, county nursing homes, inpatient rehabilitation facilities, and ambulatory surgical facilities must submit the required information regarding trauma patients to the registry. The Board must take into consideration the financial and other burdens the registry's requirements impose on the affected health care providers and health care facilities. In addition, at the Board's request, any person or state agency possessing information regarding adult or pediatric trauma care must also provide the required information to the Board.

All trauma-related deaths must be reported to the registry by the coroner of the county in which the death occurs within 180 days after occurrence. The coroner must include in the report copies of the investigative summary, autopsy report, if applicable, and death certificate.⁹⁹

Information collected by the registry

A trauma injury is defined in statute as "any tissue damage that creates a significant risk for loss of life or limb, or significant permanent disfigurement or disability; is caused by blunt or penetrating mechanisms; is caused by exposure to electromagnetic, chemical or radioactive energy; or is caused by drowning, suffocation, strangulation, or a deficit or excess of heat."¹⁰⁰

Not all injuries are entered into the Trauma Registry. For an injury to be entered, the patient must be admitted or observed in the hospital for at least 48 hours or transfer into or out of the hospital. The patient must have at least one serious injury, such as burns, hypothermia, smoke inhalation, or the effects of hanging or drowning. Some

⁹⁶ O.A.C. 4765-4.

⁹⁷ O.A.C. 4765-4-02.

⁹⁸ *The Register*, newsletter of the Ohio Trauma Registry, Issue 2, March 2001.

⁹⁹ O.A.C. 4765-4-03.

¹⁰⁰ R.C. 4765.01.

injuries are not to be included in the Registry, including contusions, abrasions, insect bites, foreign bodies, and isolated hip fractures.¹⁰¹

The Trauma Committee has developed a format for reports to the registry. The information to be provided includes the name of the treating hospital, identification of the patient, the date of treatment, and how the patient incurred the injury.¹⁰² Aggregate reports of each facility's trauma incidents must be made on a quarterly basis. The reports must be provided and maintained in a way that protects the individual identity of the patient. Specific physicians and health care facilities must be identified by a code or similar designation rather than by name.¹⁰³

The Board uses the information compiled in the registry to analyze and evaluate the delivery of trauma care within the state. The Board considers the geographic patterns of trauma incidence around the state, the types and severity of the trauma injuries incurred, and the criteria for, and appropriateness of, the triage decisions made in treating the reported trauma injuries. The Board must also determine what areas of the state need improvements to the system of trauma care delivery and public education in trauma prevention. Furthermore, the Board must be able to assess, through the registry, a patient's access to trauma care, the availability and responsiveness of the prehospital emergency care system, and the cost of each patient's trauma care.¹⁰⁴

Confidentiality

H.B. 138 requires that by November 3, 2002, the Board adopt and implement rules that provide written standards and procedures for risk adjustment of information received by the Board. The rules must be developed in consultation with appropriate medical, hospital, and EMS organizations and may provide for risk adjustment by a contractor of the Board. Before these risk adjustment standards and procedures are implemented, no member of the Board and no employee or contractor of the Board or Department of Public Safety may make public any information received by the Board under the EMS law that identifies or tends to identify any specific provider of emergency medical services or adult or pediatric trauma care. After the standards and procedures are implemented, the Board may make public such information only on a risk-adjusted basis.

¹⁰¹ *The Register*, newsletter of the Ohio Trauma Registry, Issue 3, June 2001.

¹⁰² http://www.state.oh.us/odps/division/ems/ems_local/trauma/Green_book%20DRAFT%20REV%20September%2027%202001.pdf.

¹⁰³ O.A.C. 4765-5-04.

¹⁰⁴ O.A.C. 4765-5-01; *The Register*, newsletter of The Ohio Trauma Registry, Issue 2, March 2001.

H.B. 138 also requires the Board to adopt rules that specify procedures for ensuring the confidentiality of information that is not to be made public and the circumstances in which deliberations of the persons performing risk adjustment functions are not open to the public and records of those deliberations are maintained in confidence. These rules have not yet been adopted, however a draft version of the rules is available on the Board's web site.¹⁰⁵

¹⁰⁵ http://www.state.oh.us/odps/division/ems/ems_local/trauma/DraftDoc.htm. (See **APPENDIX F.**)

DUTIES OF THE BOARD: GOVERNMENT AND PUBLIC LIAISON ACTIVITIES

Several of its statutory duties cause the EMS Board to act as a liaison between the EMS community and both state government and the public.¹⁰⁶ The Board is required by statute to work with other state agencies in coordinating training of firefighters and EMS personnel and to make recommendations to the General Assembly on legislation to improve the delivery of emergency medical services. The Board is also required to serve as a statewide clearinghouse for discussion, inquiry, and complaints concerning emergency medical services and is permitted to establish a statewide public information system.

Liaison with state government

To fulfill its duty to work with appropriate state offices in coordinating the training of firefighters and EMS personnel, the Board establishes the curriculum for all initial and mandatory training of EMS personnel and firefighters. The Board has adopted rules establishing uniform minimum standards for the training, classification, and certification of firefighters and fire safety instructors.¹⁰⁷ To receive a charter as a fire service training program, a program must meet or exceed requirements established in the rules.

Regarding its duty to make recommendations concerning EMS legislation, Ms. Tiberi explained that the Board acts through the Department of Public Safety, rather than independently. The Board's recommendations are made to the legal council and legislative liaison of the Division of Emergency Medical Services. Ms. Tiberi said that the Board monitors relevant legislation throughout its progress in the General Assembly.

Liaison with the public

The Board acts as a liaison with the public through its toll-free telephone line, web site, and public information programs.¹⁰⁸ The web site includes a detailed list of e-mail and phone contacts.¹⁰⁹ Both the phone line and the web site can be accessed by the public and EMS workers and organizations to contact the Board with questions, comments, and complaints.

¹⁰⁶ R.C. 4765.10. Information for this section of the report was obtained from Laura Tiberi and the EMS web site.

¹⁰⁷ O.A.C. Chapter 4765-11.

¹⁰⁸ The toll free telephone number is 1-800-233-0785.

¹⁰⁹ The web site address is http://www.state.oh.us/odps/division/ems/ems_local.default.

The Board provides free safety information and conducts public outreach and education programs. According to Ms. Tiberi and information on the EMS web site, these programs include radio and television public service announcements and participation in National EMS Week each May and in the EMS Data Collection Project. Programs for children include school visits, conducting coloring contests for children and publishing a calendar for the contest winners' designs, and maintaining the EMS for Children and Ohio Safe Kids programs. An Ohio Department of Public Safety (ODPS) press release reported that "in 2000, more than 3.1 million pieces of safety literature were sent to almost 7,000 organizations, including 1,787 schools."¹¹⁰ ODPS Director, Lieutenant Governor Maureen O'Connor, has stated that "providing free safety materials is one way we're fulfilling our mission to provide education, service, and protection to residents of Ohio."¹¹¹

The Board publishes two newsletters, "The Register" and "The Siren," to provide current information on emergency medical services to local agencies.

¹¹⁰ Press release, July 11, 2001. Available on ODPS web site.

¹¹¹ *Ibid.*

DUTIES OF THE BOARD: TRAUMA DUTIES UNDER AM. SUB. HOUSE BILL 138

Appointment of a trauma committee

The trauma committee within the EMS Board was created by H.B. 138 to advise and assist the Board in developing the state trauma registry and rules and protocols to match severely injured adults and children with the hospitals best equipped to provide the specialized medical care that critical trauma victims require.¹¹² Lt. Governor O'Connor appointed the Committee's twenty-two members on November 3, 2000.¹¹³

The Board may also appoint other committees and subcommittees as it considers necessary.

Guidelines for the triage of trauma patients

H.B. 138 also requires that by November 3, 2002, the Board adopt rules establishing written protocols for the triage of adult and pediatric trauma victims that minimize overtriage and undertriage, and emphasize the special needs of pediatric and geriatric trauma patients. The Board has published a draft version of these new rules on its web site.¹¹⁴

Once the rules are approved, the Board must review them at least every three years to determine whether they are causing overtriage or undertriage, and modify them as necessary. In addition, the Board must adopt rules that provide for enforcement of the state and regional triage protocols and for education regarding those protocols for EMS organizations and personnel, regional directors and regional physician advisory boards, EMS instructors, and persons who regularly provide medical direction to EMS personnel in Ohio.¹¹⁵

Guidelines for the care of trauma victims

H.B. 138 requires the Board to develop and distribute guidelines for the care of trauma victims by EMS personnel and for the conduct of peer review and quality

¹¹² R.C. 4765.04; Laura Tiberi, EMS Executive Director, July 2001.

¹¹³ Laura Tiberi, EMS Executive Director, July 2001.

¹¹⁴ http://www.state.oh.us/odps/division/ems/ems_local/trauma/prehospital%20trauma%20document.pdf. (See **APPENDIX E**)

¹¹⁵ R.C. 4765.40.

assurance programs by EMS organizations.¹¹⁶ The guidelines must be consistent with the state trauma triage protocols and place emphasis on the special needs of pediatric and geriatric trauma victims. In developing the guidelines, the Board may consult with entities interested in trauma and emergency medical services and consider any relevant guidelines adopted by national organizations, including those adopted by the American College of Surgeons, American College of Emergency Physicians, and the American Academy of Pediatrics.

The Board must distribute the guidelines by November 3, 2002, to each EMS organization, regional director, regional physician advisory board, certified EMS instructor, and person who regularly provides medical direction to EMS personnel in Ohio.

Report on study of trauma care

Section 3 of H.B. 138 requires the EMS Board and its trauma committee to study and evaluate the following matters:

- (1) The status and needs of emergency medical services and adult and pediatric trauma care provided between Ohio and other jurisdictions;
- (2) Methods to improve specialized care provided by EMS organizations to pediatric and geriatric trauma victims;
- (3) The feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study is to include an analysis of the cost of acquiring, maintaining, and using these devices, potential sources of funding, and training required to ensure effective use of the devices;
- (4) Methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner;
- (5) Methods to increase advanced trauma life support, basic trauma life support, and prehospital trauma life support training among appropriate health care providers, particularly in rural areas of the state;
- (6) The roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in Ohio, and methods to enhance those roles;
- (7) The causes and impact of trauma on minority populations in Ohio and methods to improve emergency medical services and trauma care for those populations.

¹¹⁶ R.C. 4765.12.

The Board must conduct this aspect of the study in cooperation with the Commission on Minority Health.

The Board must, in conducting its study and developing its recommendations, consult as needed the appropriate committees and subcommittees of the Board; regional directors; regional physician advisory boards; organizations that represent physicians, nurses, and hospitals that care for emergency and trauma patients; EMS organizations; government entities; and the Ohio State Coroners' Association, as needed.

By no later than November 3, 2003, the Board must submit a report of its findings and recommendations to the Governor, the General Assembly, and other appropriate authorities and organizations.

EMS BOARD MEETINGS

The EMS Board meets every two months. Some issues of concern to the Board are discussed in the following excerpts from Board meeting minutes:

- November 2000: A Board member expressed concern over the disparity that continues in grants honored and funds actually expended. Specifically, he wanted the Board to discuss avenues for a better expenditure record and to continue investigating the need and use of grant funds. Another Board member added that there is a need to follow up with agencies that do not spend the awarded funds and examine the true need for these funds as a function for bettering pre-hospital care. Director Tiberi stated that the grant application allows flexibility for needed items and that the typical pattern for awardees is to wait until the end of the fiscal year to file for reimbursement.
- November 2000: A Board member reported that \$500,000 was available in left over money carried over from fiscal year 1998. Grant applicants will receive a letter stating that the money must be used towards purchasing a computer and once the state has implemented the data collection system in Ohio they will have to comply and submit their data in a timely fashion. There are 533 applications, and each applicant will receive approximately \$938.08 per computer.
- January 2001: Director Tiberi reported that the Governor's Management Improvement Commission (MIC) 2000 had released its report to the Governor in November 2000. One of the recommendations included in the report was to "merge all EMS and firefighter training in a single agency of Emergency Services within an existing cabinet agency. There was insufficient time to reach a conclusion as to which cabinet agency should house this function. A small team of subject matter experts and customers of these services should work out the details of where the merged function is to be housed." Director Tiberi reported that the Department of Public Safety has responded with a plan, as requested, suggesting how this challenge might be addressed. She said that the Ohio Department of Public Safety [ODPS] emphatically supports the executive director of the board as a lead person to any small group that is put together.

Director Tiberi concluded that:

[ODPS] has also supported that representatives, customers, and consumers of services of different agencies, organizations, and professional associations that are represented on the EMS

Board be represented if such a group is developed. Certainly, if consolidation continues to be considered in any significant way, we feel very strongly along with the Fire Alliance that the logical place would be [ODPS]. The focus would be on saving lives and preserving safety in the state of Ohio. With the passage of the Trauma Bill [H.B. 138 of the 123rd General Assembly], which adds the new medical focus to the Division of EMS and EMS Board, it seems clear that [ODPS] is the mission-centered choice. With the budget on the legislative plate, no quick follow up is foreseen at this time on this section of the MIC 2000 report.

The Board unanimously approved a motion authorizing Director Tiberi to support the Board's regulatory authority and the Board's official position in opposition to moving the EMS Division to any other state agency if further discussions on the MIC 2000 report take place, since the Board feels that a mission and customer focused consolidation, if it would occur, should be at ODPS, maintaining the designated EMS fund and the Board's rule-making authority.

- January 2001: Director Tiberi stated that:

The Board is charged by law with making a State Disaster Plan, but on the other hand we have no accompanying authority or ability to truly submit an active response plan. The EMA is responsible and has authority for the State Disaster Plan and management. My concerns are the accountability to the Emergency Management Agency's current document, which says we will do certain things that we technically have no ability to do. We can assist; we can aide; we can call on other agencies; we can give a list of agencies; we can work with the Ohio Fire Chief's Association which has a fine disaster response plan; there are many things that we can do. Ohio is quite unique in the fact that we have oversight over the certificate holders, but there is no oversight over the agency, except for the private ambulance companies that have standards for private licensing.

Director Tiberi's comments were meant to alert the Board to the need to consider this issue as an active topic for 2001.

- January 2001: The Board provided the following directions to the Trauma Committee concerning actions relative to H.B. 138:

(1) The establishment of minimum qualifications and peer review and quality improvement requirements for persons who provide medical direction to EMS personnel was delegated to the regional physicians advisory board level;

(2) The establishment of the curriculum, number of hours of instruction and training and instructional materials to be used for pediatric EMS training and continuing education programs was delegated to the Education Committee;

(3) The grant program rules that create additional priorities for funding to include injury prevention, rehabilitation, retraining, and reemployment, and medical procedures related to trauma care was delegated to the Grant Committee;

(4) The development and distribution of guidelines for the care of trauma victims by EMS personnel was delegated to the Trauma Committee;

(5) The conduct of peer review and quality assurance programs by EMS organizations was referred to the Systems Management Committee.

- March 2001: A Board member initiated a discussion of the continuing education rule violations that were on the increase. He stated that:

In the past couple of months we have discovered at least two departments where there is a continuing education problem. The instructor was not operating under the direction of any approved school which then invalidates all the continuing education for those EMTs. We have also found out through the audit process (10% of all renewals annually) that there are EMTs without appropriate continuing education to be currently certified.... The case review team has discussed this at length. Our research included other boards in state government and how they deal with continuing education.... From the investigative standpoint, it was asked that the Board give some direction on this matter. These [cases] can be processed through the [Ohio Revised Code Chapter] 119 process or through consent agreements for first offenders.

A draft consent agreement policy was presented to the EMS Board to review (see **APPENDIX A**) and voted on at the May 2001 EMS Board meeting. (On May 16, 2001, the Board approved the draft consent agreement policy.)

- March 2001: Mike Glenn, Trauma Coordinator, reported that, in addition to the Trauma Registry Advisory Committee, the Pre-hospital, Hospital, and Air Medical Subcommittees have been developed and are meeting to work on specific aspects of [implementing] H.B. 138. Mr. Glenn stated that since the "Committee and the subcommittee members are aware that the Joint Commission on Agency Rule Review (JCARR) process is lengthy and will require them to have final documents ready for JCARR **no later** than January 31, 2002, this requires that all final drafts be ready for EMS Board review by mid fall and ready for final public hearing later fall/early winter."
- March 2001: A Board member reported that the EMS For Children (EMS-C) Committee's *Emergency Guidelines for Schools* have been revised and are in the process of being reprinted. They will be distributed on request to schools, EMS agencies, and other groups caring for children.¹¹⁷
- May 16, 2001: The following is from a Continuing Education Audit Report presented to the Board:

Overall Statistics [as of May 16, 2001]

Total Number Audited (since 12/00)	217
Total Number Approved (as of 05/16/01)	141
Total Number Waiting on Additional Documentation	70
Total Number Referred to the Investigative Division (Non-compliance/No response)	6

Breakout

Total EMT-Basic Audits	118
Total EMT-Intermediate Audits	23
Total EMT-Paramedic Audits	76

- ? May 16, 2001: Mike Glenn, Trauma Coordinator, reported that the Trauma Committee meets monthly. A series of trauma town meetings will be held in eight locations around Ohio to introduce the first draft of the destination protocol and transfer agreement template. The Board also approved a motion for the Trauma Committee to continue discussion with the Ohio Ambulance Licensing Board for the purpose of allowing air medical transport services to be licensed by that body. Director Tiberi stated that H.B. 138 requires that the

¹¹⁷ The *Guidelines* are also available on the EMS Board's web site at the following Internet address: http://www.state.oh.us/odps/division/ems/ems_local/emsc/EMSCGuide.pdf.

Board adopt standards for [air medical transportation] organizations even though the Board does not have the authority to certify them.

- July 2001: Director Tiberi reported that there was approximately \$1.5 million in funds that were unspent in the last fiscal years. She had been asked to approach the Controlling Board with a request to allow those funds to be utilized by the EMS Division to do a special additional grant opportunity for computers for the EMS Incidence Reporting System and perhaps look at offering Incidence Reporting cost offset. The Board approved this request to go to the Controlling Board.
- July 2001: Mike Glenn, Trauma Coordinator, reported that 359 people have participated in seven out of the eight trauma town meetings. [The numbers from the eighth meeting were unavailable.] Of these, 246 participants were from hospitals and 113 from EMS/fire agencies. Health care professionals from 58 counties have participated, and at least one Trauma Committee member has been present at all seven meetings.
- July 2001: It was reported that the Ohio EMS-C program has been selected to participate in a pediatric assessment project funded by the National EMS-C program. The project is modeled after the National Highway Traffic Safety Administration's Technical Assessment Team process for emergency medical services. The process offers states an approach to assessing their EMS system as it relates to children and adolescents. The process will provide a comprehensive assessment to help Ohio continue to improve emergency medical service for children and provide information to the Federal EMS-C program documenting strengths and weaknesses of its program. The review team will be in Columbus for the three-day assessment on December 4, 2001. The team will hear presentations and conduct interviews on Ohio's EMS-C activities.

GLOSSARY

Emergency Medical Services Incidence Reporting System - A system established by the State Board of Emergency Medical Services for the collection of information regarding the delivery of emergency medical services in Ohio and the frequency at which services are provided. (R.C. 4765.06.)

Emergency Medical Services Personnel - First Responders, EMT-basic, EMT-intermediate, EMT-paramedic, and persons who provide medical direction to such persons. (R.C. 4765.01(L).)

Emergency Medical Technician-Basic (EMT-Basic) - A person who holds a valid certificate to practice as an EMT-Basic. An EMT-basic may operate an ambulance and give emergency medical services to patients. Services may include determining the nature and extent of illnesses or injuries and establishing priority for required emergency services, opening and maintaining an airway, chest compressions, controlling hemorrhages, stabilizing fractures, assisting in childbirth, cardiac resuscitation, and any other services approved by adoption of a rule by the State Board of Emergency Medical Services. (R.C. 4765.01 and 4765.37.)

Emergency Medical Technician-Intermediate (EMT-I) - A person who holds a valid certificate to practice as an EMT-I. An EMT-I may perform the emergency services including the following: cardiac monitoring, electrical interventions to support or correct cardiac function, administering epinephrine, determining triage, and any other service approved by rule of the State Board of Emergency Medical Services. (R.C. 4765.01 and 4765.38.)

Emergency Medical Technician-Paramedic (Paramedic) - A person who holds a current certificate to practice as an EMT-Paramedic. Paramedics may perform emergency medical services including cardiac monitoring, electrical interventions to support or correct cardiac function, airway procedures, relief of pneumothorax, administering appropriate drugs and intravenous fluids, triage of trauma victims, and any other services, including life support or intensive care techniques, approved by rule of the State Board of Emergency Medical Services. (R.C. 4765.01 and 4765.39.)

First Responder - A volunteer for a non-profit emergency medical services organization or a non-profit fire department who holds a certificate to practice as a first responder. A first responder may provide limited emergency services until an EMT arrives on the scene of the emergency. Limited emergency services include opening and maintaining an airway, giving mouth to barrier ventilation, chest compressions, electrical interventions with automated defibrillators, assisting in childbirth, and triage of trauma victims. (R.C. 4765.30 and 4765.35.)

Life Support Care (life support) - Care provided to patients requiring extraordinary therapeutic measures to sustain and prolong life. (Online Medical Dictionary, (December 1998) <www.graylab.ac.uk/omd/index.html>.)

State Trauma Registry - A register containing information on adult and pediatric trauma-related deaths, the identification of trauma patients, the monitoring of trauma patient care data, amounts of uncompensated adult and pediatric trauma care provided annually by each

facility, and any other information specified by the State Board of Emergency Medical Services. (R.C. 4765.06.)

Trauma (or traumatic injury) - Severe damage to or destruction of tissue that creates a significant risk of loss of life; loss of limb; significant, permanent disfigurement; or significant, permanent disability and is caused by one of the following: blunt or penetrating injury; exposure to electromagnetic, chemical, or radioactive energy; drowning; suffocation; strangulation; or a deficit or excess of heat. (R.C. 4765.01(N).)

Triage - The sorting out and classification of patients or casualties to determine priority of need and proper place of treatment. (Online Medical Dictionary, (December 1998) <www.graylab.ac.uk/omd/index.html>.)

APPENDIX

APPENDIX A: EMS Board's Draft Consent Agreement Policy

Ohio Department of Public Safety
State EMS Board Meeting Minutes
May 16, 2001
FINAL

28

process and how the testing has impacted the state of Ohio. There are ten other states doing the 99 Intermediate Curriculum and the committee would like to receive input from them to see how it is affecting the work they're doing.

INVESTIGATIVE TEAM REPORT - Richard Rucker & Melissa Vermillion

The investigative team passed out a "Summary of Past Adjudication Orders to Date of the State Board of EMS."

DRAFT CONSENT AGREEMENT POLICY

Draft Consent Agreement Policy was provided March 21, 2001 to Board for review. The policy was brought before the Board today for approval.

- CONSENT AGREEMENTS

I. POLICY

The State Board of Emergency Medical Services through the Division of Emergency Medical Services will consider entering into consent agreements for rule violations under ORC/OAC 4765. with certificate holders and accredited schools when deemed appropriate. *Consent agreements* provide the State EMS Board and the certificate holders or accredited institutions an alternate method in lieu of the Chapter 119 process to comply with established rules, and where appropriate, be administered discipline as the circumstances warrant.

Consent agreements will be presented to the State EMS Board for consideration after the following conditions are satisfied:

1. The Office of Investigative Services has completed a thorough investigation.
2. The Assistant Attorney General representing the State EMS Board believes a consent agreement is appropriate for the particular circumstances.
3. The EMS Executive Director approves the consent agreement.
4. The certificate holder or accredited institution agrees to the conditions set forth in the consent agreement.

When applicable, the Case Review Team as outlined in the Investigative Process Policy may be convened by the Executive Director to provide input into consent agreement consideration.

II. SPECIAL PROVISIONS

The Assistant Attorney General representing the State EMS Board shall prepare and present consent agreements to the State EMS Board for consideration after review by the Executive Director and Office of Investigative Services. A

majority vote by State EMS Board Members is necessary to approve a consent agreement.

Eligibility for certificate holders and accredited institutions to participate in consent agreements should fall within the following guidelines:

1. First offenders.
2. The rule violation can be readily remedied through a consent agreement.
3. High probability that the certificate holder or accredited institution will fulfill the conditions of the consent agreement.

Consent agreements approved by the State EMS Board in previous cases have included but not limited to criminal convictions, scope of practice and patient care issues. These consent agreements when applicable, contained provisions requiring the certificate holders to complete education or training to reinforce appropriate emergency medical technicians behavior. Ethics courses, anger management and critical decision making are primary examples. When educational or training courses are part of a consent agreement; the following conditions shall be satisfied to successfully meet the terms of the agreement.

1. The certificate holder shall submit the proposed relevant education or training course for approval to the Division of Emergency Medical Services prior to attending the course.

- a. Universities, colleges, and educational institutions are appropriate sources for obtaining such education or training.
- b. Consideration will be given to local education or training by the department's medical director, department's training officer or other
- c. instructional source approved by the Division of Emergency Medical Services.

1. The education or training with rare exceptions should be multiple sessions.
2. The length and hours of education or training will be approved (disapproved) on a case by case basis. The prime consideration is reinforcing appropriate emergency medical technician behavior.
3. The certificate holder attending the education or training must demonstrate attendance and satisfactory completion of the course within the agreed upon time frame. Submissions of grade transcripts, certificates of completion or signed letterheads by the program director are examples of documents giving evidence of attendance and satisfactory completion.

When all conditions of the consent agreement have been completed, then the case shall be presented to the State EMS Board for consideration of closure.

Certificate Holders who fail to complete the conditions outlined in the consent

agreement shall be processed in accordance with all applicable provisions of Ohio Revised Code Chapters 4675, 119 and terms listed in the agreement.

ACTION: Motion to approve Draft Consent Agreement policy. Burgess first. Fratianne second. None opposed. Motion approved.

Mr. Resanovich stated he felt as being part of the case review team this is a way to do business for these offenses and do business quickly.

Mr. Mace asked on several different occasions we have dealt with patient care standards and entered into consent agreements. He didn't see the medical director being consulted on these matters. Would that be a part of the investigative process?

Ms. Vermillion answered the medical director on most cases have been consulted. The medical directors are implementing remedial training.

Ms. Petrella stated actually that is part of the investigation.

ACTION: Motion to go into Executive Session at 12:55 p.m. to deliberate on report and recommendations of case #OOI-10 (Rumbaugh) and several consent agreements. Burgess first. Close second. None opposed. Motion approved.

ROLL CALL

Mark G. Burgess	Yes
Edward L. Close	Yes
William H. Cotton, MD	Yes
David B. Fiffick	Yes
Richard Fratianne, MD	Yes
Amy P. Gaddis-Lynn	Yes
Kathryn Haley	Yes
Andrew Hawk, MD	Yes
Carl A. Jordan	Yes
Martin Mace	Yes
Charlene Mancuso	Yes
Mark R. Mankins	Yes
Mark Marchetta	Yes
Mark N. Resanovich	Yes
Merle Stewart	Yes
Raymond Walendzak	Yes
Larry Willard	Yes

ACTION: Motion to go out of Executive Session at 1:04 p.m.

APPENDIX B

Ohio Task Force on Fire and Emergency Response Training Summary Report and Recommendations December 15, 1999

I. Executive Summary

Under the authority of Governor Bob Taft, Lt. Governor Maureen O'Connor and Commerce Director Gary Suhadolnik convened the Ohio Task Force on Fire and Emergency Response Training on September 15, 1999.

The purpose of the Ohio Task Force on Fire and Emergency Response Training was to accomplish the following:

- 1) To survey and compile information on all of the fire and emergency response programs provided by or coordinated through state government, including a list of all training programs, the oversight agency (agencies) and sources of funding. 2) To make formal, written recommendations to the Directors of the Departments of Commerce and Public Safety regarding the following: a) How can the state coordinate fire and emergency services training so as to increase efficiencies, lower overall costs and provide customers simpler points of contact for arranging training opportunities. b) How can the state agencies which provide fire and emergency services training better coordinate their offerings with those provided by or coordinated through local government and/or by the federal government. c) What additional training opportunities should the state offer and which agency should provide the training? d) How can test scheduling and registration be improved to provide for the prompt test registration needs of the fire and EMS services. e) Which agency or agencies should administer each type of training offered?

Using historical, evaluative, and action research methodology, the Task Force held public hearings throughout the state, surveyed similar agencies throughout the United States, and reviewed models for the efficient delivery of fire and emergency medical training and certification for the State of Ohio. Public hearings, research and interaction by the Task Force members revealed the following problems:

- Frustration with the service delivered by the Division of Emergency Medical Services and the Office of the State Fire Marshal.
- Dissatisfaction with the Division of EMS regarding telephone and information systems, and the certification and testing process.

- Poor communications between state agencies and local governments, local training institutions, local fire and EMS service providers, and instructors.
- The need to coordinate services through consolidation.
- The length of time it takes for BCI to conduct background and fingerprint checks of fire and EMS candidates.
- Live fire training centers not readily available.
- Concern with the usefulness of the National Registry as the testing source for EMTs.
- Perceived inequities in the fire and EMS funding mechanisms.

Using the Quality Service through Partnership problem solving processes and quality improvement techniques, the Task Force developed both immediate and long-term recommendations for improvements.

The immediate goals include:

- Re-establishing regional training coordinators.
- Establishing, publicizing and utilizing a Communications Plan.
- Utilizing technology, especially the Internet, to design an information clearinghouse.
 - Developing an interactive inquiry system for information regarding status of certification, test, or renewal.
 - Establishing an automated telephone system for response to Frequently Asked Questions.
 - Coordinating and updating all curricula, materials, and corresponding tests.
 - Establishing and monitoring a clearinghouse for grants.
 - Increasing communications to and solidifying the relationship with schools and instructors.
 - Working with training delivery partners, such as local training institutions, to decentralize the testing and grading process for fire and EMS certification tests and to review alternative testing mechanisms for fire and EMS.
 - Evaluating the disparities between re-certification of EMTs and no renewal requirements for Firefighters and seeking the necessary legislative changes to make for a more equivalent system of requirements.
 - Implementing a more prompt and efficient certification and card issuance process, such as using the state's deputy registrar locations to issue certification identification cards with proof of requirements met.

The Task Force believes that many of these goals can be accomplished with in-house operational changes and administrative direction. Possible long-term solutions may require budgetary, legislative or administrative rules changes in order to occur.

Long-term goals include the following recommendations:

- A single agency approach to fire and EMS training and certification.

- Additional funding for current training and grants, as well as the construction of regional live fire training facilities.
- Efficient use of the Internet and technology to bring effective training into the individual fire stations and chartered agencies, and for more efficient testing and certification.

The Task Force also requests that the Management Improvement Commission, scheduled to meet early next year, review these findings and determine how the State of Ohio can otherwise improve the quality delivery of fire and EMS training to all emergency responders.

Respectfully submitted this 15th day of December, 1999

II. Ohio Task Force on Fire and Emergency Response Training

On July 27, 1999, by written notice, Ohio's Governor Bob Taft appointed thirteen individuals to work with Director Gary Suhadolnik (Department of Commerce) and Lt. Governor/ Director Maureen O'Connor (Department of Public Safety) as members of Ohio's Task Force on Fire and Emergency Response Training. On September 15, 1999, Directors Suhadolnik and O'Connor convened the first meeting of the task force to review the purpose and goals and establish timelines for the task force. State Fire Marshal Robert Rielage and Public Safety Assistant Director Gary Joseph were appointed as co-chairpersons of the task force and charged with coordinating future meetings and activity.

Task Force members appointed by the Governor represent the fire and emergency medical services professional community including fire chiefs, training institutions, practitioners, state agencies, and local government. They are: Jim Beckner, Rural Fire Council; Charles Geloff, Miami Valley CTC and Joint Vocational Schools; Ed Humphrey, Ohio Township Association; Gary Joseph, Department of Public Safety; Mike Kelly, Ohio Municipal League; Daniel Leffler, Northern Ohio Firefighters; Laura Ludwig, Department of Public Safety and EMS Board; Cheryl Lyman, Department of Commerce; John Preuer, Ohio Fire Chief's Association; David Price, Fire Chief and County Emergency Management; Robert Rielage, State Fire Marshal; Rodger Sansom, Ohio State Firefighters' Association; Kevin Watts, Ohio Association of Professional Firefighters. (Appendix A)

The written recommendations of the Task Force were to be shared with the Directors of Commerce and Public Safety no later than 90 days after the first meeting, or by December 15, 1999. The Directors of Commerce and Public Safety will review the recommendations and forward the report, with their comments, to the Governor no later than thirty days after the receipt of the recommendations. Unless otherwise directed by the Governor, the Task Force on Fire and Emergency Response Training has completed its charge and ceases to exist with the issuance of these recommendations.

III. Task Force Mission and Purpose

The purpose of the Ohio Task Force on Fire and Emergency Response Training was to accomplish the following:

- 3) To survey and compile information on all of the fire and emergency response programs provided by or coordinated through state government, including a list of all training programs, the oversight agency (agencies) and sources of funding.
- 4) To make formal, written recommendations to the Directors of the Departments of Commerce and Public Safety regarding the following:
- f) How can the state coordinate fire and emergency services training so as to increase efficiencies, lower overall costs and provide customers simpler points of

- contact for arranging training opportunities.
- g) How can the state agencies which provide fire and emergency services training better coordinate their offerings with those provided by or coordinated through local government and/or by the federal government.
- h) What additional training opportunities should the state offer and which agency should provide the training?
- i) How can test scheduling and registration be improved to provide for the prompt test registration needs of the fire and EMS services.
- j) Which agency or agencies should administer each type of training offered?

IV. Step One: **Information Collected on Current Fire and EMS Training Programs in State Government**

The first meeting of the Task Force focused on surveying and compiling information about fire and EMS training offered through state agencies. Staff of the Office of the State Fire Marshal and Public Safety's Division of EMS made presentations to explain the role they play and the training offered. Information gathered from multiple sources was shared with all task force members.

A. Current Training and Certification Training required for certification as an Ohio Firefighter or EMT is essentially administered by one state agency, the Department of Public Safety, through the Division of Emergency Medical Services. Service and training delivery involves multiple agencies and organizations including the State Fire Academy, Joint Vocational Schools, Fire Departments, Hospitals and other charters and accredited agencies.

The Division of Emergency Medical Services (ODPS), along with the State Board of Emergency Medical Services, regulates EMS Training and Certification for the state of Ohio. (Appendix B) The State Board of EMS has the authority to make rules regarding Emergency Medical Services. EMS training includes the initial training for certification levels of First Responder, Basic and Intermediate EMT, and EMT-Paramedic and all continuing education training. The Division, with the approval of the Board, also accredits the training institutions which are permitted to conduct certified training programs and continuing education courses for EMT training at all levels. There are currently 90 such accredited training institutions and 280 sites with certificates of approval to teach continuing education. (Appendix C) The Division and the Board also approve EMS Instructor qualifications, training and recertification.

The Division of EMS, with the advice of a Firefighter and Fire Safety Instructor Training Sub-Committee of nine (9) members selected by the Fire Service Members of the EMS Board, also oversees the requirements for firefighter training, instructor qualification, firefighter certification requirements and chartering fire training institutions. (Appendix D) A Fire Chartered Agency is permitted to conduct certified firefighter training programs, including Firefighter I A, 1B, 1 C, Firefighter 1 and 2, Fire Safety Inspector and

Fire Instructor. There are currently 64 such chartered agencies which are approved to conduct firefighter training. (Appendix C)

All of the Division of EMS rules regarding mandatory certification training for EMS and Fire and accredited institutions are governed by rule as published in the Ohio Administrative Code. (Appendix E) There are about 1260 fire departments in Ohio, approximately 45,000 firefighters, 1600 EMS services, and 35,000 EMTs of all levels. EMTs must recertify every three years. 70-75% of Ohio's firefighters are volunteer or part-time and about 70% of EMS response is provided by fire departments. The Division of EMS certification standards are based upon nationally recognized standards for Firefighters and Emergency Medical Services professionals. Finally, while EMS renewals require meeting continuing education requirements, no additional training is required by the state for Fire personnel.

The Office of the State Fire Marshal, (SFM) a division of the Department of Commerce (DOC) sets the certification standards for Underground Storage Tank Inspectors (UST), a mandatory training program. The SFM, through the Ohio Fire Academy, offers optional advanced and specialized classes in such areas as fire service supervision and management, fire safety education, fire investigation and fire inspection. While none of these are requirements for state certification as a firefighter, the wide variety of programs offered through the Fire Academy resident program and the Outreach program offer advanced learning opportunities for fire personnel. The Fire Academy conducts 150 resident programs annually at the Academy facility in Reynoldsburg for 3,000 participants and an estimated 800 Outreach programs statewide for 13,000 participants. The SFM also operates a Film Library and Resource Center to support local training efforts. The Ohio Fire Academy is not chartered or accredited institution for mandatory fire and EMS certification training, but does hold a charter to teach the courses required to obtain certification as a Certified Fire Safety Inspector and Instructor. Additionally, the Academy does offer certification levels of training in its course catalog by virtue of a contract with another chartered and accredited training institution, a local joint vocational/adult education institution. The Fire Academy has also recently been approved to offer continuing education for EMS. (Appendix F)

In fact, the vast majority of certification level training for Fire and EMS is conducted at local Joint Vocational Schools (JVS) and community and technical colleges. Other training delivery institutions include hospitals, county and regional Fire/EMS programs, private entities, and fire departments. Fire departments may apply for and qualify as a chartered or accredited institution to conduct fire and/or EMS training and/or to provide continuing education training programs.

B. Current Funding Sources

The cost of and funding for training is diverse. Individuals, the employer or sponsoring agency, government stipends, or grants may cover the cost of training. Mandatory

training required for certification as an EMT or Firefighter appears to be most often paid for by the individual or the sponsoring agency. The Division of EMS, entirely supported by Ohio's safety belt fines, uses 50% of the safety belt fine fund for grants to local EMS providers. The percentage is designated by statute. Approximately \$3.5 million a year in this grant fund supports EMS initial training, continuing education, training equipment and patient care equipment to eligible local EMS agencies.

The Office of the State Fire Marshal offers some grants for fire equipment and training, mostly to smaller fire departments. An estimated \$750,000 is available in equipment grants to small, rural departments. There is an additional modest set-aside for equipment for departments in forest fire districts. Finally, there is an estimated \$1 million for reimbursement for basic training for firefighters from areas with less than 25,000 population.

The cost of the training itself also varies. For specialized firefighter training beyond the certification requirements, the Fire Academy, on-premise and through statewide outreach, charges a fee for courses offered. The fee generally covers the cost of the instructor and class materials. Technical schools and JVS's, offering the mandated state training for certification as a firefighter or an EMT, depend on course fees, local support (such as administrative budget and local levies) and a modest reimbursement through the State Department of Education per hour taught (\$440,262 total statewide in FY 1999). Because schools are a competitive business and do not have equal resources, the class costs do remain the prerogative of the school. Several JVS's report a deficit in the area of Public Safety training, yet continue to offer what is considered this vital service and attempt to offset the costs through other program areas or through dedicated local support, such as through a hospital. Fire departments that hold a charter to teach firefighter training or EMS do not receive the Department of Education reimbursement. These class expenses are entirely absorbed by the local department, the individual student, or may be offset by EMS grants available through the Division of EMS.

The most visible funding-mechanisms are the state budget and the dedicated funding sources that support the operations of the Office of the State Fire Marshal, including the Fire Academy, and the Division of Emergency Medical Services.

The Fire Marshal's Office and Fire Academy's operating budget's primary source (64%) of funding is taxes levied in the amount of .75% of gross fire insurance premium receipts collected by insurance companies operating in Ohio. This fund, Fund 546 (O.R.C. 3737.7) also earns interest. The current FY 2000 budget, accounting for revenues from all sources, for the State Fire Marshal's Office is slightly over \$13 million. An historical comparison is available in Appendix G. Included also is a chart reflecting FY 1999 expenditures which illustrates in summary fashion where the funding goes: 13% to Capital improvement; 13% to BUSTR; 11 % Fire Academy; 6% Fire prevention; 3% Forensic Lab; 14% Code Enforcement; 11 % Fire Investigations; 1 % Firefighters Dependents Fund; 12% Grants to Fire Departments; 16% Administration Costs. The figures also reflect that the Office of the State Fire Marshal has statutory responsibilities

beyond the training issues this task force has researched.

The safety belt fines collected in the state of Ohio provide the dedicated funding source for the operations of the Division of Emergency Medical Services and the expenses incurred with the support of the State EMS Board. By statute (O.R.C. 4513.263), the safety belt fines are distributed as follows:

- 10% School age safety belt program
- 10% Statewide safety belt public information and education
- 28% EMS Administration (Division and Board)
 - 50% EMS Grants to local agencies
 - 2% Ambulance Licensing Board

The current fiscal year budgets \$1.5 million for the EMS Administration and \$4.8 for EMS grants. Comparison and historical figures can be found in Appendix G.

Finally, the broad scope of emergency response training includes a host of other specialized training programs offered by/through the Ohio Emergency Management Agency (OEMA), a division of the Department of Public Safety, and the Ohio Department of Natural Resources (ODNR). The ODNR provides specialized training through the Division of Forestry on Wildfire Behavior, limited to their designated fire protection areas. The Division of Forestry is the State's liaison with the U.S. Forest Service and supports the training and equipping of national fire crews. The OEMA provides specialized training in Emergency Planning and Exercise, Emergency Management, Radiological Incidents, terrorism and CAMEO (Computer Aided Management of Emergency Operations). All of the special offerings are federally funded through sources such as the Federal Emergency Management Agency (FEMA) and the Environmental Protection Agency. The OEMA is the State's liaison with the Federal Emergency Management Agency's Emergency Management Institute. (Appendix H)

V. Regional Meetings

The collection of information about all the training opportunities for fire and EMS personnel, and the accompanying concerns, issues and complaints about training and testing procedures led the Task Force early on to establish a priority stage in their work; the need to gain input from boundaries beyond Columbus, Ohio. The Task Force considered necessary the involvement and contributions from the fire and EMS service customers statewide. Inviting user groups into regional forums illustrated quite clearly the significance of this effort and the importance of customer input. Task Force members shared the responsibility for hosting five regional meetings on October 6, 1999 in Columbus, Findlay, Akron, Nelsonville, and Middletown. (Appendix I)

An estimated 225 representatives from local governments, EMS services, fire

departments, Joint Vocational Schools, and other interested parties attended the five regional information gathering sessions. Each regional forum was equally well attended, and the participants who gave of their own time to attend were well prepared, thoughtful, and earnest in their remarks. The comments heard by the task force members were mirrored across the state. Most of these "customers" of Ohio's Fire and EMS training and certification delivery system expressed frustration with the service delivered by the Division of EMS and, to some extent, some concerns with the Office of the State Fire Marshal. The comments overwhelmingly, however, signaled dissatisfaction with the Division of EMS in relation to telephone and information systems, the certification and testing process, and confusion surrounding educational requirements, in general. Suggestions were made to add continuing education requirements for firefighters and to equalize or standardize somewhat the fire and EMS certification and education requirements. Poor communications between state agencies and local governments, local training institutions, local fire and EMS service providers and instructors also surfaced as a concern. Funding issues for vocational schools, the dedicated budgets, the distribution of EMS grants and the desire for additional fielding and grants for local fire departments were also a significant topic. Finally, a substantial number of attendees at the regional meetings noted the difficulty of working between two state agencies and expressed a wish for consolidated services from the state level. All of the testimony heard at the regional forums was recorded on videotape for accuracy of reporting and for the archive.

The Task Force members reported back to the third meeting of the full membership all details of comments and concerns from the field; messages consistent from all areas of the state and all representative customer organizations. Joined with similar concerns that Task Force members themselves had taken the opportunity to express, a substantial list of issues was compiled. The Task Force then divided the list into three primary categories: Training; Testing and Certification; and Service Delivery. Subcommittees were established to review, summarize and prioritize the issues in each of these areas and did so with a narrative and summary chart report. Full subcommittee reports are included in Appendix J.

VI. Survey From Other States

Because the input of Ohio's Fire and EMS community was valuable in crafting the recommendations of the Task Force, the members also decided to look beyond Ohio's borders. How did other states administer emergency training? How did other states pay for public safety services? With the goal of benchmarking in mind, and seeking best practices, the task force queried other states through the State Training Director's, the State Fire Marshal's Association, and the Association of State EMS Director's. (Survey -Appendix K)

The one lesson clearly learned was the diversity in organization and funding of public safety services across the nation. The 37 surveys returned are rich in information with

little consistency among the states and the agencies responding. The Task Force agreed that while it was of benefit to have made the collection effort, the information assembled was difficult to make use of at this time. The members concurred that the collected information would be saved as a source of data for both the Office of the State Fire Marshal and the Division of EMS to continue to review for best practice concepts.

VII. Recommendations of the Ohio Task Force on Fire and EMS Training

Information collected, digested, and discussed at length, the task force turned to the responsibility of the assigned report and recommendations. These recommendations follow the format as set by the formal charge to the Task Force. Most of the issues and suggestions as reported by the Subcommittees on Training, Testing and Certification, and Service Delivery will have a logical position in these overall recommendations. The Task Force requests that the subcommittee issues which perhaps stretched beyond the bounds of the charge of the task force, yet are identified concerns, be addressed by the departments and divisions/offices involved.

A) How can the state coordinate fire and emergency services training so as to increase efficiencies, lower overall costs and provide customers simpler point of contact for **arranging training opportunities?**

Based upon comments from the field and the Task Force membership, most feel that significant consideration should be given to consolidation of fire and EMS training, certification and service delivery in one agency. Members of the state's fire services organizations seem particularly adamant about the need to coordinate services by consolidation, and, in fact, presented a model for consideration. (Appendix L) The customer base feels that a single agency point of contact would be simpler, more efficient, and more cost effective. A "one-stop-shop" approach consolidating the rules and regulations, testing, training and certification, resource and information delivery, and funding and grants clearly has merit. To accomplish this would require no less than the Governor's support and legislative and statutory changes regarding placement of offices in state agencies and funding mechanisms, as well as a substantive redirection of the involved agencies' budgets.

- The Task Force recommends that the issue of single agency consolidation of fire and EMS training and services be given serious consideration by the Directors of Commerce and Public Safety and the Governor's Management Improvement Commission.

In the meantime, as noted in the subcommittee reports, a great deal can be accomplished by focusing on administrative and operational changes which will improve training

delivery. It is recommended that the state coordinate training and delivery by:

- Re-establishing regional training coordinators. (EMS) Establishing, publicizing
- and utilizing a Communications Plan. (EMS and SFM)

- Utilizing technology, especially the Internet, in addition to current forms of communication, to design an information clearinghouse. Developing an interactive inquiry system for information regarding status of certification, test, or renewal. (EMS and SFM)
- Establishing an automated telephone system for response to Frequently Asked Questions. (EMS)
- Updating and keeping communication current regarding all curricula, materials, and corresponding tests. (EMS)
- Establishing and monitoring a clearinghouse of grants for local agencies. (EMS)
- Increasing communications to and solidifying the relationship with schools and instructors.(EMS)
- Working with training delivery partners, such as local training institutions, to decentralize the testing and grading process for fire and EMS certification tests and to review alternative testing mechanisms for fire and EMS. (EMS)
- Evaluating the disparities between recertification of EMTs and no renewal requirements for Firefighters and seeking the necessary legislative changes to make for a more equitable system of requirements. (EMS and SFM)
- Implementing a more prompt and efficient certification and card issuance process, such as using the state's deputy registrar locations to issue certification identification cards with proof of requirements met.(EMS)

B) How can the state agencies which provide fire and emergency services training better coordinate their offerings with those provided by or coordinated through local and/or federal government?

The Task Force believes a single agency system would provide more coordinated training, certification and testing, rules and information delivery. A single agency training model was prepared as an example by Fire Academy staff of the Office of the State Fire Marshal. (Appendix M)

In the short-term, the Division of EMS and the Office of the State Fire Marshal should make an Internet and print version clearinghouse of information regarding training, certification and testing readily available, as noted above. A concentrated effort to create and continue this information base as a shared responsibility of the two primary agencies, the State Fire Marshal and the Division of EMS, would go a long way to improving communications statewide.

Another coordination issue of concern is the length of time it takes for BCI to conduct a background and fingerprint check of Fire and EMT candidates for the local employers, Fire Departments and EMS services. The Task Force requests that BCI be made aware of the Task Force concerns and asked to expedite the process and the turn around time for Firefighter and EMS personnel. In fact, the Task Force believes that EMTs and Firefighters should qualify as public safety candidates, much like law enforcement, and be granted prompt processing.

C) What additional training opportunities should the state offer and which agency should provide the training?

The significant issue here was the ability to equalize training opportunities statewide. For example, the Task Force recommends that funds be sought and obtained for regional live fire facilities throughout the state, perhaps under the supervision of the recommended regional coordinators. These facilities should be located regionally so that there is a training facility within an hour's drive of every fire department in the state. Under the current required training standards, and the hours set by law, many beginning volunteer firefighters do not participate in a live fire as a training exercise, but experience their first live fire in a real emergency scenario. Live fire training centers are not readily available. In fact, 80 of Ohio's 88 counties do not have such a training facility. Large paid-professional fire services may operate a training facility, but the vast majority of Ohio's firefighters outside these services have less opportunity in the way of live fire training, a significant safety concern, as well as a training issue. Live fire training facilities are the physical setting necessary for achieving additional training recommendations as listed below which place an emphasis on firefighter safety through required live fire training. The Task Force recommends that these training centers and training recommendations be adopted within two years time.

Other additional training recommendations include:

- Better vigilance at maintaining a standard fire curriculum and testing system.(EMS)
- Develop and seek approval for a continuing education program for firefighters.(EMS and SFM)
- Waive the teaching methodology requirement for instructor certification candidates with a teaching degree or demonstrated ability, and require continuing education for instructor certificate renewal. Revise the 36-hour Basic Firefighter course with supplemental modules for specialty training such as wildland, interior structural firefighting, and hazardous materials awareness.(EMS)
- Revisions to the volunteer and part-time firefighter training requirements:

Volunteer Firefighter

-

1 St year

Complete 36-hour Basic training course with a focus on orientation, firefighter safety, and basic skills. Satisfactory completion of a haz mat awareness and operations

program. Prior to engaging in interior structural firefighting, satisfactory completion of alive fire training module. By End of 3rd year Satisfactory completion of a 74 hour (1-B) training program and

	meet NFPA Firefighter I standards.	–
	Part-Time Firefighter	
1 St year	Meet all requirements above, including the 1-B program, and the NFPA Firefighter I standards.	
	Career Firefighter	
1 st year	Complete the 240 hour fire recruit training course, and meet NFPA Firefighter II standards.	

D) How can test scheduling and registration be improved to provide for the prompt test registration needs of the fire and EMS services?

The Task Force recommends no less than an entire overhaul of the testing process conducted by the Division of EMS. No program gathered as much criticism and concern from all customers as the current testing registration and grading process. Lost registrations, inefficient service, testing locations, lag time between test and grade, incapability in accessing information and actual employment concerns because of inability to be promptly tested and certified all surfaced as viable concerns. An additional consideration was the usefulness of the National Registry as the testing source and mechanism for EMTs. Timeliness, pertinence to practical training, pass rates, and simply the fact that the Registry does not represent an Ohio test, all numbered as Task Force discussion points. With this significant concern, the Task Force felt that the recommendations must include a strong endorsement to evaluate testing methods, timeliness and alternatives to the National Registry.

The fire service representatives of the Task Force remain adamant about testing on demand. Funding, time demands, staff levels and a comparison with a multitude of other professional examinations for certification or licensure suggest that this is not a viable option. However a great deal can be done to improve this process in service and efficiency.

- Establish "permanent" testing sites statewide with established and published hours of operation so that tests may be given at any time to individual applicants during hours of operation. Such sites might include deputy registrar/driver exam stations, vocational schools, colleges or universities. The final approved listing will be based on geographic representation, customer demand and reasonable cost.
- Offer the option for application for a specific test date request at the class location with a proctor for large class groups.
- Establish decentralized prompt grading so that with proper paperwork, upon

successful passage of the appropriate test, an individual can report to a designated site and be issued a certification card.

- The certification card would be an identification card, such as a driver's license, with the appropriate Fire and EMT endorsement, renewable at recertification time, as designated by rule or code. A small appropriate cost for issuing the certification card would be considered based on reasonable costs and funding availability.
- Utilizing such technology would allow for the compilation of a database of certified firefighters, instructors, inspectors and EMTs at all levels which could form the basis of an interactive inquiry system for status of an individual's certification.

E) Which agency or agencies should administer each type of training offered?

The Task Force feels a service improvement could be gained by moving towards a single agency system for training. With the addition of regional training coordinators, improved training, outreach, and communications would be more easily achieved. However, given the legislative and budgetary modifications this would entail, this project needs substantive review and planning and ultimately, approval.

In the meantime, achievements in service delivery, through recommendations noted throughout this report, will go a long way to bettering the administration of training. Currently, the Division of EMS, with the approval of the EMS Board, administers all EMS training. The Division also administers fire training. While the basic administration of training is in one agency, the service delivery is more fragmented. In fact, while the Fire Academy is renowned for fire service training, the Academy itself is not a chartered training institution for fire or EMS certification training. While the EMS Board represents the fire and EMS community, by statute, there is no designated representation from the SFM or the Fire Academy. At a minimum, staff level coordination and participation should broaden to include EMS and SFM staff at EMS Board meetings and Firefighter Training Sub-Committee meetings and Public Safety EMS staff at Fire Commission meetings so that a more thorough and connected approach in planning, information exchange and training can be achieved.

In addition, basic service delivery, or customer service, improvements need to be made by the administering agency, the Division of EMS, as noted throughout this report.

F) Funding

Although not one of the original questions to be addressed, the issue of funding crosses all boundaries in the points reviewed. The Task Force felt that a specific, separate, and priority recommendation regarding funding be indicated.

- The Task Force strongly encourages that policy and budget decisions made regarding the dedicated funding sources that exist for the Office of the State Fire Marshal and the Division of EMS utilize and account for all of the dedicated funds, and that these funds go entirely to the benefit of the service as designated by law.

There are also perceived inequities in the fire and EMS funding mechanisms. EMS services currently have \$3.5-4 million in grants available to them in a state fiscal year to be used for initial training or continuing education, training equipment and patient care equipment. The Fire Marshal's budget includes \$1.5 million for firefighter grants in specific categories. With 70-75% of Ohio's firefighters in the volunteer or part-time category, and nearly 70% of EMS provided by Ohio's fire departments, volunteer and paid, the fire services hope that impetus can be given to seeking more training and equipment assistance funding for fire service needs.

The survey conducted of other state's fire and EMS training and budgets revealed multiple funding mechanisms across the nation for public safety services, including some states that support local public safety services training entirely from state budgets. The Task Force advocates continued review of funding sources to better support Ohio's not-for-profit fire and emergency medical services. At a minimum, it is hoped that alternative and additional sources for training and equipment grants for fire services can be identified. Mindful of the concern mandates pose for state and local governments, yet recognizing that public safety services represent a partnership between state and local governments and a valuable and necessary service for the protection of all of Ohio's citizens, consideration should be given to state funding to offset the costs of mandatory training for EMS and fire personnel.

The Task Force also wishes to call special attention to the following funding concerns:

- Joint Vocational Schools rely heavily on the minimum reimbursement received per hours taught in public safety services, yet this funding is entirely reliant upon the Ohio Department of Education Budget. With no dedicated source, the funding levels are not assured.
- The Task Force is concerned with the flat level of income directed to the Office of the State Fire Marshal over the years as generated by the .75% of gross fire insurance premium receipts. While there has been a 27% increase in the gross state product, the insurance premium receipts show no increase that could be attributed to economic growth over time. Instead, the fund has remained static. The Task Force questions whether the total amount is being collected, if some adjustment factor occurs, or if there is some other rationale for this fund not

reflecting economic growth patterns. In fact, the question is whether the funding amount available is consistent with the intent of the original legislation.

VIII. Conclusions

The members of Ohio's Task Force on Fire and Emergency Response Training thank Governor Taft, Lt. Governor O'Connor and Director Suhadolnik for their leadership and interest in Ohio's firefighters and emergency medical services personnel, partners in the protection of and service to Ohio's citizens. The ninety -day deadline was a challenge to meet. Members of the Task Force engaged in a candid and forthright exchange of information over the three-month period.

With an earnest dedication from all members, and the dialogue and synergy that evolved, the Task Force is confident that this report summarizes the issues and challenges that face Ohio's public safety services in the matter of training, testing and certification, and service delivery. The Task Force also deems these recommendations and solutions achievable. Many of the solutions proposed should entail no more than sound administrative changes and good management.

On behalf of the broad representation of Ohio's fire and emergency services community that the Task Force represents, we respectfully recommend these changes for better assistance to emergency services in Ohio and protection for Ohio's citizens.

-Submitted by the Ohio Task Force on Fire and Emergency Response Training-
December 15,1999

APPENDIX C



Bob Taft, Governor

**Lt. Governor Maureen O'Connor,
Director**

Laura L. Tiberi
Executive Director
Emergency Medical Services
1970 W. Broad St., P.O. Box
182073
Columbus, OH 43218-2073
(614) 466-9447 • (800) 233-0785

OHIO DEPARTMENT OF PUBLIC SAFETY

- Administration
- Ohio State Highway Patrol
- Bureau of Motor Vehicles

- Emergency Medical Services Division
- Emergency Management Agency

Division of Emergency Medical Services

Staff and Committee reports to the State EMS Board for 2000

Presented to the Board at the January 17, 2001 Board Meeting



Mission of the Division of EMS: To save lives and minimize disability to Ohio's citizens and visitors by developing and continually enhancing a statewide, comprehensive, systematic response to injury, illness and fire, primarily through education and training, certification, and strategic planning.

The EMS Division of the Ohio Department of Public Safety serves as the administrative arm of Ohio's State EMS Board, a regulatory board. This statutorily created Board includes representatives from Ohio's medical community, EMT organizations and practitioners, and representatives from Ohio's fire services.

State Board of Emergency Medical Services

O.R.C. 4765.02

James Augustine	Dayton	November 12, 2001	1.
Mark Burgess	Ashland	November 12, 2001	6.
Larry Ables	Dayton	November 12, 2001	9.
Merle Stewart	East Palastine	November 12, 2001	12.
David B. Fiffick	Youngstown	November 12, 2001	16.
Kathryn Haley	Columbus	November 12, 2001	5.
William Cotton	Columbus	November 12, 2002	3.
Charlene Mancuso	Cleveland	November 12, 2002	4.

Mission Statement

"to save lives, reduce injuries and economic loss, to administer Ohio's motor vehicle laws and to preserve the safety and well being of all citizens with the most cost-effective and service-oriented methods available."

Martin Mace	Fairview Park	November 12, 2002	10.
Mark Mankin	Reynoldsburg	November 12, 2002	13.
Ed Close	Beverly	November 12, 2002	15.
Raymond Walendzak	Oregon	November 12, 2003	7.
Joseph Toth	Parma	November 12, 2003	8.
Carl A. Jordan	Massillon	November 12, 2003	11.
Mark N. Resanovich	Uniontown	November 12, 2003	14.
Mark Marchetta	Akron	November 12, 2003	17.
Richard Fratianne	Cleveland	November 12, 2003	2.
Andrew Hawk	Dayton	November 12, 2003	18.
Larry Willard	Logan	November 12, 2003	19.
Sgt. Gary Lewis	Columbus	Appointed by the Director of Public Safety	

Membership

20 members, 19 appointed by the Governor; 1 ODPS staff person appointed by the Director of Public Safety

Term

Three years

Qualifications

Members must have a background or experience in emergency medical services or trauma care. The Governor makes the appointments based on recommendations submitted by the following groups, each of which submits three names to the Governor.

1. American College of Emergency Physicians, Ohio Chapter / EMS Certified Physician
2. American College of Surgeons, Ohio Chapter / EMS Certified Surgeon
3. American Academy of Pediatricians, Ohio Chapter / EMS Certified Pediatrician
4. OHA; Osteopathic Association; Children's Hospitals Association; Health Forum / Administrator of a Hospital with adult or pediatric trauma center
5. Ohio State Council of Emergency Nurses and Ohio Nurses Association / RN
6. Ohio Fire Chiefs Association / Fire Chief with primarily full-time EMS squad
7. Ohio Fire Chiefs Association / Fire Chief with primarily volunteer EMS squad
8. Ohio Emergency Medical technicians Instructors Association/ EMT Instructor
9. Ohio Association of Professional Firefighters and Northern Ohio Firefighters/ EMT-Basic
10. Ohio Association of Professional Firefighters and Northern Ohio Firefighters / EMT-I
11. Ohio Association of Professional Firefighters and Northern Ohio Firefighters / EMT-Paramedic
12. Ohio State Firefighters Association / EMT-Basic
13. Ohio State Firefighters Association / EMT-I
14. Ohio State Firefighters Association / EMT-Paramedic
15. Ohio Association of Emergency Medical Services / EMT-Basic, Intermediate OR Paramedic
16. Ohio Ambulance Association / Member
17. EMT-Basic, EMT-Intermediate or EMT-Paramedic / at-large member affiliated with an EMS Organization
18. Ohio Association of Air Medical Services (Ohio Assoc of Critical Care Transport) / Chief Medical Officer
19. OHA; Osteopathic Association; Children's Hospitals Association; and Health Forum / Administrator of Hospital Not a Trauma Center

Compensation

Expenses only.

EMS Board and Division Responsibilities include:

- Certification of Emergency Medical Technicians at the First Responder, Basic, Intermediate and Paramedic levels
- Accreditation and approval of EMS training sites for initial certification and continuing education programs
- Certification of approved state EMS instructors
- Curriculum design and oversight for EMS
- Administration of a multi-million dollar grants program; in 2000, \$4.9 million was awarded to EMS agencies for training, training equipment, and patient care equipment
- Creation and implementation of a statewide trauma registry
- Implementation of H.B. 138, the "Trauma Bill," with the assistance of a Trauma Committee appointed by the Director
- Coordination of statewide regional physicians advisory boards which oversee EMS systems at the regional level and provide input and guidance into statewide protocols
- Coordination of the federally funded initiative designed to improve emergency care for children, EMS-C and the statewide leadership for Ohio's SafeKids
- Creation and maintenance of statewide EMS incidence reporting and data collection



EMS FACTS:

Total Active Certifications

First Responder	1426
EMT-Basic	20,382
EMT-Intermediate	3,059
EMT-Paramedic	11,187

Total	36,054
-------	--------

EMS Instructors	1468
Special Topics Instructors	968

Certifications Issued in 2000 (through December)

First Responder	832
EMT-Basic	7,595
EMT-Intermediate	1310
EMT-Paramedic	4000

Totals for 2000	13737
-----------------	-------

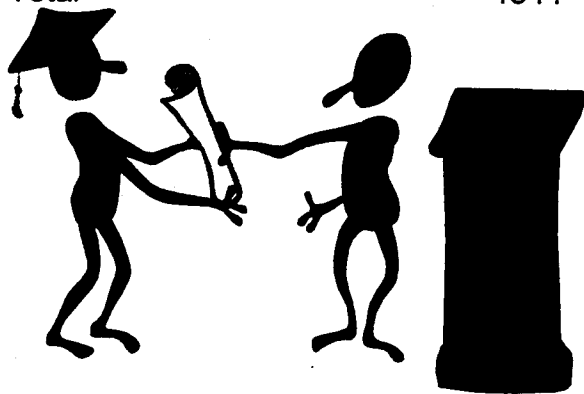
Current Continuing Education Sites 330
Accredited Schools (EMS) and Fire Charters 122

Total EMS certifications eligible for renewal/recertification

EMT-Basic	8455
EMT-Intermediate	1910
EMT-Paramedic	3532

Total renewals processed in 2000

EMT-Basic	1941
EMT-Intermediate	471
EMT-Paramedic	2132
Total	4544



Renewals Randomly Audited

480

Approximate First Time Pass Rates:

First Responder	79%
EMT-Basic	72%
EMT-Intermediate	65%
EMT-Paramedic	78%

Extensions given in 2000	989
Reciprocity granted in 2000	142

Fire Certifications:

Total Active Certifications By Level

Firefighter 1A (Volunteer)	42,957
Firefighter 1/1B	3,376
Firefighter 1&2/1C	19,749
Fire Safety Inspector	15,709
 Total Fire Certifications	 81,521
 Fire Instructors	 1743
Asst. Fire Instructors	427

Fire Certifications Issued in 2000 (through December):

Firefighter 1A	1960
Firefighter 1B	551
Firefighter 1C	350
Firefighter Level 1	119
Firefighter Level 2	1060
Fire Safety Inspector	579
 Totals for 2000	 4619



Office Operations:

The telephone auto-attendant system was put into place in April 2000. Up to that point, there was no mechanism for calculating telephone calls.

April through December 2000

44,497 telephone calls received and answered on the office main line only

Only 961 received the greeting that says "due to heavy volume we are not able to take your call at this time. Please call back later."

23 callers were not able to get through at all because all phone ques were full

Case Investigations/ EMS Investigative Services

<u>Case Classification</u>	<u>Year-to-Date Total (year 2000)</u>
101-Misdemeanor Convictions	13
102-Felony Convictions	15
201-Falsification	1
203-Forgery	1
206-Falsified EMS Application	1
303-Instructor Certification	1
306-Unauthorized Possession of Exams	1
307-Improper Instruction	1
401-Patient Care	4
402-Protocol Procedures	3
403-Scope of Practice	7
404-Staffing Procedures	1
405-Transporting Errors	2
505-Non Paymnt/Child Support	1
Total	52
Notices of Opportunity Approved by Board	23
Chapter 119 Hearings Conducted	8
Number of Completed Cases	9
Cases Open/Active	43

Investigative Services on behalf of the State Board made significant strides in efficiency and effectiveness. A lead investigator, an additional compliance officer, and a secretary were added to Division staff. Improvements and Achievements include:

- Presentation to and adoption by EMS Board of a formal investigative policy to promote uniformity in the conduct of investigations and to ensure investigations are Fair, Impartial and Reasonable.
- Persons party to an investigation are fully informed at the outset of the investigation
- Standardized complaint forms and policy initiated; available for download on web-site
- Case investigation classification and tracking system fully implemented to promote management of the system from initial complaint to final adjudication and comprehensive monthly statistical reports to Executive Director and Board
- EMS case tracking identifies common areas of investigation and discipline which will lead to the categorizing of trends and training needs
- The EMS certification database reflects internally pending cases or disciplinary actions



Regional Physicians Advisory Boards

A coordinator was hired in 2000 to recreate the Board's and Divisions efforts in the area of coordination of the RPAB's. In Ohio's ten (10) regions, most have 7-9 members. An Annual RPAB meeting was conducted in November to kick-off the new organizational details, encourage participation, and highlight information needed by the physicians who assist in medical direction for Ohio's EMS services. The newly rejuvenated RPABs will provide a strategic resource for the success of the statewide trauma system. All regions have resumed regular meetings. A quarterly Chair's meeting calendar has been established. And a protocol advisory group is currently forming to assist in the development and evaluation of state minimum guidelines. State EMS Medical Director, Dr. Drstvensek, and the RPAB Coordinator continue to work closely on these medical issues.

Legislative Activity

The year 2000's legislative highlight was the passage of HB 138, the Trauma Bill, signed by the Governor in a ceremony at Children's Hospital in July and effective November 3, 2000.

The new trauma bill establishes a statewide trauma system. Over the next two years, rules and protocols will be developed to match severely injured adults and children with the hospitals best equipped to provide the specialized medical care that critical trauma victims require.

The bill, sponsored by Rep. William Schuck (R-Columbus), provides for the establishment of a state wide trauma system, linking EMS, hospitals, and trauma centers. The EMS Board's Trauma Committee and the Regional Physician Advisory Boards will play a significant role in helping the EMS Board develop these protocols. The Ohio Department of Public Safety's EMS Division and State EMS Board will oversee the development of a state protocol for the triage of severely injured adult and pediatric trauma victims.

Hospitals caring for severely injured patients will be required to meet national standards for trauma centers set by the American College of Surgeons. All hospitals in Ohio will be required to have trauma care protocols and transfer agreements with trauma centers. The goal is to provide the most seriously injured with the best care possible.

The EMS Board's Trauma Committee is comprised of 24 healthcare and EMS experts from across the state. Appointed by the Director of the Ohio Department of Public Safety, Lt. Governor Maureen O'Connor were the following:

- | | |
|---------------------------|--|
| 1. Jay A. Johannigman, MD | General Trauma Surgery/Cincinnati |
| 2. Martin A. Torch, MD | Orthopedic Surgery/ Columbus |
| 3. Michael B. Shannon, MD | Neurosurgery/Zanesville |
| 4. Sidney F. Miller, MD | Surgery with Burn Victim Specialty/ Dayton |
| 5. Mark L. Billy, DDS | Oral and Maxillofacial Surgery/ Austintown |

- | | |
|---------------------------|--|
| 6. Greg Nemunaitis, MD | Physical Medicine and Rehabilitation / Toledo |
| 7. Victor Garcia, MD | Pediatric Surgery / Cincinnati |
| 8. Michael D. Mackan, MD | Emergency Medicine Physician / Akron |
| 9. Joseph W. Luria, MD | Pediatric Emergency Medicine / Cincinnati |
| 10. Howard Werman, MD | Air Medical Physician / Columbus |
| 11. William Emery, MD | Coroner / Ashland County |
| 12. Kathryn Jo Haley, RN | Registered Nursing-Trauma Center / Columbus |
| 13. Nancie M. Bechtel, RN | Emergency Nursing / Columbus |
| 14. Timothy Erskine | Trauma Registrar / Cincinnati |
| 15. Jean Kirchner | Trauma Center Administration / Toledo |
| 16. Lynn V. Horner | Hospital Administration / Orrville |
| 17. Michael H. Perkins | Ambulance Company Operations / West Lafayette |
| 18. Kenneth A. Rybka | Fire Chief / Bedford |
| 19. Jason Kinley | Firefighter and EMT-P / Xenia |
| 20. Enrique Grisoni, MD | Physician with Trauma Administrative
Responsibility / Cleveland |
| 21. Sue Fickle, RN | Hospital Representative / Lima |
| 22. Karen Weaver | Hospital Representative / Defiance |
| 23. Patrick Dunster, MD | Hospital Representative / Millersburg |

One additional appointment, a trauma victim advocate, remains to be named.

The Trauma Committee, working closely with the Regional Physician Advisory Boards, will assist the EMS Board over the next two years in developing the rules and protocols necessary to ensure that the most seriously injured trauma victims in Ohio are matched with an appropriate level of medical care.

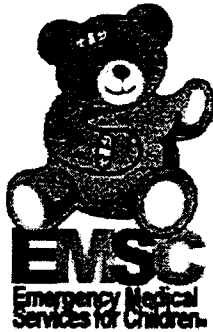
The **Board's Legislative Committee** also prepared a Board approved legislative agenda which was presented to Lt. Governor Maureen O'Connor, Director of Public Safety, for endorsement. The following legislative goals have been recognized by ODPS and will be carried by the department's legislative liaison into the legislative process in 2001 with the 124th General Assembly. The items to be pursued in this legislative package include:

- A realignment/redrawing of the prehospital emergency medical services regions as currently outlined under O.R.C. 3702.58 to allow for the defining of these districts by the Division of EMS authorized under O.R.C. 4765.
- The establishment of subpoena power for the Board as an investigating agency.
- Authority to issue summary suspension of a certificate to practice for individuals where overwhelming evidence shows a violation of the O.R.C./O.A.C. that is serious in nature and may effect the safety or well-being of the public.

OHIO EMSC – 2000

As a section of the Division, Ohio's EMS-C coordinators have combined EMS leadership in Injury Prevention, state leadership for Ohio's SafeKids, and the

federally-funded EMS-C effort into a comprehensive injury prevention program focusing on children. Utilizing the strength of Board members in pediatric medicine, the result is an EMS Board committee for EMS-C which provides oversight and direction to these projects.



EMS and Injury Prevention: Advocates for Children

The primary goal of our new EMSC Partnership Grant is to increase the involvement of EMS providers in community-based injury prevention initiatives. This goal will be accomplished by 1) offering regional injury prevention training to EMS providers; 2) offering funding to EMS agencies through sub-contracts; and 3) creating an injury prevention resource manual for EMS. Following is a summary of progress for each of these objectives:

1. Contracted with an injury prevention specialist to facilitate 10 regional training sessions. The injury prevention training sessions have been successful, with over 150 participants in attendance.
1. Injury prevention subcontract proposal forms have been developed based on models provided by the Delaware, Virginia and New Mexico EMSC programs. Thirty-two applications were received this year. Eighteen subcontracts were awarded in November for an approximate total of \$89,000.
1. Adapted the New Mexico EMSC Program's *EMTs and Injury Prevention: Advocates for Children* for use in Ohio. Three hundred training manuals have been printed for use in 10 regional trainings.

Child Day Care Project

The Ohio EMSC program has updated and revised Ohio's approved first-aid curriculum for child day care personnel in an effort to standardize training and establish a statewide network of trainers. In 2000, twelve train-the-trainer sessions were completed, resulting in the training of over 300 eligible instructors. Those who have completed the training have been added to regional referral lists to be accessed by day care providers. Training manuals are currently available to anyone eligible to teach the curriculum. To date, we have distributed 525 of the revised first aid curricula to eligible instructors in Ohio.

Ohio has also collaborated with the State of Oklahoma to put our curriculum on a CD ROM with their current day care project. They are currently available through the EMSC Resource Center.

Guidelines Evaluation

Ohio EMSC has recently completed an evaluation of our *Emergency Guidelines for Schools* which were created under a previous enhancement grant. Over 20,000 copies of the guidelines have been distributed throughout the state and thousands more nationwide. The guidelines are in the process of being revised and reprinted.

PEPP Training

The Ohio EMSC program has sponsored training for six individuals to become PEPP course coordinators. These coordinators will train EMS personnel throughout the state and establish a network of PEPP trained instructors. Our goal is to sponsor train-the-trainer PEPP meetings in Ohio specifically in areas where there are no pediatric hospitals or trauma centers. We are sponsoring a PEPP train-the-trainer course in Southeast Ohio in March, 2001. The Ohio EMS Board has approved the PEPP course for continuing education in Ohio and has approved grant funds to be utilized for PEPP training.

Ohio SAFEKIDS

The Ohio EMSC Program has responsibility for lead agency activities for the Ohio SAFE KIDS Coalition. The Coalition serves seventeen local coalitions. The Ohio program has recently secured state grant funding for Ohio SAFE KIDS activities and workshops.



Coalition Children's Safety Calendar

We are coordinating our annual EMS Children's Safety Poster Contest. An awards ceremony took place in October to award prizes and honor the winners of this annual EMS event. Fourteen winners were selected from over 4,000 entries. The winners received a bicycle with a helmet. Over 220 helmets were given as honorable mention prizes. The calendars are being distributed throughout Ohio to all EMS agencies, schools, child care centers, health departments, pediatricians, SAFE KIDS Coalitions and others upon request.

EMSC Staff

Ohio has two full-time EMSC coordinator positions funded by state funds. Alan Boster, and Christy Beeghly, MPH, EMT-B, EMSC Coordinators

EMSC Website

The Ohio EMSC website was expanded and enhanced during 2000. All current Ohio EMSC products and resources are available on the website. It also contains descriptions of current projects and links to other related sites.

TRAUMA COMMITTEE



Trauma Report to EMS Board **Activities for 2000** **Reporting in January 2001**

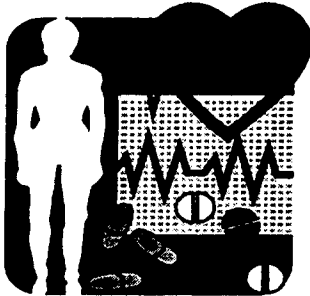
Trauma Committee

1. The trauma committee has met 3 times, and has scheduled monthly meetings through the end of 2001.
2. Elected a chair (Dr. Luria) and vice chair (Dr. Johanningman)
3. Adopted a basic set of committee standard operating procedures.
4. Two standing and one AdHoc committee have been created to address details of certain assigned activities
5. Requests that the EMS allow the Trauma Registry Advisory Committee to report to the Board through the Trauma Committee, thus eliminating the need to have a second data committee under the trauma committee.
6. The position of victim advocate is being pursued, the two nominating organizations have been contacted, expect nominations list from the Governors Council on People with Disabilities soon, awaiting the Ohio Brain Injury

Mission Statement

"to save lives, reduce injuries and economic loss, to administer Ohio's motor vehicle laws and to preserve the safety and well being of all citizens with the most cost-effective and service-oriented methods available."

- Association's list. The OBIA Ex. Dir. attended the December meeting as a guest
7. Triage protocols are a priority activity



Trauma Registry Advisory Committee

1. Held six meetings between April and October 2000. Meetings in November and December were not held in deference to the Trauma Committees activities.
2. The TRAC meet several times between May 1999 and October 1999, without ever achieving a quorum. Thus, a chair as required was never elected, nor any official business conducted. The committee did review several reports, looking at the baseline validity of the data collected to date.
3. The database of hospital registry contacts has been updated and a scheduled contact information data maintenance is in place.
4. The first issue of a regular newsletter, *The Register*, was published on June 1
5. Regular monthly meetings are scheduled for 2001.
6. The nominating organizations for seats on the TRAC have been contacted with a renewed request to nominate if the seat is empty, re-consider their nominee if they have not attended, or confirm that their existing member is interested in continuing.
7. The TRAC is planning to publish an annual report of 1999 trauma registry data, early in 2001.
8. The Register will be published on regular basis (4 issues/2001, 6 issues/2001)
9. The state data set will be evaluated and possible deletions/additions/changes to data points will be recommended
10. The framework for collecting data from the County Coroners and Rehabilitation facilities will be developed. The goal is to begin collection of data 1/1/02. Beta testing of data downloads as early as the 3rd quarter 2001 (electronic data transfer from the death certificate database at the DOH)
11. Develop a web based data system, for Rehab facilities to report through.

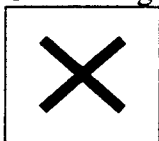
Trauma Coordinator Activity

- Several speaking engagements were undertaken addressing the trauma legislation, especially on trauma registry issues, pertinent to regional organizations in Lima, Dayton, Cleveland, and Toledo.
- Established contacts with state trauma coordinators and/or state EMS offices

- and Health Departments which have jurisdiction over their trauma systems in
- Texas, Washington, New York, Oregon, California
 - Created a power point presentation for use by EMS office in speaking to public and professional organizations about the trauma legislation.
 - Have met with several Ohio state organizations to create a liaison/contact with them for enhanced communication (College of Surgeons, Trauma Coordinators, Trauma registrars, Ambulance Association). During early 2001 plan to meet with College of Emergency Physicians, Hospital Association, Coroners Association, Air Medical Association and Emergency Nurses)
 - Attended the Annual Regional physicians advisory board meeting and spoke on the status of the trauma legislation activity
 - Created an extensive mail and e-mail database of trauma committee members, trauma committee nominees, interested individuals, EMS Board members and nominating organizations to facilitate communications.
 - Developed a base of information to be used for trauma legislation and registry information on the EMS website.

GRANTS COMMITTEE

The Division of EMS Grants Coordinator provided staff assistance to the Grants Committee in 2000. The safety belt funded state EMS Grants Fund provided for 603 grants to state EMS agencies in FY2000 for a total of \$4,922,091 in reimbursement grants awarded. These grants, per statute and rules developed by the EMS Board, are dedicated to training, training equipment, patient care equipment and research regarding the quality and accessibility of care. Money's above the projected \$3,000,000 available were added to the FY 2000 grant base by gaining Controlling Board approval for a carryover of unspent grant funds from previous years.

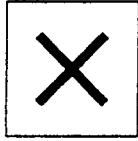


In a separate grant award, a joint venture of the Board's Grants and Systems Management Committee, a portion of unspent grant funds from previous years was carried forward for a special computer assistance grant. This special offering provides funds for eligible EMS agencies, to purchase the hardware necessary for compliance with Ohio's upcoming EMS data collection effort. 538 agencies applied for and received computer grants totaling \$505,585.

The grants process was also administratively streamlined to allow for local determination and justification of training and equipment needed, rather than intensive selection by the committee at the state level. The grants committee continues to seek appropriate methods and rules changes to allow for even more efficiency and maximum use of the available grant funds.

See grants insert for funds history

EDUCATION



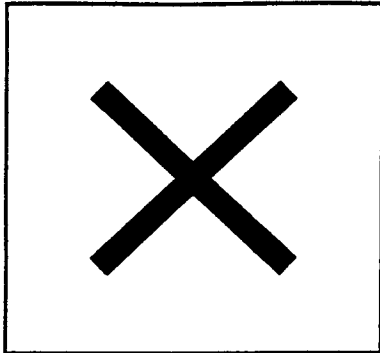
In 2000, the Education Committee finalized the rules language for the paramedic curriculum which were subsequently approved by the Board; assisted the Board with an animated Public Hearing; and followed through with the final filing of the rules January 2, 2001. (effective date March 1, 2001) The committee led the roll-out sessions for paramedic training institutions relative to the new paramedic curriculum, the USDOT curriculum adopted by the Board in 2000. Thirty-eight of the forty-one paramedic programs were represented at the roll-outs.

The Committee also maintained a subcommittee to review the new USDOT Intermediate curriculum and recommendations. By motion of the committee, the EMS Board approved adoption of the national Intermediate curriculum in Ohio. The committee remains charged with a recommendation of hours. The national recommendation is 600 hours; the committee reported to the Board that they were evaluating a range of hours probably between 230-400 and asked for Board members final comments by August 16, 2000. However, the final report to the Board on recommendations has not been issued.

In additional activities in 2000, the Education Committee:

- Recommended with successful Board adoption a 12 hour strategy for an equivalent cardiac class as an option to the ACLS
- Evaluated available testing options and the National Registry and, while timeliness remains an issue, the time factor can be adequately addressed with administrative actions. Developing, maintaining, validating, and administering a separate test/ test service would be cost prohibitive to the Division/Board.

Systems Management



The systems management committee continues to provide leadership to the daunting task of finalizing Ohio's statutorily required EMS data collection effort. The committee presented this year to the EMS Board for approval the draft final rules, a complete draft procedure manual, and the data elements for collection based on the National model data set. Rules language is pending final legal office review and should be filed with a rules change package in February. - The committee also worked with the grants committee to set the parameters of the special computer assistance grant, establish the system requirements of the computers, and worked operationally with staff from the ODPS Technology Section to craft a final plan for software and file transfer development. A powerpoint presentation of the data collection effort is posted on the EMS web-site for use as a self study to the elements of this project and will also be used in 5 regional information sessions in 2001.

Firefighter and FSI Training Subcommittee

Additional Accomplishments/Highlights of 2000

- Executive Director served as member of the MIC 2000 addressing issues relative to possible consolidations of fire and EMS training. The final report (November 2000) leaves this question for the departments and customers to determine.
- Successful Controlling Board requests added a rollover of unspent grant funds to the FY 2000 base grants for a total of nearly \$5 million directly benefiting EMS agencies in Ohio. Another successful request carried over operational funds from a previous year to begin office improvements and automation as driven largely by the ***Report and Recommendations of the Governor's Task Force on Fire and Emergency Response Training*** in December 1999.
- AG's office issued a Draft Opinion on EMS run reports and the confidentiality issue
- The Division participated in a successful State Fire School in May 2000
- Executive Director keynote at May 2000 Star of Life Awards, sponsored by partner ACEP
- Celebration of National EMS Week including Board photo, presentation of EMS-C

t-shirt with Ohio's Meredith Murphy (student calendar contest) at Parma Christian Academy

- EMS-C program won the innovation and Product Development Award for an Outstanding Publication, the Emergency Guidelines for Schools
- EMS Staff and Board members worked the display at the Ohio State Fair in August
- EMS Board approved the expansion of scope of practice for EMT-B's to allow for the administration of aspirin under local medical control and direction
- The Trauma Committee transition required per HB 138 coordinated by former Chair James Augustine, with transition materials and the work of the prehospital subcommittee forming the basis of the new committee start-up
- Approved the PEPP course as eligible for Ohio's reimbursement grant program and with EMS-C sponsored initial EMS-C trainings in Ohio
- New Board appointments nominated and made in timely fashion for continued work of Board in November 2000
- Adopted the USDOT curriculum for Paramedics and Intermediates.
- Fire Prevention Week celebrated with Firefighter Subcommittee in an event handing out smoke detectors to area residents and Hilltop employees
- ***The Siren***, the newsletter of the EMS Board, established a regular publication date and is available on the website. Publication set for the 30th of every Board meeting month.
- Executive Director attended "Feel the Heat," a day-long training in firefighting for public safety officials
- EMS staff spoke and organized display at quarterly and annual conferences of the Ohio Association of EMS
- Conducted 16 instructor orientation sessions for new EMS and Fire instructors
- Executive Director attended "boot camp" for new State EMS Directors coordinated by the National Association of State EMS Directors (NASEMSD); also attended the NASEMSD Annual Conference and Meeting
- Division web page expanded for better ease of use and more information available to customers
- Teleconference held with all exam proctors
- Executive Director participated in several television and radio interviews on special topics such as National EMS Week, National Fire Prevention Week, Toy Safety issues during the holidays, and multiple other injury-prevention topics
- Executive Director attending regular meetings of Ohio's Regulatory Boards, a joint information and educational group
- Contractual agreements developed to update all accredited and chartered training institutions
- Database for all training programs established to improve communications with and monitoring of all programs

GOALS 2000

At the January 2000 meeting, the State EMS Board set a number of Goals for the Year 2000

Goal	Status
The Board should become more Public Focused/Friendly ongoing	Achieved and
Update the Newsletter and Web page ongoing	Achieved and
Improve Telephone System/Service	Achieved
Implement the Trauma Registry	Achieved and ongoing
Trauma Committee develop data oversight group or procedure	In process
Continue EMS-C program/grants	Achieved
Prepare Board Notebooks/copies of rules	Achieved
Examine Task Force Recommendations	Achieved and ongoing
Establish committee membership/Orientation for Chairs	Achieved
Review Office Operations to Improve delivery of Service	Achieved
Make an Office Automation Plan	Achieved
Implement new Paramedic and Intermediate Curricula	In process/Planned
Continue Regional Conferences for Information Sharing	did not do in 2000 However information sharing did occur in many other ways
Seek RPAB Legislative Change	In process
Meet with Border States to discuss EMS issues	Not done
Update the State Disaster Plan	In process w/EMA

Mission Statement

"to save lives, reduce injuries and economic loss, to administer Ohio's motor vehicle laws and to preserve the safety and well being of all citizens with the most cost-effective and service-oriented methods available."

APPENDIX D:
EMS Board Executive Director's 2001 Update of EMS Board
Accomplishments

EMS ACCOMPLISHMENTS

EMS FACTS:

Total Active Certifications

First Responder	1426
EMT-Basic	20,382
EMT-Intermediate	3,059
EMT-Paramedic	11,187

Total	36,054
-------	--------

EMS Instructors	1468
-----------------	------

Special Topics Instructors	968
----------------------------	-----

Certifications Issued in 2000 (through December)

First Responder	832
EMT-Basic	7,595
EMT-Intermediate	1310
EMT-Paramedic	4000

Totals for 2000	13737
-----------------	-------

Current Continuing Education Sites	330
------------------------------------	-----

Accredited Schools (EMS) and Fire Charters	122
--	-----

Fire Certifications:

Total Active Certifications By Level

Firefighter 1A (Volunteer)	42,957
Firefighter 1/1B	3,376
Firefighter 1&2/1C	19,749
Fire Safety Inspector	15,709

Total Fire Certifications	81,521
---------------------------	--------

Fire Instructors	1743
------------------	------

Asst. Fire Instructors	427
------------------------	-----

Fire Certifications Issued in 2000 (through December):

Firefighter 1A	1960
Firefighter 1B	551
Firefighter 1C	350
Firefighter Level 1	119
Firefighter Level 2	1060
Fire Safety Inspector	579

Office Operations:

The telephone auto-attendant system was put into place in April 2000. Up to that point, there was no mechanism for calculating telephone calls.

April through December 2000

44,497 telephone calls received and answered on the office main line only
Only 961 received the greeting that says "due to heavy volume we are not able to take your call at this time. Please call back later."
23 callers were not able to get through at all because all phone ques were full

July 2001

Rollled out the results of a one year project to redesign the EMS database for efficiency and web-based capabilities. Customers can register on-line for a test, search for a school, and verify their certification and expiration dates. Planned for the next phase of technology enhancements are grant applications on-line

Investigative Services on behalf of the State Board made significant strides in efficiency and effectiveness. A lead investigator, an additional compliance officer, and a secretary were added to Division staff. Improvements and Achievements include:

- Presentation to and adoption by EMS Board of a formal investigative policy to promote uniformity in the conduct of investigations and to ensure investigations are Fair, Impartial and Reasonable.
- Persons party to an investigation are fully informed at the outset of the investigation
- Standardized complaint forms and policy initiated; available for download on web-site
- Case investigation classification and tracking system fully implemented to promote management of the system from initial complaint to final adjudication and comprehensive monthly statistical reports to Executive Director and Board
- EMS case tracking identifies common areas of investigation and discipline which will lead to the categorizing of trends and training needs

Legislation

The year 2000's legislative highlight was the passage of HB 138, the Trauma Bill, signed by the Governor in a ceremony at Children's Hospital in July and effective November 3, 2000.

The new trauma bill establishes a statewide trauma system. Over the next two years, rules and protocols will be developed to match severely injured adults and children with the hospitals best equipped to provide the specialized medical care that critical trauma victims require.

The bill, sponsored by Rep. William Schuck (R-Columbus), provides for the establishment of a state wide trauma system, linking EMS, hospitals, and trauma centers. The EMS Board's Trauma Committee and the Regional Physician Advisory Boards will play a significant role in helping the EMS Board develop these protocols. The Ohio Department of Public Safety's EMS Division and State EMS Board will oversee the development of a state protocol for the triage of severely injured adult and pediatric trauma victims.

Trauma

- Trauma committee appointed by Lt. Governor O'Connor November 3, 2000
- Trauma Committee presents 8 regional trauma town meetings June-July 2001
- Trauma Registry Committee redesigns registry and publishes the *Register* to highlight Ohio's trauma data and knowledge

OHIO Emergency Medical Services for Children

- EMS has combined EMS leadership in Injury Prevention, state leadership for Ohio's SafeKids, and the federally-funded EMS-C effort into a comprehensive injury prevention program focusing on children. Utilizing the strength of Board members in pediatric medicine, the result is an EMS Board committee for EMS-C which provides oversight and direction to these projects.

- **Child Day Care Project**

The Ohio EMSC program has updated and revised Ohio's approved first-aid curriculum for child day care personnel in an effort to standardize training and establish a statewide network of trainers. In 2000, twelve train-the-trainer sessions were completed, resulting in the training of over 300 eligible instructors. Those who have completed the training have been added to regional referral lists to be accessed by day care providers. Training manuals are currently available to anyone eligible to teach the curriculum. To date, we have distributed 525 of the revised first aid curricula to eligible instructors in Ohio.

- **Guidelines Evaluation**

Ohio EMSC has recently completed an evaluation of our *Emergency Guidelines for Schools* which were created under a previous enhancement grant. Over 20,000 copies of the guidelines have been distributed throughout the state and thousands more nationwide. The guidelines are in the process of being revised and reprinted.

- **PEPP Training (Pediatric Education for Prehospital Professionals)**

The Ohio EMSC program has sponsored training for six individuals to become PEPP course coordinators. These coordinators will train EMS personnel throughout the state and establish a network of PEPP trained instructors. Our goal is to sponsor train-the-trainer PEPP meetings in Ohio specifically in areas where there are no pediatric hospitals or trauma centers. We are sponsoring a PEPP train-the-trainer course in Southeast Ohio in March, 2001. The Ohio EMS Board has approved the PEPP course for continuing education in Ohio and has approved grant funds to be utilized for PEPP training.

- **Ohio SAFEKIDS**

The Ohio EMSC Program has responsibility for lead agency activities for the Ohio SAFE KIDS Coalition. The Coalition serves seventeen local coalitions. The Ohio program has recently secured state grant funding for Ohio SAFE KIDS activities and workshops.

- **Children's Safety Calendar**

We are coordinating our annual EMS Children's Safety Poster Contest. An awards ceremony took place in October to award prizes and honor the winners of this annual EMS event. Fourteen winners were selected from over 4,000 entries. The winners received a bicycle with a helmet. Over 220 helmets were given as honorable mention prizes. The calendars are being distributed throughout Ohio to all EMS agencies, schools, child care centers, health departments, pediatricians, SAFE KIDS Coalitions and others upon request.

EMS Grants Program

The safety belt funded state EMS Grants Fund provided for 603 grants to state EMS agencies in FY2000 for a total of \$4,922,091 in reimbursement grants awarded. These grants, per statute and rules developed by the EMS Board, are dedicated to training, training equipment, patient care equipment and research regarding the quality and accessibility of care. Money's above the projected \$3,000,000 available were added to the FY 2000 grant base by gaining Controlling Board approval for a carryover of unspent grant funds from previous years. For FY 2001, the Board has just awarded \$5.5 million to nearly 800 local provider agencies.

In a separate grant award, a joint venture of the Board's Grants and Systems Management Committee, a portion of unspent grant funds from previous years was carried forward for a special computer assistance grant. This special offering provides funds for eligible EMS agencies, to purchase the hardware necessary for compliance with Ohio's upcoming EMS data collection effort. 538 agencies applied for and received computer grants totaling \$505,585.

EDUCATION

In 2000, the Education Committee finalized the rules language for the paramedic curriculum which were subsequently approved by the Board; assisted the Board with an animated Public Hearing; and followed through with the final filing of the rules January 2, 2001. (effective date March 1, 2001) The committee led the roll-out sessions for paramedic training institutions relative to the new paramedic curriculum, the USDOT curriculum adopted by the Board in 2000. Thirty-eight of the forty-one paramedic programs were represented at the roll-outs.

ADDITIONAL ACCOMPLISHMENTS

- Executive Director served as member of the MIC 2000 addressing issues relative to possible consolidations of fire and EMS training. The final report (November 2000) leaves this question for the departments and customers to determine.

- Successful Controlling Board requests added a rollover of unspent grant funds to the FY 2000 base grants for a total of nearly \$5 million directly benefiting EMS agencies in Ohio. Another successful request carried over operational funds from a previous year to begin office improvements and automation as driven largely by the ***Report and Recommendations of the Governor's Task Force on Fire and Emergency Response Training*** in December 1999.
- AG's office issued a Draft Opinion on EMS run reports and the confidentiality issue
- The Division participated in a successful State Fire School in May 2000
- Executive Director keynote at May 2000 AND May 2001 Star of Life Awards, sponsored by partner ACEP
- EMS-C program won the innovation and Product Development Award for an Outstanding Publication, the Emergency Guidelines for Schools
- New Board appointments nominated and made in timely fashion for continued work of Board in November 2000
- Adopted the USDOT curriculum for Paramedics and Intermediates.
- ***The Siren***, the newsletter of the EMS Board, established a regular publication date and is available on the website. Publication set for the 30th of every Board meeting.
- Division web page expanded for better ease of use and more information available to customers

APPENDIX E: Draft Trauma Triage Protocol

DRAFT – June 13, 2001

Persons 16 Years of Age and Older

These criteria are used to define the Adult trauma patient and include, but are not limited to the following:

Physiologic Criteria

1. GCS <12, Loss of consciousness greater than 5 minutes, alteration in level of consciousness with evidence of head injury at time of exam or thereafter, or fails to localize pain.
2. Respirations less than 10 or greater than 29 or intubation or relief of a tension pneumothorax.
3. Pulse greater than 120 in combination with any other physiologic criteria.
4. Systolic blood pressure less than 90 or absent radial pulse with carotid pulse present.

Anatomy of Injury

1. Penetrating trauma to head, neck, torso, or extremities proximal to knee or elbow.
2. Abdominal injury with tenderness, distention, or seatbelt sign
3. Flail chest and/or tension pneumothorax.
4. Two or more proximal long bone fractures.
5. Evidence of pelvic fracture (exception: isolated hip fracture).
6. Signs or symptoms of a spinal cord injury.
7. Amputation proximal to wrist and/or ankle.
8. Crush injury to head, neck, torso, or extremities proximal to knee or elbow.
9. Burns greater than 10% Total BSA or other significant burns involving the face, feet, hands, genitalia, or airway.

Patients with any of the mechanisms of injury and/or special considerations that appear in standardized pre-hospital trauma education curriculum, or who in the judgment of the on-scene EMS provider, may be considered trauma patients for the purpose of this document.

Persons Under 16 Years of Age

These criteria are used to define the Pediatric trauma patient and include, but are not limited to the following:

Physiologic Criteria

1. GCS <12, Loss of consciousness greater than 5 minutes, alteration in level of consciousness with evidence of head injury at time of exam or thereafter, or fails to localize pain.
2. Evidence of poor perfusion (i.e.; weak distal pulse, pallor, cyanosis, delayed capillary refill, or tachycardia)
3. Evidence of respiratory distress or failure (i.e.; stridor, grunting, retractions, cyanosis, nasal flaring, hoarseness or difficulty speaking)

Anatomy of Injury

1. Penetrating trauma to head, neck, torso, or extremities proximal to knee or elbow.
2. Abdominal injury with tenderness, distention, or seatbelt sign
3. Flail chest and/or tension pneumothorax
4. Two or more proximal long bone fractures.
5. Evidence of pelvic fracture including hip
6. Signs or symptoms of a spinal cord injury.
7. Amputation proximal to wrist and/or ankle.
8. Crush injury to head, neck, torso, or extremities proximal to knee or elbow.
9. Burns greater than 5% Total BSA or other significant burns involving the face, feet, hands, genitalia, or airway.

Patients with any of the mechanisms of injury and/or special considerations that appear in standardized pre-hospital trauma education curriculum, or who in the judgment of the on-scene EMS provider, may be considered trauma patients for the purpose of this document.

DRAFT – June 13, 2001

Destination Guidelines Pre-hospital Sub-Committee

EMS personnel should limit on scene time to **Ten Minutes** or less after the trauma patients extrication except in extenuating circumstances. The receiving facility should be notified prior to arrival

Trauma patients as defined in this document and as required by law should be transported to the nearest appropriate Trauma Center.

The state triage protocols are to require that a trauma victim be transported directly to a trauma center that is qualified to provide appropriate adult or pediatric trauma care, unless any of the following exceptions applies:

- (1) It is medically necessary to transport the victim directly to another hospital for initial assessment and stabilization before transfer to an appropriate trauma center:

Including but not limited to:

- a.) Blunt Cardiac Arrest
- b.) Unstable Airway not controlled by conventional means
- c.) Uncontrolled hemorrhage

- (2) It is unsafe or medically inappropriate to transport the victim directly to an appropriate trauma center due to adverse weather or ground conditions or excessive transport time:

For purposes of defining excessive consider 15-30 minutes

- (3) Transporting the victim to an appropriate trauma center would cause a shortage of local emergency medical service resources:
- (4) No appropriate trauma center is able to receive and provide trauma care to the victim without undue delay:
- (5) Before transportation of a patient begins the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than 18 years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient.

DRAFT – May 21, 2001

Note: This page was NOT reviewed/revised at the June 13th pre-hospital sub-committee meeting

Air Medical Document

Air Medical Transportation

1. General principles
 - a. Prolonged delays at the scene waiting for air medical transport should be avoided. If air medical transportation is unavailable (e.g., weather conditions), patient should be transported by ground guidelines as listed above.
 - b. Air transport, if dispatched to the scene, should be diverted to the hospital if the patient appeared appropriate for air transport but the decision was made to transport to the nearest facility (non-trauma center) in the interim.
 - c. Air Medical Programs share the responsibility to educate EMS units and facilities on appropriate triage. They should also institute an active utilization and quality review program that provides feedback to EMS units.
 - d. Patients with uncontrolled ABC's should be taken to the closest appropriate facility (24-hour emergency department) if that can be achieved prior to the arrival of air medical transport.
 - e. Traumatic cardiac arrest due to blunt trauma is not appropriate for air transport.
2. Reasons to Consider a Call for Air Transport:
 - a. Prolonged extrication
 - b. Multiple victims/trauma patients
 - c. Time/distance factors:

If the transportation time to a trauma center by ground is greater than 30 minutes AND the transport time by ground to the nearest trauma center is greater than the total transport time* to a trauma center by helicopter. ***Total transport time includes any time at scene waiting for helicopter and transport time to trauma center.**
 - d. In the rural environment, immediate transfer with severely traumatized patients by air medical transport may be appropriate and should be encouraged if it does not significantly delay intervention for immediate life-threatening injuries.

21 May, 2001
JCK

APPENDIX F: Draft Registry Risk Adjustment & Confidentiality

DRAFT

General Principals being considered by the Trauma Registry Advisory Committee discusses rules language for the registry mandates in HB 138

This information is posted for comments and feedback from parties interested in the Ohio State Trauma Registry. Recently enacted legislation requires the EMS Board to adopt rules that address risk-adjustment and confidentiality of registry data. This process is being discussed by the members of the Trauma Registry Advisory Committee. Comments, and questions can be directed to Mike Glenn, RN, Trauma Coordinator at (614) 728-6853 or mglenn@dps.state.oh.us

This is a draft only and not necessarily the exact language that would be submitted for rules.

Risk Adjustment of Trauma Registry Data

1. Mortality should be the outcome that is risk adjusted.
2. TRISS should be the primary methodology used to risk adjust trauma registry data.
3. Major Trauma Outcome Study (MTOS) equations and co-efficient should be used
TRISS allows for risk adjustment of mortality utilizing the following factors;
 Physiologic (systolic BP, respiratory rate, Glasgow Coma Scale score)
 Anatomic (Injury Severity Score)
 Age (older or younger than 55)
 Trauma Type (blunt or penetrating injury)
4. Other risk adjustment methodologies should be evaluated by the Trauma Registry Advisory Committee (TRAC) and recommendations made to the Trauma Committee and EMS Board on their potential use. (i.e. NISS, ASCOT, ICISS)
5. The TRAC will evaluate the possibilities of creating Ohio specific co-efficients, based upon the Ohio data set, to utilize with the TRISS methodology, and when appropriate these equations should be utilized. Additionally, other appropriate state databases should be evaluated for use in developing specific co-efficients.
6. The TRAC should utilize a variety of acceptable techniques for providing statistical analysis of risk-adjusted data (examples: Z-scores, M statistics and W statistics)
7. In addition to TRISS, mortality should be risk adjusted by sex and age providing specific attention to age groupings that appropriately identify pediatric patients. (TRISS only discriminates between groups older and younger than 55 year old).
8. The TRAC will evaluate and report to the Trauma Committee and EMS Board on the feasibility of adjusting mortality on other risk factors, (Ethnicity, presence of co-morbid conditions, geographic regions, etc.)
9. The TRAC will evaluate and report to the Trauma Committee and EMS Board on the feasibility of risk adjusting other outcomes (i.e. complications, functional outcomes, length of stay, cost, etc)

DRAFT

General Principals being considered by the Trauma Registry Advisory Committee discusses rules language for the registry mandates in HB 138

10. ODPS may contract with individuals and or organizations with specific expertise in risk-adjustment and statistical analysis of medical data.

Confidentiality of Deliberations of Employees/Contractors performing Risk-Adjustment

1. All employees and contractors performing risk-adjustment on Ohio trauma registry data should be required to sign and adhere to statements of confidentiality and conflicts of interest.
2. The EMS Board, with the advise of the Trauma Committee and TRAC shall approve individuals who will have access to data, or involvement with the process of data review, regarding trauma data risk adjustment. These individuals may include Trauma Registry Advisory Committee members, Trauma committee members or EMS Board members.
3. All TRAC meetings containing discussions involving non-risk adjusted outcome data from individual hospital or groups of hospitals, shall be considered confidential and not subject to Ohio's open meetings act.
4. All minutes, recordings, and documents, electronic and paper, that contain non-risk adjusted outcome data from individual hospitals or groups of hospitals shall be considered confidential and not subject to Ohio's public records act.
5. Any meeting at which the discussion, review or display of outcome data for the purpose of risk adjustment will be utilized shall be a meeting closed to the public.
6. Executive sessions may/may not (*this still needs legal interpretation*) be used to discuss risk adjustment and/or review data in which individual providers are identifiable, at meetings that would otherwise be open meetings.

Confidentiality of data that is not to be made public

1. All reports that contain non-risk-adjusted outcomes must be presented in an aggregate form to a degree that individual hospitals and individual patients are not identified.
2. Individual Hospitals may request data reports on their own hospitals data, and these reports shall remain confidential, for the exclusive use of the hospital only for support of its trauma quality assurance program as required by ORC 3727.09 B (4).
3. The TRAC and hospitals will work out a process for the formatting, structure and frequency of confidential trauma QA reports.
4. All entities submitting data to the state trauma registry must do so in accordance with policies and procedures adopted by the TRAC and approved by the Board.

DRAFT

General Principals being considered by the Trauma Registry Advisory Committee discusses rules language for the registry mandates in HB 138

5. The TRAC should develop policies and procedures that specifically address how requests for data from the state trauma registry are handled and the creation of reports with TRAC review prior to release.
6. The following data fields, individually would identify an individual recipient of trauma care, and thus are considered not public data.
 - SS#
 - Medical Record Number
7. The following data fields, collectively, may identify an individual recipient of trauma care, and thus must be strictly reviewed by the TRAC prior to publication as public data.

Patients date of birth	Gender
Race/ethnicity	Zip code of residence
Date injury occurred	County in which injury occurred
ICD-9-CM Diagnosis codes	E-Code description of injury
Time of arrival at ED	Others? _____
8. The following data fields, individually would, identify an individual provider of trauma care, and thus are considered not public data.
 - Hospital code
9. The following data fields, collectively, may identify an individual provider of trauma care, and thus must be strictly reviewed by the TRAC prior to publication as public data.

Date injury occurred	Site at which injury occurred
County in which injury occurred	E-code description of injury
ICD-9-CM Diagnosis codes	
Others? _____	
10. The following data points are outcome oriented and must be reported in aggregate format unless risk-adjusted.

Total days in ICU	Ventilator support days
Complications	FIM scores upon discharge
Discharge status	Billed hospital charges
Length of stay in hospital	Others? _____

DRAFT

General Principals being considered by the Trauma Registry Advisory Committee discusses rules language for the registry mandates in HB 138

Informational Review of Risk Adjustment

The trauma registry was created by ORC 4765.06 (B) specifically to “provide for the reporting of adult and pediatric trauma-related deaths, identification of adult and pediatric trauma patients, monitoring of adult and pediatric trauma patient care data, determination of the total amount of uncompensated adult and pediatric trauma care provided annually by each facility that provides care to trauma victims, and collection of any other information specified by the board”

Meaningful comparisons of patients’ outcomes, across the state, require adjustment for patient risks. Risk-adjustment “levels the playing field” by accounting for factors that the patient brings to a healthcare encounter that could affect their outcome. Risk adjustment facilitates “apples to apples” comparisons, sorting patients by similar characteristics so that like is compared to like. Risk adjustment is a way to remove or reduce the effects of confounding factors in the study of a group of patients

Additional considerations in risk-adjustment (these may not necessarily need to be written in rule.

Selection bias – the patient groups reported on must be reviewed in great detail to control for selection bias (ex. Inclusion or exclusion of dead on arrival patients, patients transferred from another facility vs. directly from the scene, etc.)

Coding differences – manual AIS coding variances between trauma centers, manual coding vs. software generated coding. Coding done with and without autopsy data.

Missing data - TRISS analysis requires certain minimum data, large numbers of records with missing data can skew reporting.

Confounding factors – co-morbidities, prolonged or inconsistent pre-hospital care are significant factors that are difficult to control

Steps in Risk Adjustment

The first step in risk adjustment is to decide which outcome you are evaluating. The Trauma Registry database has several potential outcomes that could be evaluated using risk adjusted methodologies. Mortality is the most common outcome that is risk adjusted. Through consensus of the TRAC members present and the expertise of the non-voting members, it was agreed that initially, mortality should be the outcome measure subjected to risk adjusted reporting.

DRAFT

General Principals being considered by the Trauma Registry Advisory Committee discusses rules language for the registry mandates in HB 138

The next step in the risk adjustment process is to determine which risk factors need to be adjusted for. A wide variety of factors could be considered such as age, sex, race, ethnicity, acute clinical stability, extent and severity of co-morbidities, physical functional

status, etc. To a great degree, risk adjustment on data in the trauma registry will be limited by the information available in the data set itself. By electing to use the TRISS methodology, the following factors of risk will be adjusted for: physiologic stability on arrival to the ED, severity of anatomic injury, age and injury type blunt or penetrating.

The third step is to define the methodology that will be applied to the variables in order to produce risk adjusted data. The TRISS methodology is used most consistently in published trauma literature and effectively serves as the gold standard against which other trauma mortality risk adjustment methodologies are compared. Its limitations are well documented and although not a perfect tool, it should serve adequately to begin evaluating trauma mortality in Ohio.

TRISS utilizes information from the Revised Trauma Score (RTS), the Injury Severity Score (ISS), patient age and injury type. TRISS provides a revised probability of survival given the factors used to create the TRISS score (physiologic instability as measured by the RTS, the first set of vital signs in the emergency department, anatomic injuries, as coded on patient discharge using the Abbreviated Injury Score (AIS) which is used to calculate the Injury Severity Score). The physiologic components of the RTS, systolic blood pressure, respiratory rate and coded values from the glasgow coma scale are all currently collected as part of the trauma registry. The patient's age and injury type (blunt or penetrating) are also collected routinely.

The anatomic injury information that is used must be supplied in the format of an injury severity score (ISS). The ISS ranges from 1-75 and is calculated using the Abbreviated Injury Scale (AIS). AIS scores are assigned for each anatomic injury, and range from 1-6. Injury Severity Scores are calculated by identifying the three highest AIS scores from six different body regions. These three AIS scores are squared and summed, giving you an ISS. The current trauma registry does not collect AIS scores on individual injuries, although we do collect ICD-9-CM diagnosis codes. Software exists which will "map" AIS codes to the existing ICD-9 codes in the trauma database. It is current practice at all ACS verified trauma centers in Ohio to code patient injuries using AIS. Due to the specific nature of AIS coding for trauma center use and the training required to use this process, AIS coding will not become standard practice at non-trauma center hospitals. Thus, ICD-9 mapping is the only currently viable alternate to AIS coding of large ICD-9 data sets. The limitations of ICD-9 mapping are well established and can be controlled for when reviewing data. Future revisions of the Trauma Registry data set should include collection of trauma center AIS coding.

DRAFT

General Principals being considered by the Trauma Registry Advisory Committee discusses rules language for the registry mandates in HB 138

TRISS produces a probability of survival using the following formula

$$Ps = 1/(1+e^{-b}) \text{ where } b = b_0 + b_1 (\text{RTS}) + b_2 (\text{ISS}) + b_3 (\text{A})$$

(A) is the symbol for the patients age. If the age is 54 years or less, A is equal to 0, If the patient is 55 years old or more, A is equal to 1

$b_{0...3}$ are coefficients derived from regression analysis applied to the Major Trauma Outcome Study. The constant e is equal to 2.718282

Coefficients for Revised Trauma Score blunt and penetrating injury types

	b_0 (constant)	b_1 (RTS)	b_2 (ISS)	b_3 (age)
Blunt	-1.2470	0.9544	-0.0768	-1.9052
Penetrating	-0.6029	1.1430	-0.1516	-2.6676

GCS	Systolic BP	Respiratory Rate	Coded Value
13-15	>89	10-29	4
9-12	76-89	>29	3
6-8	50-75	6-9	2
4-5	1-49	1-5	1
3	0	0	0

Weights

GCS	0.9368
Systolic BP	0.7326
Respiratory Rate	0.2908

REFERENCES

Champion, Copes, Sacco, et al: The Major Trauma Outcome Study: Establishing National Norms for Trauma Care. Journal of Trauma 30:1356-1365
Boyd, Tolson, Copes Evaluating Trauma care: The TRISS Method. Journal of Trauma 27:370-378
Mattox, Feliciano, Moore: TRAUMA, 4th edition. McGraw-Hill, 2000

APPENDIX G

DRAFT GUIDELINES FOR THE OPERATION OF AIR MEDICAL SERVICES: June 13, 2001

AIR AMBULANCES

Definitions

The Following definitions apply throughout this article:

- 1) "Air Medical Program" means to furnish, operate, conduct, maintain, advertise, promote, or otherwise engage in providing emergency medical services, as a rotorcraft or fixed-wing ambulance service provider as part of a regular course of doing business.
 - 2) "Air medical personnel" means a person who is licensed and/or certified by the State of Ohio as a paramedic, a registered nurse, or physician with an unlimited license to practice medicine.
 - 3) "Medical director of an air medical program" means a licensed physician within an air ambulance service who is ultimately responsible for patient care during each transport. The Medical Director shall have an active role in the delivery of emergency care and has knowledge of air medical transport and flight physiology. The medical director is responsible for directly overseeing and assuring that appropriate air-medical personnel, and equipment are provided for each patient transported by the air medical program within the air-medical services as well as the clinical performance of air medical personnel.
 - 4) "Rotorcraft ambulance" means a helicopter or other aircraft capable of vertical take offs and landings with the capability of hovering.
 - 5) "A rotorcraft ambulance service provider" means a service provider, based in the State of Ohio or providing transport services within the State of Ohio, that utilizes rotorcraft aircraft to respond directly to the scene of a medical emergency and are utilized to air lift critically ill or injured patients directly to or between definitive care facilities or to a point of transfer with another more appropriate form of transportation and has a minimum staff of at least one RN and a second licensed and /or certified medical crew member which may be physician, nurse, paramedic, or respiratory therapist.
 - 6) "Fixed-wing ambulance" means a propeller driven or jet airplane with appropriately licensed and or certified medical personnel as determined by the medical director.
 - 7) "Fixed-wing ambulance service provider" means a service provider, based in the State of Ohio or providing transport services within the State of Ohio, that utilizes fixed-wing aircraft to provide airport to airport transports where the patient(s) involved requires a stretcher or cot and are being transported to or from a definitive care medical setting.
 - 8) "Licensed" or "licensure" means authorization in written form issued by the State of Ohio to an air medical program.
 - 9) "CAMTS" means the Commission on Accreditation of Medical Transport Systems.
 - 10) "14 CFR, Part 135 & 119" means air carriers with reference to Federal Aviation Regulations, Part 135 & 119, and holding a current FAA Air Carrier certificate, with approved "Air Ambulance Operations-Helicopter," or "Air Ambulance Operations-Airplane" operations specifications.
 - 11) "F.A.A." means the Federal Aviation Administration.
 - 12) "F.A.R." means the Federal Aviation Regulations including but not limited to Title 14 CFR.
 - 13) "Base of operation" means a location at which an aircraft and crew are stationed to respond to transport requests.
 - 14) "Mutual aid" means an agreement between two or more air medical programs to respond to the scene of an emergency or interfacility transport when the original service requested is unable to respond.
 - 15) "Flight Physiology" means the physiological stress of flight encountered during air medical operations to include, but not be limited to, the Boyle's, Charles', Dalton's, Henry's, and Universal Gas Laws, and stressors of barometric pressure changes, hypoxia, thermal and humidity changes, gravitational forces, noise, vibration, and fatigue.
-

Rotorcraft Ambulance Service Provider

Sec. 1.

- 1) Who needs to be licensed as a rotorwing provider?**
 - a) Base of operations in Ohio, or
 - b) Program providing, or seeking to provide rotorcraft ambulance services within the State of Ohio, or
 - c) Responding directly to the scene of a medical emergency in the State of Ohio,
- 2) Licensure not needed for the following:**
 - a) Assisting in a major catastrophe, disaster, when existing emergency medical services are insufficient are unable to cope with the situation.
 - b) An air medical program responding in a mutual aid capacity
 - c) An agency or instrumentality of the United States.
- 3) Other aviation requirements:**
 - a) Meet all applicable parts of F.A.A regulation, and shall
 - b) Hold a valid 14 CFR , Part 135 Air Carrier certificate, or shall have a contract with the holder of a 14 CFR Part 135 Air Carrier certificate to provide aviation services under their certificate.
 - c) Either must also have current FAA approved Air Ambulance Operations-Helicopter specifications.
- 4) Rotorcraft ambulance service provider organizations will have:**
 - a) Continuing education
 - b) Audit and review
 - c) Scene response utilization consistent with the American College of Surgeons as defined in Resources for Optimal Care of the Injured Patient.
 - d) Performance Improvement
 - e) Qualified Medical control and direction
 - f) Safety and survival programs and education.
- 5) Medical Director requirments:**
 - a) Ohio licensed medical director with a current unlimited Ohio License.
 - b) The duties and responsibilities of the medical director include, but are not limited to:
 - (i) Assuming medical authority over any and all patients treated and transported by the rotorcraft ambulance service.
 - (ii) Providing liaison with physicians.
 - (iii) Assuring that the drugs, medications, supplies, and equipment are appropriate
 - (iv) Monitoring and evaluating overall clinical operations.
 - (v) Assisting in the coordination and provision of clinical continuing education.
 - (vi) Participating in a quarterly audit and review of cases treated by air medical personnel.
 - (vii) Attesting to the competency of air medical personnel affiliated with the rotorcraft ambulance service provider organization.
- 6) Responsibility for in-service training** – program will designate one (1) person licensed and/or certified as a paramedic, a registered nurse, or a licensed physician, and have appropriate knowledge of patient care during air ambulance transport.
- 7) Public Safety** - service will not engage in conduct or practices detrimental to the health and safety of emergency patients or to members of the general public while in the course of business or service as a rotorcraft ambulance service provider.
- 8) Coordination with EMS and Law enforcement** - will have area wide plan to provide safety education and coordinate rotorcraft ambulance service with emergency medical services rescue, law enforcement, and mutual aid back-up systems
- 9) Required personnel resources** - adequate number of trained personnel and aircraft to routinely provide continuous twenty-four (24) hour services.
- 10) Safety committee to include:**
 - a) Pilot(s)
 - b) Air-medical personnel
 - c) Aircraft maintenance technician(s)
 - d) Communications personnel.
 - e) The safety committee shall meet at least quarterly and may be concurrent and in conjunction with the audit/review committee.
- 11) Who can request rotorcraft?**
 - a) hospitals and health care facilities,
 - b) emergency medical services organizations,
 - c) fire departments and
 - d) law enforcement agencies
 - e) industrial safety departments.

12) Destinations

- a) Appropriate medical facility in accordance with protocols approved by the Air Medical Program Medical Director.
- b) Trauma patients meeting triage criteria will be transported to an appropriate Level I or II Trauma Center.

Sec. 2.

1) Application requirements:

- a) Aircraft types and identification numbers.
- b) A listing of all personnel, and their qualifications by category, who will regularly serve as pilots, and air medical personnel.
- c) A copy of the patient care transport record to be utilized on each transport.
- d) Documentation of medical education as approved by the Medical Director
- e) A listing of all on-board life support and medical communications equipment available, including a list of drugs and medications to be carried on each aircraft.
- f) A copy of all treatment protocols and standing orders (if applicable) under which all non-physician personnel operate.
- g) Documentation of appropriate aircraft liability coverage in accordance with State guidelines.
- h) Insurance coverage for each and every aircraft owned and/or operated
- i) valid for a period of two (2) years

Sec. 3.

1) Rotorcraft ambulance characteristics:

- a) equipment and operations
 - i) performance inherent in the type of aircraft selected by the rotorcraft ambulance service provider
 - ii) aircraft and its equipment and operations shall be in compliance with prevailing F.A.R for the type of aircraft in question and flying conditions under which the aircraft will be operated as specified in the 14 CFR, Part 135 air carrier certificate of the air ambulance service provider.
- b) Capable of carrying a minimum of one (1) patient on a litter in a horizontal position located so as not to obstruct the pilot's vision or interfere with the performance of any member of the flight crew or required air medical personnel.
- c) Means of securing each litter and attached patient securely to either the floor (deck), walls (bulkhead), seats, or specific litter rack or any combination thereof which will comply with an acceptable method using either approved data from the aircraft manufacturer or data approved by the F.A.A. If data approved by the F.A.A. is required, a field approval or, supplemental type certificate (STC) shall be obtained.
- d) Demonstrable unobstructed vertical space at the head and thorax areas of the upper surface of a litter(s) to allow for performance of advanced life support cardiac care.
- e) Both the head and thorax of a secured patient shall be accessible by a minimum of two (2) air-medical personnel at one (1) time.
- f) Lighting available for patient observation (a minimum of forty (40) foot-candles at the level of the patient is recommended). Lighting shall be such as to not interfere with the pilots vision and will be focused, shielded, diffused, or colored illumination.
- g) Temperature regulation to assure the comfort of all persons on board.
- h) Door access demonstrably large enough for ease of patient litter loading and unloading in the supine position.
- i) Electrical system of the aircraft capable of supporting all of the ancillary equipment without the threat of overload or systems failure.
- j) Other specialized equipment may be required to conduct certain operations. The installation of this equipment shall comply with an acceptable method using either approved data from the aircraft manufacturer or data approved by the F.A.A. If data approved by the F.A.A. is required, a field approval or, supplemental type certificate (STC) shall be obtained.
- k) Searchlight rated as a minimum of four hundred thousand (400,000) candlepower or greater, manipulated by the pilot with a minimum movement of ninety (90) degrees vertical and one hundred eighty (180) degrees horizontal with the capability of illuminating the proposed landing site.
- l) air to ground communication capability to allow the pilot to communicate with all of the following ground personnel:
 - i) Law enforcement,
 - ii) Fire/rescue,
 - iii) Ambulances,
 - iv) Hospital(s).
- m) Adequate patient restraint(s) to preclude interference with the crew or aircraft flight controls.
- n) Intercommunications system.

Sec. 4.

1) Documentation:

- a) Maintain accurate records concerning the emergency care provided to each patient within the state.
- b) Participate in Ohio EMS Run reporting and the Ohio Trauma Registry as required.
- c) Premises maintained, suitable to the conduct of a rotorcraft ambulance service, with provision for adequate storage, and/or maintenance of rotorcraft ambulances and the on-board equipment.
- d) Have a periodic maintenance program as outlined for each specific aircraft in compliance with F.A.A. guidelines and manufacturer's service recommendations (MSR) as a minimum to assure that each rotorcraft ambulance, including equipment, is maintained in good, safe working condition and that rigid sanitation conditions and procedures are in effect at all times.
- e) Premises, records, hangars, padding, and tie-down facilities, and rotorcraft ambulances will be made available for inspection
- f) A determination of non-compliance with F.A.R. may result in immediate suspension of licensure as a rotorcraft ambulance service provider.
- g) Each rotorcraft ambulance service provider shall make available for inspection at place of operation during regular business hours any manual of operations required under F.A.R.
- h) Licensure as a rotorcraft ambulance service provider may be terminated upon the date specified in the notice.
- i) establish equipment checklist procedures to insure the following:
- j) Electronic and mechanical equipment are in proper operating condition.
- k) Rotorcraft ambulances shall be maintained in safe operating conditions at all times.
- l) Emergency patient care equipment maintained in minimum quantities either directly on board the rotorcraft ambulance or available at the time of patient transport.
- m) Insure that rigid sanitation conditions and procedures are in effect at all times.
- n) The interior and the equipment within the aircraft are clean and maintained in good working order at all times.
- o) Freshly laundered linens are used on all litters, and pillows and linen shall be changed after each patient is transported.
- p) When the aircraft has been utilized to transport a patient known to have a communicable disease, the aircraft must be cleansed and all contact surfaces be disinfected.
- q) Provider may operate, for a period not to exceed one hundred eighty (180) consecutive days, a temporary replacement rotorcraft ambulance if the temporary replacement rotorcraft ambulance is used to replace a certified rotorcraft ambulance that has been temporarily taken out of service for repair or maintenance, providing the following:
- r) The replacement rotorcraft ambulance must meet all certification requirements of this article.

Sec. 5.

1) Staffing

- a) will be staffed by no less than three (3) people and include the following requirements:
- b) The first person must be a properly certified pilot who shall complete an orientation program covering flight, and air medical operations as prescribed by the holder of the 14 CFR Part 135 Air Carrier certificate under which the Air Medical Program operates.
- c) The second person shall be an Ohio-licensed registered nurse with air-medical oriented training as prescribed by the program medical director
- d) The third person shall be any appropriate, licensed or certified medical personnel required to properly care for the medical needs of the patient at the discretion of the program medical director.
- e) The air medical personnel on board the aircraft must be trained in air transport issues and flight physiology.
- f) notify in writing within thirty (30) days of any change in the services provided.

Sec. 6.

1) Equipment

- a) Portable suction with appropriate catheters and tips capable of a minimum of three hundred
- b) (300) mm mercury.
- c) Oropharyngeal airways (adult, child, and infant sizes)
- d) Nasopharyngeal airways (small, 20-24 french; medium, 26-30 french; large, 30 french or greater)
- e) greater)
- f) 1 adult, & 1 child/infant bag, with adult, child, infant, and neonate masks.
- g) Portable oxygen w/appropriate cannulas, or mask, etc.
- h) Blood pressure cuffs (adult, child, and infant sizes)
- i) Stethoscope (carried in the aircraft or by air medical personnel)
- j) Bandages and dressings to include, but not limited to the following:
- k) Sterile gauze pads (4x4).

DRAFT GUIDELINES FOR THE OPERATION OF AIR MEDICAL SERVICES: June 13, 2001

- l) Airtight dressings.
 - m) Tape/bandage shears (shears may be carried in aircraft or by air-medical personnel).
 - n) Rigid extrication collars in pediatric, small, medium, and large (or adjustable to fit the sizes indicated) for each patient transported.
 - o) Portable defibrillator with self-contained cardiac monitor and E.C.G. strip writer with adult and pediatric paddles, or hands-free adapter which will not interfere with the aircraft's electrical and radio system
 - p) Endotracheal intubation equipment to include laryngoscopes with spare batteries and bulbs, with laryngoscope blades, and endotracheal tubes in adult, child, and infant sizes.
 - q) Medications, intravenous fluids, administration sets, syringes, and needles will be specified by the air-medical director identifying types and quantities
- 2) Controlled drugs shall not be left on unattended aircraft unless adequate security precautions have been taken.

Sec. 7.

1) Communications – rotorcraft provider will have maintain the following:

- a) communications equipment required under 14 CFR Part 135 for the type of aircraft and service provided
- b) radio communications equipment that allows it to communicate directly with Ohio hospitals and EMS.
- c) Transmitters are to operate with an output power not to exceed ten (10) watts as applicable to F.C.C. rules and regulations.
- d) A dispatch and tactical communications system with the capability to provide a coordinated voice communications linkage within the flying area of the rotorcraft ambulance service provider.

Rotorcraft Ambulance Service Provider Licensure Application with Accreditation by CAMTS (Commission for Accreditation of Medical Transport Systems).

Sec. 1.

1) Deemed status - CAMTS Accredited programs

- a) Required info:
 - i) Base of operations and a level of care to be provided.
 - ii) A description and general location of each aircraft to be used as an air ambulance, including the make, model, year of manufacture, insignia, name or monogram, or other distinguishing characteristics.
 - iii) Documentation of appropriate aircraft liability coverage in accordance with State guidelines.
 - iv) The insurance coverage specified shall be for each and every aircraft owned and/or operated by or for the fixed wing ambulance service provider.
 - v) Proof of current critical care transport accreditation by the Commission for Accreditation of Medical Transport Systems (CAMTS), including the date of accreditation expiration.
 - vi) Other information as requested .
 - b) will be licensed by the commission for a period of up to three (3) years, or the expiration date of the CAMTS accreditation (whichever occurs first), and a certificate will be issued.
 - c) must comply with all applicable F.A.A regulation(s), and
 - d) hold a valid 14 CFR Part 135 Air Carrier certificate, or
 - e) have a contract with the holder of a 14 CFR Part 135 Air Carrier certificate, to provide aviation services under their certificate.
 - f) hold a current FAA approved EMS Operations Specifications certificate.
-

Fixed Wing Ambulance Service Provider

Sec. 1.

- 1) **Who needs to be licensed as a Fixed Wing Provider?**
 - a) base of operations in Ohio, or a program
 - b) providing, or seeking to provide fixed wing ambulance services within the State of Ohio,
- 2) **Licensure not required for the following:**
 - a) assisting in a major catastrophe, disaster, when existing emergency medical services are insufficient or are unable to cope with the situation.
 - b) an air medical program responding in a mutual aid capacity
 - c) an agency or instrumentality of the United States.
- 3) **Other Aviation Requirements:**
 - a) meet all applicable parts of F.A.A regulation, and
 - b) hold a valid 14 CFR , Part 135 Air Carrier certificate, or
 - c) have a contract with the holder of a 14 CFR Part 135 Air Carrier certificate to provide aviation services under their certificate.
 - d) Either must also have current FAA approved Air Ambulance Operations-Helicopter specifications.
- 4) **Fixed wing ambulance service provider organizations will have:**
 - a) Continuing education
 - b) Audit and review
 - c) Performance Improvement
 - d) Qualified Medical control and direction
 - e) Safety and survival programs and education.
- 5) **Medical Director requirements:**
 - a) Ohio licensed medical director with a current unlimited Ohio License.
 - b) The duties and responsibilities of the medical director include, but are not limited to:
 - c) Assuming medical authority over any and all patients treated and transported by the fixed wing ambulance service.
 - d) Providing liaison with physicians.
 - e) Assuring that the drugs, medications, supplies, and equipment are appropriate
 - f) Monitoring and evaluating overall clinical operations.
 - g) Assisting in the coordination and provision of clinical continuing education.
 - h) Participating in a quarterly audit and review of cases treated by air medical personnel.
 - i) Attesting to the competency of air medical personnel affiliated with the fixed wing ambulance service provider organization.
- 6) **Responsibility for in-service training** - will designate one (1) person licensed and/or certified as a paramedic, a registered nurse, or a licensed physician, and have appropriate knowledge of patient care during air ambulance transport.
- 7) **Public safety**
 - a) service provider will not engage in conduct or practices detrimental to the health and safety of emergency patients or to members of the general public while in the course of business or service as a fixed wing ambulance service provider.
- 8) **Safety committee to include:**
 - a) Pilot(s)
 - b) Air-medical personnel
 - c) Aircraft maintenance technician(s)
 - d) Will meet at least quarterly and may be concurrent and in conjunction with the audit/review committee.
- 9) **Patient Destination:**
 - a) Transport to an appropriate medical facility in accordance with protocols approved by the Air Medical Program Medical Director.

Sec. 2.

- 1) **Application Requirements:**
 - 2) Aircraft types and identification numbers.
 - 3) A listing of all personnel, and their qualifications by category, who will regularly serve as pilots, and air medical personnel.
 - 4) A copy of the patient care transport record to be utilized on each transport.
 - 5) Documentation of medical education as approved by the Medical Director
 - 6) A listing of all on-board life support and medical communications equipment available, including a list of drugs and medications to be carried on each aircraft.
 - 7) A copy of all treatment protocols and standing orders (if applicable) under which all non-physician personnel operate.
 - 8) Documentation of appropriate aircraft liability coverage in accordance with State guidelines.

DRAFT GUIDELINES FOR THE OPERATION OF AIR MEDICAL SERVICES: June 13, 2001

- 9) Insurance coverage specified shall be for each and every aircraft owned and/or operated by or for the fixed wing ambulance service provider.
- 10) valid for a period of two (2) years from the date of issue

Sec. 3.

Fixed Wing ambulance characteristics:

1) Equipment and operations

- a) Performance characteristics inherent in the type of aircraft selected by the fixed wing ambulance service provider.
- b) Equipment and operations shall be in compliance with prevailing F.A.R for the type of aircraft in question and flying conditions under which the aircraft will be operated as specified in the 14 CFR, Part 135 air carrier certificate of the air ambulance service provider.
- c) Capable of carrying a minimum of one (1) patient on a litter in a horizontal position located so as not to obstruct the pilot's vision or interfere with the performance of any member of the flight crew or required air medical personnel.
- d) Means of securing each litter and attached patient securely with an acceptable method using either approved data from the aircraft manufacturer or data approved by the F.A.A. If data approved by the F.A.A. is required, a field approval or, supplemental type certificate (STC) shall be obtained and kept on file.
- e) Demonstrable unobstructed vertical space at the head and thorax areas of the upper surface of a litter(s) to allow for performance of advanced life support cardiac care.
- f) Both the head and thorax of a secured patient shall be accessible by a minimum of two (2) air-medical personnel at one (1) time.
- g) lighting available for patient observation (a minimum of forty (40) foot-candles at the level of the patient is recommended). Lighting shall be such as to not interfere with the pilots vision and will be focused, shielded, diffused, or colored illumination.
- h) Temperature regulation to assure the comfort of all persons on board.
- i) door access demonstrably large enough for ease of patient litter loading and unloading in the supine position.
- j) The electrical system of the aircraft capable of supporting all of the ancillary equipment without the threat of overload or systems failure.
- k) Other specialized equipment may be required to conduct certain operations.
- l) The installation of this equipment shall comply with an acceptable method using either approved data from the aircraft manufacturer or data approved by the F.A.A. If data approved by the F.A.A. is required, a field approval or, supplemental type certificate (STC) shall be obtained.
- m) Equipped with adequate patient restraint(s) to preclude interference with the crew or aircraft flight controls.
- n) The aircraft must have air to ground communications capabilities to allow medical personnel to communicate with medical control.

Sec. 4.

- 1) Maintain accurate records concerning the medical care provided to each patient within the state.
- 2) Premises will be maintained, suitable to the conduct of a fixed wing ambulance service, with provision for adequate storage, and/or maintenance of fixed wing ambulances and the on-board equipment.
- 3) Have a periodic maintenance program as outlined for each specific aircraft in compliance with F.A.A. guidelines and manufacturer's service recommendations (MSR) as a minimum to assure that each fixed wing ambulance, including equipment, is maintained in good, safe working condition and that rigid sanitation conditions and procedures are in effect at all times.
- 4) Premises, records, hangars, padding, and tie-down facilities, and fixed wing ambulances will be made available for inspection by the director or the director's authorized representative at any time during regularly scheduled business hours.
- 5) A determination of non-compliance with F.A.R. may result in immediate suspension of licensure as a fixed wing ambulance service provider.
- 6) Each fixed wing ambulance service provider will make available for inspection at place of operation during regular business hours any manual of operations required under F.A.R.
- 7) Licensure as a fixed wing ambulance service provider may be terminated upon the date specified in the notice.
- 8) establish equipment checklist procedures to insure the following:
- 9) Electronic and mechanical equipment are in proper operating condition.
- 10) Fixed wing ambulances shall be maintained in safe operating conditions at all times.
- 11) Emergency patient care equipment required for fixed wing ambulance certification is maintained in minimum quantities either directly on board the fixed wing ambulance or available at the time of patient transport.
- 12) insure that rigid sanitation conditions and procedures are in effect at all times. The following sanitation standards apply to all fixed wing ambulances:
- 13) The interior and the equipment within the aircraft are clean and maintained in good working order at all times.
- 14) Freshly laundered linens are used on all litters, and pillows and linen shall be changed after each patient is transported.

DRAFT GUIDELINES FOR THE OPERATION OF AIR MEDICAL SERVICES: June 13, 2001

- 15) When the aircraft has been utilized to transport a patient known to have a communicable disease, the aircraft must be cleansed and all contact surfaces be disinfected.

Sec. 5.

Fixed Wing Staffing

- 1) Staffed by no less than three (3) people and include the following requirements:
- 2) The first person must be a properly certified pilot who shall complete an orientation program covering flight, and air medical operations as prescribed by the holder of the 14 CFR Part 135 Air Carrier certificate under which the Air Medical Program operates.
- 3) Minimum of 2 appropriate, licensed or certified medical personnel required to properly care for the medical needs of the patient at the discretion of the program medical director.
- 4) The air medical personnel on board the aircraft must be trained in air transport issues and flight physiology.

Sec. 6.

Equipment

- 1) **Required on all flights:**
 - a) Portable suction with appropriate catheters and tips capable of a minimum of three hundred
 - b) (300) mm mercury.
 - c) Oropharyngeal airways (adult, child, and infant sizes)
 - d) Nasopharyngeal airways (small, 20-24 french; medium, 26-30 french; large, 30 french or greater)
 - e) 1 adult, & 1 child/infant bag, with adult, child, infant, and neonate masks as appropriate for the flight.
 - f) Portable oxygen w/appropriate cannulas, or mask, etc.
 - g) Blood pressure cuffs (adult, child, and infant sizes)
 - h) Stethoscope (carried in the aircraft or by air medical personnel)
 - i) Bandages and dressings to include, but not limited to the following:
 - j) Sterile dressings
 - k) Airtight dressings.
 - l) Tape/bandage shears (shears may be carried in aircraft or by air-medical personnel).
 - m) Rigid extrication collars in pediatric, small, medium, and large (or adjustable to fit the sizes indicated) for each patient transported.
 - n) Minimum of AED must be carried on transports.
- 2) **Equipment based on mission/patient condition**
 - a) alternative to the AED is Portable defibrillator which may be used by appropriately trained medical personnel as specified by the medical director. Monitor should include self-contained cardiac monitor and E.C.G. strip writer with adult and pediatric paddles, or hands-free adapter which will not interfere with the aircraft's electrical and radio system
 - b) (12) Endotracheal intubation equipment to include laryngoscopes with spare batteries and bulbs, with laryngoscope blades, and endotracheal tubes in adult, child, and infant sizes.
 - c) (13) Medications, intravenous fluids, administration sets, syringes, and needles will be specified by the air-medical director identifying types and quantities
- 3) Controlled drugs shall not be left on unattended aircraft unless adequate security precautions have been taken.
- 4) Additional equipment/supplies as specified by the medical director based on crew medical training and patient need.
- 5) Medical equipment will not interfere with aircraft electrical and radios system.

Sec. 7.

1) Communications:

- a) all communications equipment required under 14 CFR Part 135 for the type of aircraft and service provided
- b) radio communications equipment that allows it to communicate directly with medical control.
- c) Transmitters are to operate with an output power in accordance with applicable F.C.C. rules and regulations.

Fixed wing Ambulance Service Provider Licensure Application with Accreditation by CAMTS (Commission for Accreditation of Medical Transport Systems).

Sec. 1.

Deemed status - CAMTS Accredited programs

1) Required info:

- a) Base of operations and a level of care to be provided.
 - b) A description and general location of each aircraft to be used as an air ambulance, including the make, model, year of manufacture, insignia, name or monogram, or other distinguishing characteristics.
 - c) Documentation of appropriate aircraft liability coverage in accordance with State guidelines.
 - d) The insurance coverage specified shall be for each and every aircraft owned and/or operated by or for the fixed wing ambulance service provider.
 - e) Proof of current critical care transport accreditation by the Commission for Accreditation of Medical Transport Systems (CAMTS), including the date of accreditation expiration.
 - f) Other information as requested .
- 2) will be licensed by the commission for a period of up to three (3) years, or the expiration date of the CAMTS accreditation (whichever occurs first), and a certificate will be issued.
 - 3) must comply with all applicable F.A.A regulation(s), and
 - 4) hold a valid 14 CFR Part 135 Air Carrier certificate, or
 - 5) have a contract with the holder of a 14 CFR Part 135 Air Carrier certificate, to provide aviation services under their certificate.
 - 6) hold a current FAA approved EMS Operations Specifications certificate.



It's About Safety

THE SIREN

*A Newsletter of the Division of Emergency Medical Services
and the State Emergency Medical Services Board
1970 W. Broad Street • Columbus, Ohio 43223
1-(800)-233-0785*



September/October 2001

Laura Tiberi, Executive Director

We have implemented several new online services on our Web site. It is hoped that the Emergency Medical Services (EMS) Web site and the new online features will serve as an alternative mode of communication for visitors and a one-stop center for current EMS related information. I hope everyone will take the opportunity and familiarize themselves with the new online system. It will provide a more value-added Web site for the EMS and fire community.

New online services that were recently implemented include:

- 1) **Training Facility Look-up-** Viewers can look up either accredited training facilities or approved continuing education sites by county, school name, city or ZIP code;
- 2) **Exam calendar-** Offers a listing of all scheduled exam dates through the end of the year. The benefit of this online system is that all exam dates that are entered in the database automatically appear, eliminating the need to frequently update printed exam calendars;
- 3) **Certification Verification-** Certifications can be verified by entering either a social security number or certification number; and
- 4) **New and Improved Online Test Registration-** This version will require those registering for tests to update their personal information that is fed directly into EMS database records. This will assist the Division in keeping accurate records. Try out the new online services by visiting the Division of EMS Web site at: <http://www.state.oh.us/odps> Click on Emergency Medical Services.

Ohio Task Force One Aids New York After Terrorist Attacks

Within hours of the September terrorist attack on the World Trade Center in New York on September 11th, 72 members of Ohio's Urban Search and Rescue Task Force One were on their way to assist in the recovery effort coordinated by our Emergency Management Agency (EMA) division.

Commanded by Michael Muhl, the Ohio Task Force is one of 27 such units in the United States and was one of nine dispatched to New York and Washington, D.C. following the terrorist attacks. The Ohio Task Force carried with it four trained canines along with a large array of specialty equipment, including sensitive listening devices, miniature TV cameras connected with fiber optics for insertion into tiny spaces, heavy lift and extraction equipment and its own medical support. All the equipment is worth about \$1.2 million.

It was the second deployment of the Task Force, which is comprised of highly trained and equipped volunteers from across the state. The Task Force, based at Wright-Patterson Air Force Base near Dayton, became operational in April 2000 and first was deployed as part of the recovery effort in Xenia following a tornado a year ago.

Many Ohio fire departments kept a volunteer list following the terrorist attacks in case more were needed to go search the rubble. But federal officials said their need was not immediate.

The training and support finances for the Task Force come from state and federal funds.



Many organizations distributed red, white and blue ribbons to people in exchange for donations to the relief efforts.

DISCIPLINARY & ADMINISTRATIVE ACTION

September 19, 2001

Scott Whitcomb, EMT Applicant
Violation: Felony conviction for Corruption of a Minor
Sanction: Denial of EMT-Basic certificate to practice

Anthony Allegrini, EMT Cert #18537
Violations: Committed fraud, misrepresentation, or deception in applying for or securing any certificate - Not satisfying the requirements for certification to practice for the level sought in a renewal application - Not completing the continuing education requirements to renew as a paramedic

Sanction: \$500 fine, EMT certificate to practice suspended for six months, must complete the continuing education requirements within this six month period. If not in compliance at the completion of the six month suspension, then will result in the revocation of EMT-Paramedic certificate to practice

Stacey McGuire, EMT Cert #88116
Violation: Practicing beyond the scope of an EMT-Paramedic
Sanction: Written reprimand and two year probation

Edison Cook, Jr., EMT Cert #7909
Violation: Conviction for misdemeanor involving moral turpitude to wit domestic violence
Sanction: Written reprimand, three year probation, and successful completion of anger management course within nine months

Chris LaDue, EMT Cert #95798
Violation: Conviction for misdemeanor involving moral turpitude to wit domestic violence
Sanction: Written reprimand, three year probation, and successful completion of anger management course within nine months

Kenneth Allison, EMT Cert #95680
Violation: Conviction for misdemeanor involving moral turpitude to wit domestic violence
Sanction: Written reprimand, three year probation, and successful completion of anger management course within nine months

Annette McKissic, EMT Applicant
Violation: Felony convictions for Theft and Food Stamp Trafficking
Sanction: Issue EMT-Basic Certificate, 3 year probation and within six months must supply the Division of EMS with a complete criminal history check

A Note from Doctor D.

State Medical Director Dr. John Drstvensek



C. Q. I.

In manufacturing plants, service industries and medical centers, organizations around the world are using continuous quality improvement (CQI) as their strategy to bring about dramatic changes in their operations.

Today, organizations need to meet or exceed customer expectations while maintaining a cost competitive position. CQI is a systematic, organization wide approach for improving all processes that deliver quality products and services and is the strategy to meet today's challenges and to prepare for the future.

In pursuing CQI, the organization will use four principles:

1. Develop a strong customer focus
2. Continually improve all processes
3. Involve employees
4. Mobilize data and team knowledge to improve decision-making

The Regional Physician Advisory Boards (RPAB) are preparing a sample CQI packet to share with the EMS providers and EMS medical directors in an effort to help all areas of this diverse state meet the needs of the patients in their communities.

CQI courses are available around the state and country. Talk to your EMS medical director about using this important tool to improve the health care in your area.

Ohio Families to Receive 25,000 Free Booster Seats

Boost America! a \$30 million child passenger safety program that gives one million booster seats to low-income families nationwide, gave its 250,000th free booster seat to an Ohio family on August 24, 2001, at the St. Stephens Community Center in Columbus. In all, 25,000 booster seats will be given to Ohio families. United Way and the Ohio Department of Public Safety are handling the distribution of the seats.

A new survey indicates 84 percent of Ohio children ages four through eight run an increased risk of injury or death in car crashes because they are not in booster seats.

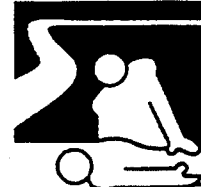
A booster seat raises a small child higher in a car, allowing a safety belt to properly cross at the shoulder and at the waist, as recommended by safety belt and auto manufacturers. If improperly restrained, during a crash, a child is more likely to suffer critical or even fatal injuries.

Lt. Governor Maureen O'Connor helped craft HB 334 with Representative Kevin DeWine to require children under 80 pounds and under 8-years-old be properly restrained in life-saving booster seats. HB 334 is currently in committee.

Boost
America!
Raising kids with safety in mind



FIRST THERE FIRST CARE



Bystander Involvement Encouraged

The Ohio Department of Public Safety Emergency Medical Services Division (EMS) encourages educated bystander involvement to help prevent motor vehicle fatalities. According to the National Highway Traffic Safety Administration (NHTSA), every American will be in or witness a motor vehicle crash every ten years.

The campaign, "First There, First Care" includes these five actions for bystander care:

• Stop to help • Call for help • Assess the victim • Start the breathing • Stop the bleeding

The chances of being in a life-threatening crash are greatest in rural areas, which is partially attributed to the significant time delay from when a crash occurs to when it is first reported to Emergency Medical Services (EMS). It also takes longer for EMS to respond in rural areas, due to the distances they must travel to reach injured crash victims.

Many highway fatalities result from blood loss and airway obstruction. Both are treatable conditions if care is given soon after the injuries occur. Thus, many rural highway fatalities may be attributed to the lack of early intervention.

We know that every second counts in an emergency. Therefore, individuals trained to perform bystander care at a roadway emergency can make the difference between life and death—but only if they get involved and take action!

To receive more information on the "First there, First Care" bystander care for the injured campaign, visit www.nhtsa.dot.gov/people/injury/ems. Also, to become more involved, contact your local emergency medical service.

IT'S EMS BIKE PATROL

In Toledo, the Whitehouse fire department has been using bikes to help save lives. They have a converted police mountain bike and nine bicycles to assist. The new Emergency Medical Services (EMS) bike carries more than \$3,000 worth of equipment, which includes an oxygen tank, portable heart defibrillator, IV set up and a first-aid kit.

Paramedics with the city of Toledo's fire and rescue division began riding bikes in 1999. The bikes are equipped with 30 pounds of gear. The obvious difference is that they can't transport people to hospitals. The bikes are only used at special events such as parades, firework shows, running races and festivals so they can respond to people and problems in congested areas.

The bike unit has taken an additional 32 hours of training to cover such topics as bike maintenance, how to maneuver through crowds and how to go up and down stairs on a bike that is carrying an oxygen tank and other heavy equipment. The paramedics also promote bike safety.

Several other EMS providers in Ohio also offer bike service for festivals and other events.

(Source: Toledo Blade)

EMS Staff

...Up Close & Personal

Carol MacDowell

E-mail: clmacdowell@dps.state.oh.us

- ★ Responsible for coordinating and assisting with the activities of the 10 regional physician advisory boards
- ★ Provides a vital link between the regional physician advisory boards, the state trauma committee, EMS board, and state medical director
- ★ Attends regional physician advisory board meetings
- ★ Member of the Business Advisory Committee of Goodwill Rehabilitation
- ★ Graduated from Columbus State Community College in 1998 with a degree in Health Information Management
- ★ Is certified as a Registered Health Information Technician
- ★ Worked as a manager in the Health Information Management Department at Columbus Children's Hospital, 1998
- ★ Served as Trauma Registrar at Mt. Carmel Health System, 1998-2000
- ★ Is an adjunct faculty member at Columbus State Community College, where she currently teaches Advanced Medical Terminology

Michaele Von Ville-Feuillerat

E-mail: mvonville-feuillerat@dps.state.oh.us

- ★ Attended The Ohio State University and graduated with a Bachelor of Science in Physical Education K-12 in August of 1989
- ★ Accepted to the Columbus Division of Fire Training Academy and graduated in December of 1989 with a 240 hour Firefighter and EMT-Basic certification
- ★ Gained Paramedic status in 1996 and became an EMS Instructor
- ★ Obtained a Masters of Science in Human Services Management from Franklin University
- ★ Also trained as a Heavy Rescue Technician
- ★ Began career with the Ohio Division of EMS in February 2001
- ★ Is the EMS Education Coordinator, responsible for the accreditation of all training programs in the state, handles the initial certification of all instructors and serves as staff liaison to the Education Committee of the EMS Board
- ★ Interests are in family, profession, horseback riding and soccer

Meetings @ a Glance

EMS Board Meetings

November 14, 2001*

Dublin Wyndham Hotel

*Note date and location change due to Thanksgiving Holiday

January 16, 2002

Location TBA

Trauma Committee

November 7, 2001

10 a.m. - 12:30 p.m.

Holiday Inn North

(Note date/time change due to Thanksgiving holiday)

December 12, 2001

12:30 p.m. - 3:00 p.m.

Location TBA

Trauma Subcommittees

December 12, 2001

10 a.m. - noon:

1. Hospital/Clinical
Location TBA

2. Pre-hospital
Location TBA

3. Air Medical
Location TBA

Trauma Registry Advisory Committee

October 25, 2001

1:00-4:00 p.m.

ODPS, Room 134

R.P.A.B.

R.P.A.B. General Meeting

November 13, 2001

10 a.m.

ODPS, Room 134

Please visit our Web site for a comprehensive listing of meeting dates and information
www.state.oh.us/odps



Editor: Lynne McBee

THE SIREN

Layout & Design: Kris Marple

Focus on EMS Board Members...

In this issue, we will continue to introduce you to Ohio EMS Board members. More profiles will be included in the next issue of the Siren.

Ohio EMS Board Member—Martin Mace

E-mail: mmace@apk.net

Position on EMS Board: Full-time paramedic nominated by Northern Ohio Firefighters

Brief biography

- * Full-time paid Paramedic in state of Ohio for 25 years
- * 13 years with Lakewood EMS, a hospital based third municipal service
- * 12 years with City of Bay Village Fire Dept. as Firefighter/Paramedic
- * -Currently involved in the Dive Rescue Team for the Fire Department
- * Personal interest in law that led to Paralegal training

Interest/involvement and/or association with EMS:

- * Chairman of Legislative Committee
- * Co-Chair of Education Committee
- * Have worked in Private and Public sector including teaching throughout career
- * Served as representative of the EMS Board on the Rules Committee at Board of Health for the 1999 DNR Legislation

Ohio EMS Board Member—Mark Mankin

E-mail: MM5241@aol.com

Position on EMS Board: Firefighter, EMT instructor nominated by Ohio State Firefighters Association

Brief biography

- * Capt./EMS Coordinator City of Worthington Division of Fire
- * EMS, EMT-P for 17 years
- * Started as a volunteer FF/EMT 1980
- * Became full-time EMT-P instructor in 1983

Interest/involvement and/or association with EMS:

- * Serves on EMS Systems Management Committee

**OHIO
PUBLIC
SAFETY**



EDUCATION • SERVICE • PROTECTION

Division of Emergency Medical Services
P.O. Box 182073
Columbus Ohio 43218-2073

Bob Taft, Governor
Lt. Governor Marureen O'Connor, Director
Laura Tiberi, Executive Director

Mailing Label Goes Here

PERMIT NO 3546
COLUMBUS OH
U.S. POSTAGE PAID
PRESORTED STANDARD



Alan Van Dyne

Final Analysis
Legislative Service Commission

Am. Sub. H.B. 138
123rd General Assembly
(As Passed by the General Assembly)

Reps. Schuck, Barrett, Bender, Evans, Ford, Metelsky, D. Miller, Sullivan, Sykes, Pringle, Van Vyven, Verich, Winkler, Young, Bateman, Haines, Olman, DePiero, Barnes, Williams, Willamowski, Terwilleger, Vesper, Brading, Ogg, Roberts, Tiberi, Schuler, Perry, Goodman, Jones, Corbin, Callender, Calvert, Mottley, Austria, O'Brien, Thomas, Ferderber, Cates, Flannery, Patton, Clancy, Damschroder, Sutton, Jerse, Salerno, Opfer, Myers

Sens. Drake, Hagan, Kearns, Armbruster, Spada, Johnson, Brady, Watts, Wachtmann, Prentiss, Latell, Gardner

Effective date: November 3, 2000

ACT SUMMARY

- Prohibits, beginning November 3, 2002, a hospital or physician from admitting or transferring a trauma patient to a hospital that is not an appropriate trauma center or failing to transfer a trauma patient to an appropriate trauma center.
- Requires the State Board of Emergency Medical Services to develop state triage protocols for the treatment of trauma victims.
- Provides for the establishment of regional triage protocols.
- Requires emergency medical service organizations to develop written protocols for the treatment of trauma victims.
- Imposes additional costs for failure to use an occupant restraining device and for reinstating a driver's license suspended for OMVI and reallocates the use of the funds with respect to programs involving safety education and emergency medical services.
- Directs a portion of the fines collected from state highway patrol tickets and arrests to a program under which grants are made for uses related to trauma and emergency medical services.

- Alters the composition and operation of the State Board of Emergency Medical Services.
- Establishes a trauma committee in the State Board of Emergency Medical Services.
- Requires the State Board of Emergency Medical Services, Department of Health, and Legislative Service Commission to study and report on trauma care emergency medical services in Ohio.
- Permits emergency medical service organizations to contract to provide services in other jurisdictions.
- Allows private fire companies and emergency medical service organizations to participate in Department of Administrative Services purchasing and salvage programs.
- Establishes a sales tax exemption for the purchase of emergency medical equipment and supplies for trauma care and emergency medical services.

TABLE OF CONTENTS

TRAUMA CARE

Overview.....	4
Types of trauma care and injuries	4
Authorized trauma centers.....	5
State designation of pediatric trauma centers	5
Prohibitions regarding transfer and treatment	6
Hospitals	6
Physicians	7
Hospital trauma care protocols	7
Transfer protocols	8
Hospital trauma patient transfer agreements.....	9
Exceptions	9
Public inspection of protocols and agreements.....	9
State triage protocols.....	10
Regional triage protocols.....	11
Review of triage protocols	13
Enforcement of triage protocols	13
Protocols for emergency medical service personnel	13
Guidelines for care by emergency personnel	14
Peer review and quality assurance programs	14

Trauma registry	15
Confidentiality of information received by the Board	15
Professional confidences	16
Risk adjustment of information.....	16
Funding	17
Emergency medical services grants	19
Medical direction of emergency personnel	19
Regional consultation when adopting rules.....	20
Board composition.....	20
Board operations	21
Executive director and medical director.....	21
Trauma Committee	22
Qualifications and appointment of members	25
Operation	26
Duties and powers	26
Firefighter and fire safety inspector training committee	26
Committee appointments and expiration.....	26
Assistance to the Board and its committees.....	27
Air medical organizations and ambulance service organizations	27
Training of firefighters and emergency medical service personnel	28
Training of emergency medical service personnel.....	28
Certification renewal notice	28
Out-of-state EMS personnel.....	29
Reports and studies.....	29
Department of Health: injury prevention	30
Department of Health: improving trauma care.....	30
Legislative Service Commission: trauma report and Board evaluation	31
Legislative intent.....	32
Technical changes.....	32

FIREFIGHTING AND EMERGENCY MEDICAL SERVICE ORGANIZATIONS

Agreements for fire protection or emergency medical services	32
Participation in state purchasing and salvage programs	33
Sales tax exemption.....	34

CONTENT AND OPERATION

TRAUMA CARE

Overview

The act provides that an adult or pediatric trauma center must be verified by the American College of Surgeons as a condition of representing itself to the public as a trauma center. For a limited period, the act provides that a pediatric trauma center that is not verified by the American College of Surgeons may operate under a designation issued by the Director of Health. The act prohibits a physician from admitting a trauma patient to a hospital that is not a trauma center and prohibits both physicians and hospitals from making inappropriate transfers of trauma patients. Hospitals are required to adopt protocols for providing trauma care and to enter into agreements with trauma centers governing the transfer of trauma patients from hospitals to appropriate trauma centers. The State Board of Emergency Medical Services is required to develop triage protocols for the treatment of trauma victims. Comparable regional triage protocols may be developed, however, that take precedence over the state triage protocols. The Board must develop guidelines for the care of trauma victims provided by emergency medical service personnel.

Types of trauma care and injuries

(sec. 4765.01(N) and (M))

"Trauma" (or "traumatic injury") is defined by the act as "severe damage to or destruction of tissue" that satisfies both of the following conditions:

(1) It creates a significant risk of loss of life; loss of a limb; significant, permanent disfigurement; or significant, permanent disability.

(2) It is caused by blunt or penetrating injury; exposure to electromagnetic, chemical, or radioactive energy; drowning, suffocation, or strangulation; or a deficit or excess of heat.

"Trauma care" is defined as "the assessment, diagnosis, transportation, treatment, or rehabilitation of a trauma victim by emergency medical service personnel or by a physician, nurse, physician assistant, respiratory therapist, physical therapist, chiropractor, occupational therapist, speech-language pathologist, audiologist, or psychologist licensed to practice in Ohio or another jurisdiction.

Authorized trauma centers

(sec. 4765.01)

"Trauma center" is defined by the act as "any hospital that is verified by the American College of Surgeons as an adult or pediatric trauma center, any hospital in Ohio that is designated by the Director of Health as a pediatric trauma center, and any hospital that is licensed or designated under the laws of another state as capable of providing specialized trauma care appropriate to the medical needs of the trauma patient."

State designation of pediatric trauma centers

(sec. 3727.081)

If a hospital has been denied verification as a pediatric trauma center by the American College of Surgeons solely because the hospital does not meet that organization's anesthesia and surgical staffing standards, the act permits the hospital to submit an application to the Director of Health to receive the Director's designation as a Level II pediatric trauma center. The act requires the Director to cease reviewing applications December 31, 2003, and provides that all applications pending on that date are void. The act provides that the Director's designation of a hospital as a pediatric trauma center expires December 31, 2004, unless earlier suspended or revoked by the Director or surrendered by the hospital.

Not later than November 3, 2002, the Director must adopt rules that establish standards and procedures for designating hospitals as Level II pediatric trauma centers. The rules must include standards to be followed by a hospital operating under the Director's designation and procedures for the Director's enforcement of those standards. The rules must be adopted in accordance with the Administrative Procedure Act (R.C. Chapter 119.). Any action taken to suspend or revoke a hospital's designation must be taken in accordance with the Administrative Procedure Act.

The act permits the Director to conduct an inspection before designating a hospital as a pediatric trauma center. The inspection may be conducted by using a contractor of the Department of Health with appropriate competence and independence.

The Director is required to review in a timely manner all applications received. A hospital must be designated as a Level II pediatric trauma center if the hospital submits a complete application and the Director finds all of the following:

(1) The hospital has established trauma care protocols that ensure a surgeon and anesthesiologist are available from outside the hospital in a timely manner and on short notice;

(2) The hospital's protocols ensure that the surgeon will participate in the early care of a trauma patient;

(3) The hospital has adhered to its protocols and the hospital's performance has met the expected outcomes, as evidenced by data obtained from a review of at least two years of the hospital's trauma activities;

(4) The care of patients will not be compromised by issuing the designation.

The act prohibits the Director and any employee or contractor of the Department from making public any information reported to or collected by the Department under the designation program. The prohibition applies to information that identifies or would tend to identify a specific patient.

Prohibitions regarding transfer and treatment

Hospitals

(sec. 3727.10)

Beginning November 3, 2002, the act prohibits a hospital in Ohio from knowingly doing any of the following:

(1) Representing that it is able to provide trauma care to a severely injured patient that is inconsistent with its level of categorization as a trauma center, provided that a hospital that operates an emergency facility may represent that it provides emergency care;

(2) Providing trauma care to a severely injured patient that is inconsistent with applicable federal laws, state laws, and trauma care protocols and patient transfer agreements adopted by the hospital under the act;

(3) Transferring a severely injured trauma patient to a hospital that is not a trauma center with an appropriate level of categorization or otherwise transferring a severely injured trauma patient in a manner inconsistent with any applicable trauma patient transfer agreements adopted by the hospital.

Physicians

(sec. 4765.50)

Beginning November 3, 2002, the act prohibits a physician from purposefully doing any of the following:

- (1) Admitting an adult trauma patient to a hospital that is not an adult trauma center for the purpose of providing adult trauma care;
- (2) Admitting a pediatric trauma patient to a hospital that is not a pediatric trauma center for the purpose of providing pediatric trauma care;
- (3) Failing to transfer a trauma patient to an adult or pediatric trauma center in accordance with applicable federal law, state law, and adult and pediatric trauma protocols and patient transfer agreements adopted by a hospital under the act.

Hospital trauma care protocols

(sec. 3729.09(A))

Not later than November 3, 2002, the act requires each hospital that is not a trauma center to adopt protocols for the trauma care provided in or by that hospital. Each hospital that is an adult trauma center and not a Level I or Level II pediatric trauma center must adopt protocols for pediatric trauma care provided in or by that hospital. Each hospital that is a pediatric trauma center and not a Level I or Level II adult trauma center must adopt protocols for adult trauma care provided in or by that hospital.

In developing its trauma care protocols, each hospital must consider the guidelines for trauma care established by the American College of Surgeons, the American College of Emergency Physicians, and the American Academy of Pediatrics. Trauma care protocols must be written, comply with applicable federal and state laws, and include policies and procedures with respect to all of the following:

- (1) Evaluation of trauma patients, including criteria for prompt identification of trauma patients who require a level of trauma care that exceeds the hospital's capabilities;
- (2) Emergency treatment and stabilization of trauma patients prior to transfer to an appropriate trauma center;

(3) Timely transfer of trauma patients to appropriate trauma centers based on the patient's medical needs;

(4) Peer review and quality assurance procedures for adult and pediatric trauma care provided in or by the hospital.

Transfer protocols

A hospital's policies and procedures for timely transfer are referred to in the act as "trauma patient transfer protocols." Under the act, a hospital's trauma patient transfer protocols must specify all of the following:

(1) Confirmation of the ability of the receiving trauma center to provide prompt trauma care appropriate to the patient's medical needs;

(2) Procedures for selecting an appropriate alternative trauma center to receive a patient when it is not feasible or safe to transport the patient to a particular trauma center;

(3) Advance notification and appropriate medical consultation with the trauma center to which a trauma patient is being, or will be, transferred;

(4) Procedures for selecting an appropriate method of transportation and the hospital responsible for arranging or providing the transportation;

(5) Confirmation of the ability of the persons and vehicle that will transport a trauma patient to provide appropriate trauma care;

(6) Assured communication with, and appropriate medical direction of, the persons transporting a trauma patient to a trauma center;

(7) Identification and timely transfer of appropriate medical records of the trauma patient being transferred;

(8) The hospital responsible for care of a patient in transit;

(9) The responsibilities of the physician attending a patient and, if different, the physician who authorizes a transfer of the patient;

(10) Procedures for determining, in consultation with an appropriate trauma center and the persons who will transport a trauma patient, when transportation of the patient to a trauma center may be delayed for either of the following reasons: (a) immediate transfer of the patient is unsafe due to adverse weather or ground conditions or (b) no trauma center is able to provide appropriate trauma care to the patient without undue delay.

Hospital trauma patient transfer agreements

(sec. 3727.09(B))

Not later than November 3, 2002, the act requires each hospital to enter into the following written agreements:

(1) An agreement with one or more adult trauma centers in each level of trauma center categorization higher than that of the hospital that governs transfer of adult trauma patients from the hospital to those trauma centers;

(2) An agreement with one or more pediatric trauma centers in each level of trauma center categorization higher than that of the hospital that governs the transfer of pediatric trauma patients from the hospital to those trauma centers.

The act provides that a hospital's trauma patient transfer agreement must comply with applicable federal and state laws and contain provisions conforming to the act's requirements for trauma care protocols.

Exceptions

The act establishes exceptions to the requirement that a hospital enter into patient transfer agreements. Under these exceptions, all of the following apply:

(1) A Level I or Level II adult trauma center is not required to enter into an adult trauma patient transfer agreement with another hospital.

(2) A Level I or Level II pediatric trauma center is not required to enter into a pediatric trauma patient transfer agreement with another hospital.

(3) A hospital is not required to enter into an adult trauma patient transfer agreement with a Level III or Level IV adult trauma center, or enter into a pediatric trauma patient transfer agreement with a Level III or Level IV pediatric trauma center, if no trauma center of that type is reasonably available to receive trauma patients from the hospital.

Public inspection of protocols and agreements

(sec. 3727.09(C))

A hospital is required by the act to make its trauma care protocols and patient transfer agreements available for public inspection during normal working hours. A hospital must furnish a copy of those documents on request and may charge a reasonable and necessary fee for doing so. However, the hospital must furnish copies of the documents to the Director of Health free of charge.

State triage protocols

(sec. 4765.40(A))

Not later than November 3, 2002, the act requires the State Board of Emergency Medical Services to adopt rules establishing written protocols for the triage of trauma victims. The rules must define adult and pediatric trauma in a manner that is consistent with the act's definitions, minimizes overtriage and undertriage, and emphasizes the special needs of pediatric and geriatric trauma patients. The act provides that a pediatric patient is one who is less than age 16; otherwise the patient is an adult patient. A geriatric patient is described as one who is at least 70 years old or exhibits significant anatomical or physiological characteristics associated with advanced aging.

The state triage protocols are to require that a trauma victim be transported directly to a trauma center that is qualified to provide appropriate adult or pediatric trauma care, unless any of the following exceptions applies:

- (1) It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an appropriate trauma center;
- (2) It is unsafe or medically inappropriate to transport the victim directly to an appropriate trauma center due to adverse weather or ground conditions or excessive transport time;
- (3) Transporting the victim to an appropriate trauma center would cause a shortage of local emergency medical service resources;
- (4) No appropriate trauma center is able to receive and provide trauma care to the victim without undue delay;
- (5) Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than 18 years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient.

The state triage protocols must require trauma patients to be transported to a trauma center that is able to provide appropriate adult or pediatric trauma care, but the protocols must not require a trauma patient to be transported to a particular trauma center. The protocols are to establish one or more procedures for evaluating whether an injury victim requires or would benefit from trauma care. These procedures are to be applied by emergency medical service personnel based on the patient's medical needs.

In developing the state triage protocols, the Board must consider relevant model triage rules. The Board also must consult with the Commission on Minority Health, the regional directors and physician advisory boards appointed under continuing law for each of the state's prehospital emergency medical services regions, and appropriate medical, hospital, and emergency medical service organizations.

Before the Joint Committee on Agency Rule Review considers the Board's proposed state triage protocols, or any amendments to them, the act requires the Board to send a copy of the proposal to the Ohio chapters of the American College of Emergency Physicians, American College of Surgeons, and American Academy of Pediatrics; OHA: the Association for Hospitals and Health Systems; the Ohio Osteopathic Association; and the Association of Ohio Children's Hospitals. The act requires the Board to hold a public hearing at which it considers the appropriateness of the protocols to minimize overtriage and undertriage of trauma victims.

The act requires the Board to provide copies of the adopted state triage protocols, and amendments to the protocols, to each emergency medical service organization, regional director and regional physician advisory board, certified emergency medical service instructor, and person who regularly provides medical direction to emergency medical service personnel in Ohio. The act also requires that copies be provided to each medical service organization in other jurisdictions that regularly provides emergency medical services in Ohio. Others must be given copies on request.

Regional triage protocols

(sec. 4765.40(B))

The State Board of Emergency Medical Services is required by the act to approve regional protocols for the triage of trauma victims and any amendments to them. The act requires that the regional protocols provide a level of trauma care comparable to the state triage protocols. The act specifies that the Board may not otherwise approve regional protocols. The Board may not approve regional triage protocols for regions that overlap and must resolve any such disputes by apportioning the overlapping territory among appropriate regions in a manner that best serves the medical needs of the residents of that territory. The Board's Trauma Committee is to have reasonable opportunity to review and comment on regional triage protocols and amendments to the protocols before the Board approves or disapproves them.

Regional triage protocols and amendments to them must be submitted in writing to the Board by the regional directors or physician advisory boards

appointed under continuing law for each of the state's prehospital emergency medical services regions. The act specifies that the director of the board responsible for submitting the application is the director or board that serves a majority of the population in the region in which the protocols apply.

Before submitting regional protocols or amendments to the Board, a regional director or physician advisory board must consult with each of the following that regularly serves the region in which the protocols apply:

- (1) Other regional directors and physician advisory boards;
- (2) Hospitals that operate an emergency facility;
- (3) Adult and pediatric trauma centers;
- (4) Professional societies of physicians who specialize in emergency medicine or trauma surgery;
- (5) Professional societies of nurses who specialize in emergency nursing or trauma surgery;
- (6) Professional associations of labor organizations of emergency medical service personnel;
- (7) Emergency medical service organizations and medical directors of such organizations;
- (8) Certified emergency medical service instructors.

The act provides that regional triage protocols must require patients to be transported to a trauma center that is able to provide an appropriate level of trauma care. The regional triage protocols may include any of the exceptions to the transfer requirement that the act includes with respect to the state triage protocols. The act prohibits the regional protocols from discriminating among trauma centers for reasons not related to a patient's medical needs. The act provides that regional protocols must seek to minimize undertriage and overtriage. The act specifies that the regional protocols supersede the state triage protocols in the region where the regional protocols apply.

On the approval of regional triage protocols or an amendment to them, the act requires the State Board of Emergency Services to provide written notice of the approval and a copy of the protocols or amendment to each entity in the region to which the Board is required to send a copy of the state triage protocols.

Review of triage protocols

(sec. 4765.40(C))

The act requires the State Board of Emergency Medical Services to review the state triage protocols at least every three years to determine if they are causing overtriage or undertriage of trauma patients. The Board must modify the protocols as necessary to minimize overtriage and undertriage. Each regional director or physician advisory board that has regional triage protocols must review the protocols at least every three years to determine if they are causing overtriage or undertriage and must submit an appropriate amendment to the State Board as necessary to minimize overtriage and undertriage. The Board must approve the amendment if it will reduce overtriage or undertriage. Otherwise, the Board is prohibited from approving the amendment.

Enforcement of triage protocols

(sec. 4765.40(D) and (E))

The act prohibits a provider of emergency medical services or a person who provides medical direction to emergency medical service personnel in Ohio from failing to comply with the state triage protocols or applicable regional triage protocols. The act requires the Board to adopt rules that provide for the enforcement of the state and regional triage protocols and for education regarding those protocols.

Protocols for emergency medical service personnel

(sec. 4765.41)

Continuing law requires the medical director or cooperating physician advisory board of each emergency medical service organization to establish written protocols to be followed by emergency medical service personnel in performing services when communications have failed or the required response time prevents communication and the life of the patient is in immediate danger. The act requires the organization's protocols to be consistent with the applicable state or regional protocols for the triage of trauma victims, but provides that the organization's protocols may direct to a trauma center an emergency victim who is not required under the state or regional protocols to be transported to a trauma center.

Guidelines for care by emergency personnel

(sec. 4765.12(A))

Not later than November 3, 2002, the act requires the State Board of Emergency Medical Services to develop and distribute guidelines for the care of trauma victims by emergency medical service personnel and for the conduct of peer review and quality assurance programs by emergency medical service organizations. The guidelines must be consistent with the state triage protocols adopted by the Board and must place emphasis on the special needs of pediatric and geriatric trauma victims. In developing the guidelines, the Board must consult with the entities with interests in trauma and emergency medical services and must consider any relevant guidelines adopted by national organizations, including the American College of Surgeons, American College of Emergency Physicians, and American Academy of Pediatrics. The act requires the Board to distribute the guidelines and amendments to them.

Peer review and quality assurance programs

(sec. 4765.12(B))

Not later than November 3, 2003, the act requires each emergency medical service organization to implement ongoing peer review and quality assurance programs designed to improve the availability and quality of the emergency medical services it provides. The form and content of the programs are to be determined by each emergency medical service organization. In implementing the programs, each organization must consider how to improve its ability to provide effective trauma care, particularly for pediatric and geriatric trauma victims, and must take into account the Board's trauma care guidelines.

The act provides that information generated solely for use in a peer review or quality assurance program is not a public record. The information, and any discussion conducted in the course of the program, is not subject to discovery in a civil action and is not to be introduced into evidence in a civil action against the emergency medical service organization on whose behalf the information was generated or the discussion occurred. The act provides that in the absence of willful or wanton misconduct, an emergency medical organization on whose behalf a peer review or quality assurance program is conducted and the person who conducts the program is not liable in a civil action for betrayal of professional confidence or otherwise.

Trauma registry

(secs. 3729.17, 4765.06, 4765.10, and 4765.11)

Continuing law requires the State Board of Emergency Medical Services to establish a registry to be used for the collection of information regarding the care of trauma victims in Ohio. The registry must provide for the reporting of trauma-related deaths, identification of trauma patients, monitoring of trauma patient care data, determination of the total amount of uncompensated trauma care provided annually by each facility, and collection of other information specified by the Board. The Board must maintain the registry in accordance with rules it has adopted.

The act specifies that the Board's pre-existing registry is a "state" trauma registry. The act provides that rules relating to the registry may not prohibit the operation of other trauma registries. It specifies that the rules may provide for the reporting of information to the state trauma registry by or through other trauma registries in a manner consistent with information otherwise reported to the state trauma registry. The act allows other trauma registries to report aggregate information to the state trauma registry, provided that the information can be matched to the person who reported it. The act states that "[i]nformation maintained by another trauma registry and reported to the state trauma registry in lieu of being reported directly to the state trauma registry is a public record and shall be maintained, made available to the public, held in confidence, risk adjusted, and not subject to discovery or introduction into evidence in a civil action as provided in [the laws regarding public records]." The act specifies that any person who provides, maintains, or risk adjusts such information must comply with all applicable laws and has the same immunities as a person who performs the same function for the state trauma registry.

The act eliminates a provision of law that required health care providers to make reports on trauma care to the Ohio Health Care Data Center, which is operated by the Department of Health.

Confidentiality of information received by the Board

(secs. 4765.06(B), (C), and (E), 4765.10(C), and 4765.11(A)(20))

Under prior law, the State Board of Emergency Medical Services was required to adopt rules establishing standards for protecting the confidentiality of all information it collects or receives that would identify a specific patient or recipient of emergency medical services or trauma care, unless the laws regarding public records provided otherwise. Prior law expressly required the Board to

follow its rules for maintaining the confidentiality of information it received, including information reported to the trauma registry.

In lieu of the confidentiality provisions of prior law, the act expressly prohibits the Board and any employee or contractor of the Board or the Department of Public Safety from making public any information the Board receives that identifies or would tend to identify a specific recipient of emergency medical services or trauma care. The act requires the Board to adopt rules that specify procedures for ensuring the confidentiality of information that is not to be made public. The act specifies that it does not prohibit the Board from making public any statistical information that does not identify or tend to identify a specific recipient or provider of emergency medical services or trauma care.

Professional confidences

(sec. 4765.06(F))

Under prior law, a provider was not subject to civil liability for betrayal of a professional confidence when the provider furnished information to the State Board of Emergency Medical Services. A provider who made a report could not be held to answer for betrayal of a professional confidence under the laws that permit the State Medical Board to take disciplinary actions against a physician.

The act continues the provisions of prior law that established civil immunity for providers that make reports to the Board, but limits the immunity to cases in which there is an absence of willful or wanton misconduct. The act eliminates the prior law reference to discipline by the State Medical Board, an action that appears to have the effect of including additional types of providers under the pre-existing protection from being held to answer for betrayal of a professional confidence when a report is made to the Board.

Risk adjustment of information

(sec. 4765.06(D))

Not later than November 3, 2002, the act requires the Board to adopt and implement rules that provide written standards and procedures for risk adjustment of information received by the Board. The act does not describe the process of "risk adjustment," but it appears to refer to the act of examining outcome measurements by taking into account variations that may be the result of individual, group, or community differences. For example, risk adjustment may

involve an examination of data according to age, race or ethnicity, sex, or diagnosis or treatment level.¹

The act requires the Board to develop the risk adjustment rules in consultation with appropriate medical, hospital, and emergency medical service organizations. The rules may provide for risk adjustment by a contractor of the Board.

Before risk adjustment standards and procedures are implemented, neither the Board nor any employee or contractor of the Board or the Department of Public Safety may make public any information that identifies or would tend to identify a specific provider of emergency medical services or trauma care. After risk adjustment standards and procedures are implemented, the Board may make public such information only on a risk adjusted basis. The Board's rules for ensuring the confidentiality of information must specify the circumstances in which deliberations of the persons performing risk adjustment functions are not open to the public and records of those deliberations are maintained in confidence.

Funding

(secs. 4511.191, 4511.81, 4511.99, 4513.263, 4513.99, and 5503.04)

Under continuing law, the fines for failure to use seat belts or other occupant restraining devices are deposited in five funds established in the state treasury for separate purposes, all of which are related to safety education and emergency medical services. The act changes the percentages of the amounts distributed to some of the funds, increases the fine for failing to use seat belts and other occupant restraining devices, and directs a percentage of the fines collected by the State Highway Patrol to programs related to emergency medical services.

With respect to the fines collected for failure to use seat belts or other occupant restraining devices, the act provides for the funds to be distributed as follows:

(1) 8% (reduced from 10%) for establishment of a seat belt education program;

(2) 8% (reduced from 10%) for establishment of elementary school programs that encourage seat belt use;

¹ *Ohio Department of Mental Health, Risk Adjustment in Mental Health*, <http://www.mh.state.oh.us/offices/oper/feature3.html>, last visited 1/23/01.

(3) 54% (increased from 50%) for making grants to emergency medical service organizations;

(4) 28% (no change) for operating the State Board of Emergency Medical Services;

(5) 2% (no change) for operating the Ohio Ambulance Licensing Board.

The act renames two pre-existing state treasury funds that deal with emergency medical services by including a reference to trauma care. Under the act, these funds are called the Trauma and Emergency Medical Services Fund and the Trauma and Emergency Medical Services Grants Fund.

Under prior law, the fine for operating an automobile without a seat belt or other occupant restraining device was \$25 and the fine for riding as a passenger in an automobile without wearing a seat belt or occupant restraining device was \$15. The act increases both fines by \$5.

Under continuing law, the Department of Health administers a child highway safety program with money received from fines paid by motor vehicle operators who do not properly use child restraint systems. Prior law directed 65% of the fines to the Child Highway Safety Fund for the Department's use in administering the program. The act directs 100% of these fines to the Child Highway Safety Fund and allows the Department to use the funds to defray the cost of "verifying" pediatric trauma centers.²

Under continuing law, the fines from State Highway Patrol tickets and arrests are divided between the state and the county or municipality where a case is prosecuted. Prior law directed 45% to the General Revenue Fund and 55% to the county or municipality. The act increases the state share to 50%, directs the additional 5% to the Trauma and Emergency Medical Services Grants Fund, and reduces the local share accordingly.

Continuing law imposes a fee for having a driver's license reinstated after it has been suspended for operating a vehicle while under the influence of drugs or alcohol or similar violations. The act increases the fee by \$20 (to \$425) and directs the added amount to the Trauma and Emergency Medical Services Grants Fund.

² *The Revised Code section referenced in this provision of the act does not provide for "verification" of trauma centers by the Department of Health. "Designation" of Level II pediatric trauma centers occurs under the act pursuant to R.C. 3727.081.*

Emergency medical services grants

(sec. 4765.07)

Continuing law requires the State Board of Emergency Medical Services to administer a program under which grants are distributed to emergency medical service organizations. Prior law specified that the grants were to be used for personnel training, purchasing equipment, and generally improving emergency medical services. Grants were to be distributed equitably with priority given to grants used for training personnel.

The act establishes priorities for distribution of grants as follows:

(1) First priority, which is essentially a continuation of the pre-existing priority, must be given to emergency medical service organizations for the training of personnel, for the purchase of equipment and vehicles, and to improve the availability, accessibility, and quality of emergency medical services in Ohio. In this category, the act requires the Board to give priority to grants that fund training and equipping of personnel.

(2) Second priority must be given to entities that research the causes, nature, and effects of traumatic injuries, educate the public about injury prevention, and implement, test, and evaluate injury prevention strategies.

(3) Third priority must be given to entities that research, test, and evaluate procedures that promote the rehabilitation, retraining, and reemployment of trauma victims and social service support mechanisms for trauma victims and their families.

(4) Fourth priority must be given to entities that research, test, and evaluate medical procedures related to trauma care.

Medical direction of emergency personnel

(sec. 4765.11(A)(22))

The act requires the Board to adopt rules establishing minimum qualifications and peer review and quality improvement requirements for persons who provide medical direction to emergency medical service personnel.

Regional consultation when adopting rules

(secs. 4765.05 and 4765.11(C))

Continuing law requires the State Board of Emergency Medical Services to divide the state into "prehospital emergency medical services regions." For each region, the Board must appoint a physician to serve as the regional director or a physician advisory board to serve as the regional advisory board. The act requires the Board, in developing and administering all of its rules, to consult with regional directors and regional advisory boards and to emphasize the special needs of pediatric and geriatric patients.

Board composition

(sec. 4765.02)

The act makes the following changes related to the membership of the State Board of Emergency Medical Services:

(1) In addition to the continuing law requirement for the Governor to attempt to appoint members who represent Ohio's urban and rural areas and various geographic areas, the act requires the Governor to attempt to appoint members who represent various schools of training.

(2) With respect to the continuing member who is a surgeon, the act specifies that the member must be active in the practice of trauma surgery. The act includes the Ohio Osteopathic Association among the groups permitted to make nominations for the position.

(3) With respect to the continuing member who is a physician certified in emergency medicine, the act includes the Ohio Osteopathic Association among the groups permitted to make nominations for the position.

(4) The position to be filled by an administrator of a hospital with an active emergency room is replaced by a position to be filled by the administrator of an adult or pediatric trauma center. Each of the following is permitted to make three nominations: (a) OHA: the Association for Hospitals and Health Systems, (b) the Ohio Osteopathic Association, (c) the Association of Ohio Children's Hospitals, and (d) the Health Forum of Ohio.

(5) The act adds a position to be filled by an administrator of a hospital that is not a trauma center. Three nominations for the position may be made by each of the following: (a) OHA: the Association for Hospitals and Health Systems, (b) the Ohio Osteopathic Association, (c) the Association of Ohio Children's Hospitals, and (d) the Health Forum of Ohio.

(6) The act adds a position to be filled by a physician certified by the American Board of Surgery, American Board of Osteopathic Surgery, American Osteopathic Board of Emergency Medicine, or American Board of Emergency Medicine, who is the chief medical officer of an air medical agency and is currently active in providing emergency medical services. The Governor is to appoint this member from among three persons nominated by the Ohio Association of Air Medical Services.

Board operations

(sec. 4765.02)

With respect to the Board's operation, the act does the following:

(1) Requires the Board to select a vice-chair in addition to the pre-existing requirement to select a chair;

(2) Requires the Board to maintain written or electronic records of its meetings;

(3) Permits the Board to adopt bylaws to regulate its affairs;

(4) Replaces the numerical voting requirements specified in prior law with a requirement;

(5) Reduces to five (from ten) the number of members who must submit a written request in order for the chair to be required to call a meeting;

(6) Requires the employer of a Board member, upon 24 hours' notice from the member, to release the member from the member's employment duties to attend a meeting of the full Board. The act provides that it does not require the employer to compensate the member for the time the member is released from employment duties, but any civil immunity, workers' compensation, disability, or similar coverage that applies to the member continues while the member is released from employment.

Executive director and medical director

(sec. 4765.03)

Continuing law requires the Director of Public Safety to appoint a full-time executive director for the State Board of Emergency Services. In addition to the continuing requirement that the executive director be knowledgeable in emergency medical services, the act requires that the director be knowledgeable in trauma care.

Continuing law requires the Board to appoint a medical director who is responsible for directing the executive director and advising the Board with regard to emergency medical services. The act specifies that the medical director's duties include providing direction and advice on trauma care.

Under continuing law, recommendations for the appointment of the medical director may be made by the Ohio Chapter of the American College of Emergency Physicians, the Ohio Osteopathic Association, and the Ohio State Medical Association. Rather than permitting the consideration of recommendations, the act requires the Board to consider the recommendations. The act expands the list of organizations permitted to make recommendations by including the Ohio chapters of the American College of Surgeons and American Academy of Pediatrics.

Continuing law requires the executive director and medical director to attend each meeting of the Board. Under prior law, the attendance requirement did not apply when a meeting concerned the appointment of an executive director or medical director. Under the act, the attendance requirement does not apply if the Board elects to exclude the person from a meeting. The Board's authority to exclude either the executive or medical director extends to meetings that concern a person's performance, as well as meetings that concern the appointment or performance of the person in the opposing position.

Trauma Committee

(sec. 4765.04(B))

The act creates the Trauma Committee of the State Board of Emergency Medical Services. The Committee is to consist of the following members appointed by the Director of Public Safety:

(1) A physician who is certified by the American Board of Surgery or American Osteopathic Board of Surgery and actively practices general trauma surgery, appointed from among three persons nominated by the Ohio Chapter of the American College of Surgeons, three persons nominated by the Ohio State Medical Association, and three persons nominated by the Ohio Osteopathic Association;

(2) A physician who is certified by the American Board of Surgery or American Osteopathic Board of Surgery and actively practices orthopedic trauma surgery, appointed from among three persons nominated by the Ohio Orthopedic Society and three persons nominated by the Ohio Osteopathic Association;

(3) A physician who is certified by the American Board of Neurological Surgeons or the American Osteopathic Board of Surgery and actively practices

neurosurgery on trauma victims, appointed from among three persons nominated by the Ohio State Neurological Society and three persons nominated by the Ohio Osteopathic Association;

(4) A physician who is certified by the American Board of Surgeons or American Osteopathic Board of Surgeons and actively specializes in treating burn victims, appointed from among three persons nominated by the Ohio Chapter of the American College of Surgeons and three persons nominated by the Ohio Osteopathic Association;

(5) A dentist who is certified by the American Board of Oral and Maxillofacial Surgery and actively practices oral and maxillofacial surgery, appointed from among three persons nominated by the Ohio Dental Association;

(6) A physician who is certified by the American Board of Physical Medicine and Rehabilitation or American Osteopathic Board of Rehabilitation Medicine and actively provides rehabilitative care to trauma victims, appointed from among three persons nominated by the Ohio Society of Physical Medicine and Rehabilitation and three persons nominated by the Ohio Osteopathic Association;

(7) A physician who is certified by the American Board of Surgery or American Osteopathic Board of Surgery with special qualifications in pediatric surgery and actively practices pediatric trauma surgery, appointed from among three persons nominated by the Ohio Chapter of the American Academy of Pediatrics and three persons nominated by the Ohio Osteopathic Association;

(8) A physician who is certified by the American Board of Emergency Medicine or American Osteopathic Board of Emergency Medicine, actively practices emergency medicine, and is actively involved in emergency medical services, appointed from among three persons nominated by the Ohio Chapter of the American College of Emergency Physicians and three persons nominated by the Ohio Osteopathic Association;

(9) A physician who is certified by the American Board of Pediatrics, American Osteopathic Board of Pediatrics, or American Board of Emergency Medicine, is sub-boarded in pediatric emergency medicine, actively practices pediatric emergency medicine, and is actively involved in emergency medical services, appointed from among three persons nominated by the Ohio Chapter of the American Academy of Pediatrics, three persons nominated by the Ohio chapter of the American College of Emergency Physicians, and three persons nominated by the Ohio Osteopathic Association;

(10) A physician who is certified by the American Board of Surgery, American Osteopathic Board of Surgery, or American Board of Emergency Medicine and is the chief medical officer of an air medical organization, appointed from among three persons nominated by the Ohio Association of Air Medical Services;

(11) A coroner or medical examiner appointed from among three people nominated by the Ohio State Coroners' Association;

(12) A registered nurse who actively practices trauma nursing at an adult or pediatric trauma center, appointed from among three persons nominated by the Ohio Association of Trauma Nurse Coordinators;

(13) A registered nurse who actively practices emergency nursing and is actively involved in emergency medical services, appointed from among three persons nominated by the Ohio Chapter of the Emergency Nurses' Association;

(14) The chief trauma registrar of a trauma center, appointed from among three persons nominated by the Alliance of Ohio Trauma Registrars;

(15) The administrator of a trauma center, appointed from among three persons nominated by OHA: the Association for Hospitals and Health Systems, three persons nominated by the Ohio Osteopathic Association, three persons nominated by the Association of Ohio Children's Hospitals, and three persons nominated by the Health Forum of Ohio;

(16) The administrator of a hospital that is not a trauma center and actively provides emergency care to trauma patients, appointed from among three persons nominated by OHA: the Association for Hospitals and Health Systems, three persons nominated by the Ohio Osteopathic Association, three persons nominated by the Association of Ohio Children's Hospitals, and three persons nominated by the Health Forum of Ohio;

(17) The operator of an ambulance company that actively provides trauma care to emergency patients, appointed from among three persons nominated by the Ohio Ambulance Association;

(18) The chief of a fire department that actively provides trauma care to emergency patients, appointed from among three persons nominated by the Ohio Fire Chiefs' Association;

(19) An emergency medical technician who actively provides trauma care to emergency patients, appointed from among three persons nominated by the Ohio Association of Professional Firefighters, three persons nominated by the Northern Ohio Fire Fighters, three persons nominated by the Ohio State

Firefighters' Association, and three persons nominated by the Ohio Association of Emergency Medical Services;

(20) A person who actively advocates for trauma victims, appointed from three persons nominated by the Ohio Brain Injury Association and three persons nominated by the Governor's Council on People with Disabilities;

(21) A physician or nurse who has substantial administrative responsibility for trauma care provided in or by a trauma center, appointed from among three persons nominated by OHA: the Association for Hospitals and Health Systems, three persons nominated by the Ohio Osteopathic Association, three persons nominated by the Association of Ohio Children's Hospitals, and three persons nominated by the Health Forum of Ohio;

(22) Three representatives of hospitals that are not trauma centers and actively provide emergency care to trauma patients, appointed from among three persons nominated by OHA: the Association for Hospitals and Health Systems, three persons nominated by the Ohio Osteopathic Association, three persons nominated by the Association of Ohio Children's Hospitals, and three persons nominated by the Health Forum of Ohio. The representatives may be hospital administrators, physicians, nurses, or other clinical professionals.

Qualifications and appointment of members

The act requires the members of the Trauma Committee to have substantial experience in their fields of practice and be residents of Ohio. It provides that they may be members of the State Board of Emergency Medical Services. In appointing members, the Director of Public Safety must attempt to include persons who represent urban and rural areas, various geographical areas of Ohio, and various schools of training. The Director may not appoint more than one member who is employed by or practices at the same hospital, health system, or emergency medical service organization.

The act allows the Director to refuse to appoint any of the persons nominated. In that event, the nominating organization or organizations will continue to nominate the required number of persons until the Director makes the appointment.

Initial appointments must be made not later than 90 days after the act's effective date. Members serve at the pleasure of the Director, except that a member who ceases to be qualified for the position must cease being a member. Vacancies are to be filled in the same manner as original appointments.

Members serve without compensation. They are, however, reimbursed for actual and necessary expenses incurred in carrying out official duties.

Operation

The act requires the Trauma Committee to select a chairperson from among its members. A majority of all members constitute a quorum. No action is to be taken without the concurrence of a majority of all members. The committee is to meet at the call of the chair, on written request of five members, and at the direction of the State Board of Emergency Medical Services. The committee must not meet at times or locations that conflict with meetings of the Board. The executive director and medical director of the Board are authorized to participate in any meeting of the committee and must participate at the committee's request.

Duties and powers

The act requires the Trauma Committee to advise and assist the State Board of Emergency Medical Services in matters related to trauma care and the establishment and operation of the state trauma registry. In matters relating to the registry, the Board and committee must consult with trauma registrars from trauma centers in Ohio. The committee may appoint a subcommittee to advise and assist with the registry. The subcommittee may include persons with expertise relevant to the registry who are not members of the Board or committee.

Firefighter and fire safety inspector training committee

(secs. 4765.04(A) and 4765.55(D))

Prior law created the Firefighter and Fire Safety Inspector Training Subcommittee of the State Board of Emergency Medical Services. The act redesignates the subcommittee as a full committee. The committee continues to consist of the Board members who are chiefs of fire departments, and the Board members who are emergency medical technicians appointed from among persons nominated by the Ohio Association of Professional Fire Fighters or the Northern Ohio Fire Fighters and from among persons nominated by the Ohio State Firefighter's Association. The act eliminates the member who was appointed by the Director of Public Safety. Since this member was the designated chairperson, the act requires the committee members or their designees to select a chairperson.

Committee appointments and expiration

(sec. 4765.04(C) and (E))

In addition to the Board's Trauma Committee and Firefighter and Fire Safety Inspector Committee, the act permits the Board to appoint other committees

and subcommittees as it considers necessary. The act specifies that the Trauma Committee and Firefighter and Fire Safety Inspector Committee are not subject to the continuing law that requires a committee created in statute to have a specific expiration date.

Assistance to the Board and its committees

(sec. 4765.04(D))

The Board, and any of its committees or subcommittees, are authorized by the act to request assistance from any state agency. The Board and its committees and subcommittees may permit persons who are not members of those bodies to participate in their deliberations, but no person who is not a member of the Board may vote on the Board and no person who is not a member of a committee may vote on that committee.

Air medical organizations and ambulance service organizations

(secs. 4765.01 and 4765.09)

Continuing law requires the State Board of Emergency Medical Services to prepare recommendations for the operation of ambulance service organizations and emergency medical service organizations. The act expands the requirement by including air medical organizations. "Air medical organization" is defined by the act as an organization that provides emergency medical services, or transports emergency victims, by means of fixed or rotary wing aircraft.

Under the act, the Board's recommendations regarding air medical organizations must include the following:

- (1) The definition and classification of medical aircraft.
- (2) The design, equipment, and supplies for medical aircraft, including special equipment, supplies, training, and staffing required to assist pediatric and geriatric emergency victims.
- (3) The minimum number and type of personnel for the operation of medical aircraft.
- (4) The communications systems necessary for the operation of medical aircraft.
- (5) Reports to be made by persons holding certificates as emergency medical service providers to ascertain the quantity and quality of air medical organizations throughout Ohio.

With respect to the Board's continuing duty to make recommendations for use of ambulances, the act specifies that the Board must consider the special equipment, supplies, training, and staffing required to assist pediatric and geriatric emergency victims.

Training of firefighters and emergency medical service personnel

(sec. 4765.10)

Prior law expressly required the State Board of Emergency Medical Services to work with the State Fire Marshal's Office in coordinating the training of firefighters and emergency medical service personnel when possible. In turn, the Fire Marshal's Office was required to cooperate with the Board. The act expands the cooperation requirement by requiring the Board to work at all times with "appropriate state offices" and requiring the other state offices to cooperate with the Board and its committees and subcommittees.

Training of emergency medical service personnel

(secs. 4765.16, 4765.35, 4765.37, 4765. 38, and 4765.39)

Continuing law provides that all courses offered through an emergency medical services training program or continuing education program, other than ambulance driving, must be developed under the direction of a physician who specializes in emergency medicine. The act specifies that each course dealing with trauma care must be developed in consultation with a physician who specializes in trauma surgery. The act requires all levels of emergency medical personnel to be trained in triage protocols for trauma victims. In the statutes specifying the services that emergency medical personnel are authorized to perform, the act includes determining triage of trauma victims.

Certification renewal notice

(secs. 4765.11(A)(5) and 4765.30)

The act requires the State Board of Emergency Medical Services to provide notice of the scheduled expiration of an individual's certificate to practice as a first responder or emergency medical technician-basic, emergency medical technician-intermediate, or paramedic. The Board must notify the individual and furnish a renewal application not later than 60 days before the expiration date. The act specifies that the Board's rules on renewal must include any procedures necessary to ensure that adequate notice is provided.

Out-of-state EMS personnel

(sec. 4765.50)

Continuing law exempts from Ohio's certification requirements for emergency medical service personnel a person who performs the same functions under the authority of the laws of a state that borders Ohio. The act extends this exemption to emergency medical service personnel acting under the laws of any other jurisdiction.

Reports and studies

(Sections 3, 5, 6, 7, and 8)

The act requires the State Board of Emergency Medical Services, with the assistance of its Trauma Committee, to study and evaluate the following:

(1) The status and needs of emergency medical services and trauma care provided between Ohio and other jurisdictions.

(2) Methods to improve specialized care provided by emergency medical service organizations to pediatric and geriatric trauma victims.

(3) The feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study must include an analysis of the cost of acquiring, maintaining, and using such devices, potential sources of funding, and training required to ensure effective use of the devices.

(4) Methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner.

(5) Methods to increase advanced trauma life support, basic trauma life support, and prehospital trauma life support training among appropriate health care providers, particularly in Ohio's rural areas.

(6) The roles that hospitals that are not trauma centers play in the state and regional trauma systems and methods to enhance those roles.

(7) The causes and impact of trauma on minority populations in Ohio and methods to improve emergency medical services and trauma care for those populations. This study must be conducted in cooperation with the Commission on Minority Health.

Not later than November 3, 2003, the Board must report its findings and recommendations to the Governor, General Assembly, and other appropriate authorities and organizations. The act requires that the Board conduct its study and develop its findings and recommendations in consultation with the following organizations, as appropriate: appropriate committees and subcommittees of the Board; regional directors and regional physician advisory boards; organizations that represent physicians, nurses, and hospitals that care for emergency and trauma patients; emergency medical service organizations; appropriate governmental entities; and the Ohio State Coroners' Association.

Department of Health: injury prevention

The act requires the Director of Health to organize and coordinate a temporary commission to determine how to better prevent traumatic injuries in Ohio. The commission's study is to include consideration of how to improve public safety education and how to prevent pediatric and geriatric injuries. The Departments of Public Safety, Natural Resources, Agriculture, and Education, Commission on Minority Health, and Bureau of Workers' Compensation are to participate in and assist with the study.

Within 120 days after the act's effective date, the Director of Health must appoint to the commission appropriate public health authorities, entities that conduct safety research and education, and advocates for injured persons. Commission members must have expertise in injury prevention, broadly represent relevant disciplines, and represent all regions of Ohio. Within the same timeframe, the Speaker of the House of Representatives must appoint to the commission one member of the majority party and one member of the minority party in the House of Representatives and the President of the Senate must appoint to the commission one member of the majority party and one member of the minority party in the Senate.

In conducting its study and developing its recommendations, the commission must consult with and cooperate with the Trauma Committee of the State Board of Emergency Medical Services. The commission must conclude its study and disband by November 3, 2003, whereupon the Director must transmit the commission's findings to the Governor, General Assembly, chief executive of each state agency that is involved in the study, and other appropriate persons.

Department of Health: improving trauma care

The act requires the Director of Health to organize and coordinate a temporary commission to determine how to improve the accessibility, affordability, quality, and cost-effectiveness of post-critical trauma care. The commission's study is to include consideration of appropriate transfer of trauma

victims from regional trauma centers to other health care facilities; physical, psychological, and vocational rehabilitation of trauma victims; re-employment of trauma victims; social support mechanisms for families of trauma victims; and mitigation of the effects of pediatric and geriatric trauma. The Rehabilitation Services Commission, Department of Aging, Bureau of Workers' Compensation, and Bureau of Employment Services are to participate in and assist with the commission's study.

Within 120 days after the act's effective date, the Director of Health must appoint to the commission appropriate public health authorities; entities that represent injury victims; certified safety professionals; employers; employment training and placement services; agricultural organizations; highway safety and motorists' organizations; health insurers; providers of social services to injury victims; nursing and rehabilitation institutions; victims of violent crime; hospitals; and professionals active in physical, psychological, and vocational therapy. Commission members must have expertise in rehabilitation and retraining of injury victims, broadly represent relevant disciplines, and represent all regions of Ohio. Within the same timeframe, the Speaker of the House of Representatives must appoint to the commission one member of the majority party and one member of the minority party in the House of Representatives and the President of the Senate must appoint to the commission one member of the majority party and one member of the minority party in the Senate.

In conducting its study and developing its recommendations, the commission must consult with and cooperate with the Trauma Committee of the State Board of Emergency Medical Services. The commission must conclude its study and disband by November 3, 2003, whereupon the Director must transmit the commission's findings to the Governor, General Assembly, chief executive of each state agency that is involved in the study, and other appropriate persons.

Legislative Service Commission: trauma report and Board evaluation

The act requires LSC staff, subject to the Legislative Service Commission's approval, to prepare a report on the trauma care system in Ohio. The report must include an analysis of the act's effects pertaining to the delivery of trauma care and the verification of hospitals as trauma centers. The report must be submitted to the Commission by November 3, 2004.

The act requires LSC staff, subject to the Commission's approval, to evaluate the effectiveness of the State Board of Emergency Medical Services and its staff in fulfilling the Board's duties. A preliminary report of the LSC staff's findings and recommendations must be prepared by November 3, 2001. Not later than one year after the preliminary report is submitted, the LSC staff must prepare

a final report, including an analysis of the Board's success in implementing the recommendations made in the preliminary report.

Legislative intent

(Section 4)

According to the act, the General Assembly finds that pediatric and geriatric trauma patients have special medical needs that require particular emphasis to improve outcomes for these patients. The act specifies that it is the intent of the General Assembly to provide for these special needs in a state trauma system and trauma triage protocols approved by the State Board of Emergency Medical Services.

According to the act, the General Assembly recognizes that hospitals that operate emergency facilities, but are not trauma centers, play an important role in the prompt and appropriate diagnosis, stabilization, and treatment of adult and pediatric trauma patients. The act specifies that it is the intent of the General Assembly to enhance the quality of emergency care such hospitals provide to trauma patients and to integrate such hospitals into the state and regional trauma systems provided for by the act. The act specifies that it is also the intent of the General Assembly that community-based emergency medical and trauma services be preserved and that nothing in the act be construed as encouraging the overtriage of patients or the unnecessary transfer of patients.

Technical changes

(secs. 4765.15, 4765.32, 4765.55, 4767.08, and 5502.01)

The act amends several sections of the Revised Code solely to reflect name changes and to make other technical changes.

**FIREFIGHTING AND EMERGENCY MEDICAL
SERVICE ORGANIZATIONS**

Agreements for fire protection or emergency medical services

(sec. 9.60)

Continuing law permits a firefighting agency or private fire company to contract with a governmental entity to provide fire protection, including ambulance and emergency medical services.³ Fire protection services can also be

³ A firefighting agency is a municipal corporation, township, township fire district, joint ambulance district, joint emergency medical services district, or joint fire district.

provided without a contract if all parties agree. Under prior law, the arrangements had to be made with a government agency in Ohio or an adjoining state. The act permits the arrangements to be made with government entities in other jurisdictions. The act extends the authority to enter into arrangements with government agencies to any public or private emergency medical service organization.

Continuing law provides that firefighting agencies and fire department members are immune from civil liability when they render service outside the boundaries of the firefighting agency. The act specifies that the civil immunity provisions in current law for fire departments and emergency medical service organizations apply to a political subdivision that is operating a fire department or emergency medical service organization when the members are rendering service outside the boundaries of the political subdivision.

The act provides that a private fire company or private, nonprofit emergency medical service organization providing service to a governmental entity in Ohio or another jurisdiction has the same immunities and defenses in a civil action that a political subdivision has under continuing law. Similarly, the act provides that the employees of a private fire company or private, nonprofit emergency medical service organization have the same immunities and defenses in a civil action that employees of a political subdivision have under continuing law.

Participation in state purchasing and salvage programs

(secs. 9.60, 125.04, 125.13, and 3737.66)

Continuing law allows the Department of Administrative Services to permit a political subdivision to participate in contracts into which the Department has entered for the purchase of supplies and services. Continuing law also authorizes the Director of Administrative Services to dispose of declared surplus or excess supplies the Department of Administrative Services has received from state agencies by sale, lease, or transfer.

The act allows private fire companies and private nonprofit emergency medical service organizations to participate in the cooperative purchasing programs operated by the Department of Administrative Services under the same conditions that govern public agencies' participation. Under these conditions, a private fire company or private nonprofit emergency medical service organization is required to file with the Department a written request for inclusion in the program signed by the chief officer of the company or organization. The request must include an agreement to be bound by the terms and conditions the Department prescribes and to make direct payments to the vendor under each purchase contract. The act also allows private fire companies and emergency

medical service organizations to obtain surplus or excess supplies according to the same order of priority that applies to municipal corporations and other political subdivisions. The act permits the Department to charge a reasonable fee to cover the administrative costs it incurs as a result of an entity participating in a purchase contract.

Sales tax exemption

(sec. 5739.02(B)(20))

Continuing law provides a sales tax exemption for the sale of emergency and fire protection vehicles and equipment to nonprofit organizations for use in providing fire protection and emergency services. The act specifies that the exemption applies to vehicles and equipment used in providing trauma care and emergency medical services.

HISTORY

ACTION	DATE	JOURNAL ENTRY
Introduced	02-02-99	p. 166
Reported, H. Health, Retirement & Aging	06-10-99	pp. 824-825
Passed House (95-1)	06-15-99	pp. 832-833
Reported, S. Health, Human Services & Aging	04-20-00	p. 1620
Passed Senate (32-0)	05-03-00	pp. 1654-1655
House concurred in Senate amendments (95-1)	05-10-00	pp. 1916-1917

00-HB138.123/jc

November 2003

State Board of Emergency Medical Services

Report to Governor Taft and the 125th General Assembly

Seven Reports on EMS and Trauma Topics

Ohio Department of Public Safety
Division of Emergency Medical Services





Table of Contents

Table of Contents	2
Executive Summary	4
Statutory Authority/Mandate	5
State Board of Emergency Medical Services	6
Trauma Committee	7
Introduction	8
Recommendations	11
Review of Studies from the Trauma Committee	14
Pediatrics	14
Adult/Geriatrics	16
Portable Electronic Reporting to Trauma Registry	17
Reporting of Autopsy Data	18
Trauma Education	20
The Role of Non Trauma Center Hospitals	22
Trauma and Minority Populations	24
Organizations/Agencies Invited to Comment	26

This publication is a report by the State Board of Emergency Medical Services prepared by the staff of the Division of Emergency Medical Services, from research and information supplied by a number of organizations contracted with by the Division, and with assistance from members of the state Trauma Committee. This publication contains the recommendations of the State Board of Emergency Medical Services and summaries of the studies and research conducted on behalf of the Board and the Division.

The State Board of Emergency Medical Services authorized the state Trauma Committee and the Division of EMS staff to prepare this report pursuant to the mandate of Am. Sub. H.B. 138 of the 123rd General Assembly.



Executive Summary

The 123rd General Assembly, with the passage of Am. Sub. H. B. 138, tasked the State Board of Emergency Medical Services with producing seven reports on a variety of topics related to EMS and Trauma. The Division of EMS, serving as the administrative arm of the State EMS Board, contracted with seven groups to produce studies and /or research that would assist the EMS Board in responding to this mandate. The scope of the topics that the EMS Board was required to report on is very broad. In many instances the studies and research generated additional questions that need to be addressed. The EMS Board understands that, nationally, there continues to be a lack of quality research data in the published literature, upon which EMS practice can be improved. This situation is slowly improving, but remains a serious obstacle to EMS and Trauma System development. Secondly the EMS Board has discovered that in Ohio there appears to be a general lack of interest or ability on the part of EMS agencies, trauma centers and hospitals, and professional societies of healthcare providers to engage in large scale, meaningful EMS and trauma system research. This is a multifactorial problem, which is beyond the scope of this report to detail. The low level of interest in performing EMS specific research related to the reports required by the General Assembly was a considerable concern and this resulted in an important lack of data upon which to make recommendations.

The EMS Board believes that all seven of these EMS/Trauma system reports would be better served with additional, more focused research and study. Adequate funding for research of this nature and scope is essential. The Board further feels that a comprehensive EMS and Trauma research agenda will be of immense value. A comprehensive research agenda, that supports the national EMS research agenda, will permit appropriate state level facilitation of high quality research that can be used to support and improve EMS system development. It will allow for focusing of Ohio's limited EMS and Trauma research funding on priority research that is scientifically sound and builds upon the current body of knowledge in EMS. It will limit duplication of efforts and smaller scale research that could be more effectively coordinated as part of larger scientific efforts or clinical trials. It will permit Ohio to seek or participate in larger federal EMS and Trauma care grant opportunities, thus further expanding the research skills and experience within EMS in Ohio.

Among the significant findings of these reports, the EMS Board has found that there are ongoing needs in the areas of education, training and equipment for care of specialty populations that include but may not be limited to, pediatric and geriatric patients. Continual adaptation of advancing technology in data collection and reporting should be encouraged and supported. Improved communication between trauma surgeons and county coroners may lead to better utilization of autopsy data. There are ongoing needs for trauma specific continuing education for EMS providers and consideration should be given to expanding the type, nature and availability of that continuing education. Full development of a state wide EMS and Trauma system has been successfully undertaken in a number of states. Evaluation of the effects of these efforts on all participants, from first responders to rehabilitation providers, as well as continual evaluation of Ohio's system development, is crucial.

Authority/Mandate

Am. Sub. H.B. 138 Section 3.

The State Board of Emergency Medical Services, with the advice and assistance of its trauma committee, shall study and evaluate the following matters

- (A) The status and needs of emergency medical services and adult and pediatric trauma care provided between this state and other jurisdictions.
- (B) Methods to improve specialized care provided by emergency medical services organizations to pediatric and geriatric trauma victims.
- (C) The feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study shall include an analysis of the cost of acquiring, maintaining, and using such devices, potential sources of funding, and training required to ensure effective use of the devices.
- (D) Methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner;
- (E) Methods to increase advanced trauma life support, basic trauma life support, and prehospital trauma life support training among appropriate health care providers, particularly in rural areas of the state.
- (F) The roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in this state, and methods to enhance those roles.
- (G) The causes and impact of trauma on minority populations in this state and methods to improve emergency medical services and trauma care for those populations. This study shall be conducted in cooperation with the Commission on Minority Health;

In conducting its studies and developing its findings and recommendations, the Board shall consult the appropriate committees and subcommittees of the Board; regional directors; regional physician advisory boards; organizations that represent physicians, nurses, and hospitals that care for emergency and trauma patients; emergency medical services organizations; appropriate governmental entities; and the Ohio State Coroner's Association, as appropriate.

Not later than three years after the effective date of this act, the Board shall report its findings and recommendations to the Governor, the General Assembly, and other appropriate authorities and organizations.



Ohio State Board of Emergency Medical Services

Chair

Mr. Mark Resanovich, EMT-P

Vice-chair

Dr. William Cotton, M.D.

Board Members

Chief Mark Burgess, EMT-P
Mr. Curtis Chandler, EMT-P
Ms. Darla Cooper, EMT-P
Ms. Nancy Dragani
Mr. David Fiffick
Dr. Richard Fratianne, M.D.
Ms. Kathy Haley, R.N.
Dr. Andrew Hawk, M.D.
Mr. James Holcombe, EMT-B

Mr. Carl Jordan, EMT-P
Mr. Martin Mace, EMT-I
Ms. Charlene Mancuso, R.N.
Mr. Mark Mankins, EMT-P
Mr. Mark Marchetta, EMT-P
Dr. William Rogers, M.D.
Mr. Joseph Toth, EMT-P
Chief Ray Walendzak, EMT-B

Interim Executive Director

Richard N. Rucker

Division of EMS Staff

Ms. Heather Reed, J.D.
Michael Glenn, R.N., Trauma Coordinator

State Trauma Committee

Dr. Joseph Luria, M.D., Chair

State Trauma Committee

Chair

Dr. Joseph Luria, M.D.

Vice-chair

Dr. Jay Johannigman, M.D., FACS

Committee Members

Ms. Nancie M. Bechtel, R.N., BSN, EMT-B

Ms. Melody Campbell, R.N., MSN

Dr. Guillermo Chacon, D.D.S.

Dr. John Crow, M.D.

Mr. William Crum

Chief Dan Ellenberger, EMT-P

Dr. William Emery, M.D., FACS

Ms. Kathy Haley, R.N., BSN

Ms. Lynn V. Horner

Mr. Jason Kinley, EMT-P

Dr. Michael Mackan, M.D., FACEP

Dr. Sidney Miller, M.D.

Mr. Mike Nelson, EMT-I

Dr. Greg Nemunaitis, M.D.

Ms. Jennifer Piccione, R.N., BSN

Ms. Jane Riebe, BA, CSTR

Dr. Michael Shannon, M.D.

Dr. Anthony Stallion, M.D.

Ms. Karen Weaver, R.N.

Dr. Howard Werman, M.D.

Ohio Department of Health Liaison

Dr. Virginia Haller, M.D.

Division of EMS Staff

Mr. Michael Glenn, R.N.

Ms. Heather Reed, J.D.



Introduction

Passage of Am. Sub. H.B. 138 by the 123rd General Assembly required the State Board of Emergency Medical Services to create reports on seven EMS/Trauma topics. Shortly after the appointment of the Trauma Committee in November of 2000, the determination was made that the Division of EMS and the State Board of EMS did not have the internal resources or expertise to conduct the required studies. The Division of EMS and the State Board of EMS agreed that under the direction of the Trauma Committee, individuals and or organizations with the appropriate expertise and resources would be contracted with to conduct the studies in preparation for the Board to submit a report to the Governor and General Assembly in November 2003. Initially the state supported university medical schools and their associated research departments were contacted and asked to submit quotes for performing one or more of the studies required by the legislation. After several months it was apparent that there was not sufficient interest from the medical schools. Only one organization was under contract with ODPS by the fall of 2001 for completion of one study looking at the role of non trauma center hospitals.

The studies required by the legislation were very broad and the amount of funding available to fund all seven studies was viewed to be minimal or inadequate by many of the potential researchers. A decision was made within the Division of EMS to invite a larger pool of organizations and/or individuals to participate by offering a grant for completion of supportive research projects or reports on topics related to the required reports. In most cases, researchers were asked to narrow the focus of their research or report. This was done to ensure that all of the required topics would be addressed and extrapolation of a more narrow report to a larger population or issue would be done when statistically appropriate and relevant. A call for proposals was made in January/February 2002. Proposals were received in March and six grants were awarded for completion of reports on six of the seven required topics, with one report being performed under a contract from the original request for quote process.

Based upon feedback from the organizations interested in assisting the Board complete these reports, reports on topics A and B were combined so that all pediatric issues were in one report, and all adult/geriatric issues were in another. The State Board of Emergency Medical Services, through the Division of EMS, awarded six grants and one contract, totaling \$563,044 to the following organizations to conduct research and/or develop the reports required for the Board.

- **Columbus Children’s Hospital (\$185,371)**
Report A, the status and needs of emergency medical services and pediatric trauma care provided between this state and other jurisdictions and methods to improve specialized care to pediatric trauma victims.

- **Riverside Methodist Hospital, Senior Health Services (\$65,366)**
Report B, the status and needs of emergency medical services and adult trauma care provided between this state and other jurisdictions; and methods to improve care to geriatric trauma victims.
- **St. Vincent Mercy Medical Center (\$61,442)**
Report C, the feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study shall include an analysis of the cost of acquiring, maintaining, and using such devices, potential sources of funding, and training required to ensure effective use of the devices.
- **Central Ohio Trauma System & Ohio State Coroner's Association (\$87,500)**
Report D, methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner.
- **Ohio Chapter, American College of Surgeons & Ohio Society of Trauma Nurse Coordinators (\$49,320)**
Report E, methods to increase advanced trauma life support, basic trauma life support, and prehospital trauma life support training among appropriate health care providers, particularly in rural areas of the state.
- **Hospital Council of Northwest Ohio (\$64,500)**
Report F, the roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in this state, and methods to enhance those roles.
- **Columbus Children's Hospital (\$49,545)**
Report G, the causes and impact of trauma on minority populations in this state and methods to improve emergency medical services and trauma care for those populations. This study shall be conducted in cooperation with the Commission on Minority Health.

Four of the seven organizations completed their projects under budget by a total of \$61,759.02. The total cost of grants and contracts to complete these studies was \$501,284.98. This does not include ODPS, Division of EMS staff time.



Six of the seven organizations completed their work on or before June 30, 2003. The seventh, Ohio Health, Senior Health Services, expects to have data collection completed and a report submitted by December 2003)

Given the very broad scope of these reports required by the legislation, the relatively short time frame for completion and minimal funding, it should be understood that these reports cannot be considered exhaustive, or comprehensive in nature. What is clear from the data in these studies is that additional research and study is required in all seven of these areas. The focus of future studies should be narrowed to address very specific issues, some of which can be extrapolated from data in these reports. A comprehensive and inclusive approach to evaluating and studying the EMS and Trauma system in Ohio is needed. An Ohio EMS and Trauma research agenda, supporting the national research agenda, is needed to ensure that the funding available in Ohio for EMS and Trauma research is utilized with maximum effectiveness to improve clinical care, support educational and injury prevention activities and support the needs for system development.

Recommendations

- A. The status and needs of emergency medical services and pediatric trauma care provided between this state and other jurisdictions and methods to improve specialized care provided by emergency medical services organizations to pediatric trauma victims.**
1. Additional, focused studies on pediatric trauma care needs in our state EMS and Trauma System are needed.
 2. Mutual aid is not a concern; appropriate support between EMS provider agencies exists.
 3. EMS agencies require additional preparation (education, equipment, protocols/procedures) for children with special needs.
 4. The majority of EMS providers need more pediatric education, specifically in assessment, airway management and trauma management.
 5. There is a significant deficit of pediatric education and equipment, efforts to provide additional education and equipment need to be made.
 6. Medical Directors need to be more involved in EMS agencies requests for funding from the EMS/Trauma Grant program.
- B. The status and needs of emergency medical services and adult trauma care provided between this state and other jurisdictions and methods to improve specialized care provided by emergency medical services organizations to geriatric trauma victims.**
1. Additional, focused studies on adult trauma care needs in our state EMS and Trauma System are needed.
 2. Efforts should be made to support geriatric trauma research in areas of prehospital triage parameters and resuscitation.
- C. The feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study shall include an analysis of the cost of acquiring, maintaining, and using such devices, potential sources of funding, and training required to ensure effective use of the devices.**
1. Additional, focused studies on electronic reporting of data to the state EMS and Trauma Registries are needed.
 2. Personal handheld devices, specifically the Palm Pilots tested, proved to be unfeasible for the collection of trauma registry data.
 3. Collection of registry data as directly as possible from the patient and family with concurrent entry into electronic format will have significant benefits both in cost savings and accuracy.
 4. Additional research into the use of wireless technology should be supported.



D. Methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner.

1. Additional, focused studies on the role of the county Coroner and data from autopsy reports to the state EMS and Trauma registries are needed.
2. The greatest barriers to performing autopsies on trauma victims are cost, family opposition, and lack of county coroner office staff.
3. Consensus needs to be developed between Ohio coroners and trauma medical directors on mechanism(s) of injury that require an autopsy.
4. Trauma medical directors do utilize the results of autopsies on trauma victims. Mechanisms to ensure that this data is accessible need to be in place.
5. No mandate to perform autopsies on trauma victims should be made without also providing for adequate financial and human resources for the county coroners, medical examiners or agencies/organizations performing the autopsies.
6. A single form (i.e. the death certificate) should be used statewide to report all required information as opposed to the creation of a special form just for injury reporting.
7. Autopsy reports should utilize a standardized format.
8. Efforts to promote complete documentation on the death certificate should be made.
9. The death certificate should include a field(s) to record the E codes (External Cause of Injury Code).
10. Resources need to be provided to county coroners to enable them to complete reports with tools that are designed to disseminate the information in an efficient and complete manner.

E. Methods to increase advanced trauma life support, basic trauma life support, and prehospital trauma life support training among appropriate health care providers, particularly in rural areas of the state.

1. Additional, focused studies on trauma education in Ohio are needed.
2. Exploring new options in education using existing technologies could improve accessibility and variety of courses, as well as resolve location issues.
3. On-line training, interactive educational software, and long distance education are options that should be evaluated for enhancement in learning opportunities.
4. Expanding trauma education programs beyond the basic level would be helpful in expanding continuing education options.

5. Statewide guidelines or standards for trauma education could also help identify the amount of trauma education needed.
6. Better communication about existing courses is needed to partially address issues with accessing courses.
7. Further study in the cost of education and investigating options for funding of trauma education is needed.

F. The roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in this state, and methods to enhance those roles.

1. Additional, focused studies on roles that all health care facilities play in the state EMS and Trauma System is needed.
2. The majority of hospitals, both trauma centers and non trauma centers, reported that they saw positive impacts, or reported no negative impacts, as a result of trauma system implementation. This should be monitored as the system matures.
3. Given that House Bill 138 has only been in operation since November of 2002, it was not possible to collect statistical data from the hospitals to determine what effects the trauma system changes have had on the non-trauma hospitals. A full year of data will be required to conduct the post-test and compare with the pre-test data collected during this project. Thus, a post-test should be conducted with Ohio hospitals in 2004 or 2005 to allow for at least a year's worth of experiences under the new trauma system guidelines. These data should be compared to the data collected through this project to determine the actual effect of House Bill 138 on the non-trauma centers.
4. For additional insight into the effects of House Bill 138, the State Trauma Committee believes the collection of objective data versus perception data would be more meaningful toward trauma system development.

G. The causes and impact of trauma on minority populations in this state and methods to improve emergency medical services and trauma care for those populations. This study shall be conducted in cooperation with the Commission on Minority Health.

1. Additional, focused studies on the impact of trauma on minority and specialty populations in Ohio are needed.
2. Information regarding race and ethnicity should be collected in such a manner as to be consistent and comparable between data sets such as the U.S. Census, the Ohio Bureau of Vital Statistics Death Certificate, the Ohio Trauma Registry and the EMS Incident Reporting System.
3. There are significant injury patterns, and causes specific to children in



minority populations. Additional research and increased efforts in injury prevention programming are needed.

4. Access to EMS by minority populations does not appear to be a problem, however additional research of this may be needed to assure that minority populations have ready access EMS in all areas of Ohio.

Trauma Committee Review of the Studies and Research

Trauma Committee Review of Special Study for Report A: “Identification of Issues Related to the Care and Management of Pediatric Trauma Patients Located Along the Border of Ohio”

General Description/Stated Goals:

This study focuses on the identification of issues related to the care and management of pediatric trauma patients located within 20 miles of the Ohio-West Virginia border within HSA regions 5 & 6. EMS Medical Directors, air medical physicians, EMS coordinators, and EMS providers were surveyed with regard to mutual aid concerns, transport of pediatric patients across state borders, availability of pediatric education and equipment, as well as availability of pediatric resources such as pediatric policies, protocols, and medications. Pediatric run reports from the study area were also reviewed.

Key findings:

1. Thirty two percent of EMS providers had taken a pediatric specific training course.
2. Only twelve and one half percent of agencies have all of the state recommended BLS equipment.
3. Eleven percent of the agencies surveyed are missing appropriate pediatric sized bag-valve-masks.
4. Seventy five percent of ALS units have transport monitors and even less had pediatric electrodes and defibrillator capability.
5. Fifty three percent of EMS agencies had pediatric length/weight dose charts and only seventy-six percent had resuscitation drugs and IV fluids.
6. Forty one percent of EMS coordinators indicated the need for pediatric specific equipment.
7. Ninety six percent of EMS coordinators indicated the need for more pediatric training but find cost and travel prohibitive.

8. Ninety two percent of EMS coordinators would be interested in applying for grant funding to obtain pediatric equipment and training.
9. Eighty percent of the EMS coordinators did not have protocols for children with special needs.
10. The average transport time to the closest hospital was 25.4 minutes, however run report review identified average accumulated time for a pediatric transport was 58.7 minutes.
11. All of the physician responders identified pediatric education as critical. Money and distance were listed as barriers.
12. EMS medical directors responded that they wanted assistance with review of pediatric run reports and were unaware of pediatric resources currently available to their agencies.
13. Based on run report review, the use of mutual aid does not appear to be an issue for the study region.
14. In general, there were limited issues regarding the interstate transport of pediatric trauma patients. Ranked by frequency, EMS providers listed (1) no issues, (2) longer transport times, (3) concerns over medical/legal issues, (4) service area left uncovered, (5) discrepancies in standards of care between states, and (6) discrepancies in the qualifications of the responders between states.

Strengths:

1. There is an adequate literature review to ground the study.
2. The investigators contacted a large group of rural providers. They received very good response rates for the air medical directors, EMS medical directors and EMS coordinators. The EMS providers responded to a mailed survey at a rate to be expected using this method.
3. The study resulted in the clear identification of needs for the EMS system in southeast Ohio:
 - a. EMS training in pediatrics that is locally provided and inexpensive.
 - b. Pediatric equipment by the majority of BLS and ALS units.
 - c. Training and protocol development for children with special healthcare needs.
4. Usable data was obtained using a methodology that is easily replicable.

Weaknesses:

1. Readers must be careful not to generalize the study results to other border areas of Ohio.
2. The authors state that there are no published studies regarding transport of patients across state lines or on mutual aid agreements. They do comment that some of the transport times seem excessive. Benchmark data or guidelines should be provided for comparison to justify such observations.
3. There is no information indicating the EMS agencies surveyed have attempted to obtain funding for equipment or training from available grant programs.
4. The bar graphs used to illustrate the data in Section 8 are confusing. The authors should either re-design the graphs or provide directions as to how to read the graph.



Comment:

This is a nicely designed and reported study regarding the adequacy of resources to respond to pediatric emergencies along the southeast Ohio border. The authors identify several major areas of concern related to training, equipment, protocol development and case review. The study should be replicated in other regions to gain a more complete picture of pediatric trauma care within Ohio. At a minimum, the authors indicate a need to facilitate resources for this area of the state. In a big picture sense, this report indicates a strong need for data driven trauma program improvement throughout the state.

Trauma Committee Review of Special Study for Report B: “Stand Up For Senior Independence Research-Preliminary Data”

General Description/Stated Goals:

This purpose of this study is to evaluate a program for decreasing falls in individuals over the age of sixty years. Study subjects are approached for enrollment if they experienced two falls in their home during a 30 day period. Local EMS providers, independent living housing workers, and health care providers identify potential study participants. Once enrolled, subjects are screened for risk factors linked with frailty and falling. Specific interventions were provided as necessary. The primary outcome was the number of falls post-intervention.

Key findings:

1. Issues related to the home environment, dementia, and nutrition were identified in study subjects.
2. Sixty-five percent of the patients enrolled experienced no falls 3 months after their intervention.

Strengths:

1. Reducing falls in older adults is a good goal.

Weaknesses:

1. Special Study # 3 is supposed to address the status and needs of emergency medical services and adult trauma care between this state and other jurisdictions, and methods to improve care to geriatric trauma victims. The study does not address this topic.

2. There is no needs assessment data to support the research.
3. There is a low enrollment rate for study subjects (40%).
4. There is a high drop-out rate for study subjects (30%).
5. There is no control group. How do the authors know that other forces did not account for the results they measured?
6. There is no consideration for other factors that may result in falls. This would include medications, neuromuscular dysfunction, vision impairment, mental retardation, etc.
7. There is conflicting data in the study. The authors state that “100% of the research subjects decreased their number of falls post intervention.” In one of the tables, however, 11% of the research subjects experienced three falls three months post-intervention.

***Trauma Committee Review of Special Study for Report C:
“Ohio Department of Public Safety HB 138 Special Project #6 Final Report”***

General Description/Stated Goals:

The purpose of this project was to study the feasibility of recording and reporting information to the Ohio Trauma Registry with portable electronic devices. The authors installed and tested a single software application and began testing it in January 2003. This report summarizes their experience.

Key findings:

Numerous problems were encountered. Most of the difficulties were related to the limited data capacity of the device tested. After four months, the authors concluded that portable handheld devices were not appropriate for this purpose and that laptops afforded the best approach for collecting data in a cost efficient and accurate manner. Implementation and testing of a wireless laptop computer system for recording trauma registry information is ongoing.

Strengths:

1. There is an adequate literature review to support the study.
2. The study identifies important limitations to the product and software studied.

Weaknesses:

1. This study does not meaningfully address the intent of the trauma legislation:
 - a. There was no listing/review of what products were available from alternative vendors.



- b. The authors tested only one system prior to abandoning hand held technology. There is no mention of why this was done.
2. The conclusions are limited by the technology and software used. There should have been some consideration for other handheld systems.
3. The study did not address potential sources of funding or training requirements for such a system.
4. The financial report on page 9 is unclear. How do the bold-faced values on the first line (untitled) related to the “Total” line?
5. On page 15, a reference to “typographical errors” is made. The reviewers believe the authors are referring to transcription errors. Typographical errors can be made whether writing down the information or entering it into an electronic database.

Comment on Study Recommendations:

The authors state that additional research into the use of wireless laptop computers should be supported. The information in the report does not support the notion that handheld technology should be abandoned for the purpose of reporting to the Ohio Trauma Registry. The State Trauma Committee believes that research into the use of all wireless technology, including handheld units, should be supported.

***Trauma Committee Review of Special Study for Report D:
“The Nature of Injury Related Autopsies in Ohio”***

General Description/Stated Goals:

The objectives of this study include:

1. Determine which injury types are appropriate for autopsy:
 - a. Determine rate of autopsy for these injury types.
 - b. Determine barriers to autopsy performance for these injury types.
2. To identify which stakeholders utilize autopsy data and for what purpose.
3. To survey the state county coroners, medical examiner, and a sampling of trauma medical directors for suggestions on how data might be submitted to the Ohio Trauma Registry.

These objectives were addressed through a review of death certificates from 1996-2001 and surveys sent to all Ohio coroners/medical examiner, coroners from neighboring states, and Ohio medical directors.

Key findings:

1. Sixty percent of unintentional injury deaths have an autopsy.
2. Sixty percent of intentional self-injury deaths have an autopsy.
3. Ninety-eight percent of homicides have an autopsy.
4. Ohio coroners indicated that among patients deemed appropriate for autopsy, only two percent did not receive an autopsy because of a barrier:
 - a. Barriers included cost, family opposition, and personnel.
5. Ohio and non-Ohio coroners consider trauma medical directors and EMS professionals infrequent users of autopsy data.
6. Trauma medical directors consider themselves and EMS professionals frequent users of autopsy data.
7. Trauma medical directors believed an autopsy after a motor vehicle crash was substantially more important when compared to Ohio coroners.
8. Much of the injury data included in the death certificate is missing (e.g. 59% of ICD9-10 data).
9. Over the five year study period, 2,936 injury deaths were not reviewed by a coroner, according to Ohio Vital Statistics. The consensus of the Ohio State Coroner's Association is that coroners are currently not being notified in these cases.
10. Ohio coroners expressed non-support for the creation of a new form and process to report autopsy injury data to the Ohio Trauma Registry.
11. Forty percent of coroners usually or always prepare their reports on manual typewriters.
12. While the majority of Ohio coroners are not in favor of a standardized reporting format, the non-Ohio coroners and Ohio trauma medical directors find this a reasonable request.

Strengths/Comment:

This is an extremely well done study that sends a simple message. There is a communication gap between coroners and trauma medical directors regarding the collection of autopsy data and how it is/should be utilized. Trauma medical directors want more autopsy information. Ohio coroners believe the information will serve no purpose and tax an already overburdened system. The solution is for the trauma care providers and coroners to outline a specific plan for the use of autopsy data. This would include when an autopsy is performed, what data is necessary to obtain and report, and how the data will be used to improve trauma care in the state. There should be a performance improvement process to insure appropriate deaths are being reported to the coroners and that appropriate information from autopsies is being reported. Another necessary step is to provide adequate funding and resources for obtaining autopsy information. Electronic reporting of autopsy information should be explored.



Weaknesses:

1. There is no data that indicates how Ohio compares to other states with regard to autopsy reporting.
2. The study indicates that there is a place on the death certificate to indicate if a case was reviewed by a coroner. This is incorrect. The death certificate has a place to indicate if the case was reported to the coroner.

Trauma Committee Review of Special Study for Report E: “HB 138 Special Projects #7: Evaluating Trauma Education”

General Description/Stated Goals:

The objectives of this study included:

1. Identify which trauma education courses are currently offered throughout Ohio.
2. To ascertain the number and size of the different trauma education courses offered in Ohio.
3. To determine what courses are most utilized by trauma care professionals.
4. To evaluate the barriers to offering trauma educational courses.

Surveys regarding accessibility, availability, barriers, and perceptions of trauma education in Ohio were developed and distributed to EMS providers, nurses, and physicians who care for trauma patients. Information regarding course offerings and other types of trauma education were collected from training centers and course coordinators. Perceptions regarding barriers to attending trauma education courses were also solicited at a state stakeholders meeting (EMS Board/Trauma Committee retreat). The data were categorized by population density, regions, and other factors.

Key findings:

1. Seventy eight percent of surveyed EMS providers indicated attendance of least one trauma course. BTLIS was the most common course (73%)
2. Sixty three percent of EMS providers indicated certification in at least one trauma course.
3. Forty two percent of EMS providers believe they are receiving the necessary education to provide quality trauma care.
4. Lack of financial support, frequency of courses, and having to take courses while off –duty were the most common barriers to trauma education (Urban EMS providers were more likely to attend a trauma course during normal working hours).

5. Sixty-seven percent of surveyed nurses indicated attendance of at least one trauma course. Sixty percent hold a course certification. The most common course attended was TNCC followed by BTLS.
6. Nurses cite time off work, lack of financial support as the major barriers to attending trauma courses.
7. Seventy-five percent of physicians indicated completion of a trauma course. ATLS was the most common course attended. Time off work and frequency of courses were cited as the major barriers.
8. Perceptions regarding course availability did not seem to differ with regard to population density.

Strengths:

1. This was a large and difficult undertaking. The surveys addressed the objectives.
2. The literature review demonstrates that trauma education results in improved knowledge and skill level. There is also literature available which supports the need for continuing trauma education. A 1990 study showed that BTLS skills deteriorate after approximately 18 months of initial training. (Prehospital and Disaster Medicine 5:137-144.)
3. There was an excellent distribution of EMS responses with regard to geography.
4. The recommendations could serve as a basis for more objective studies related to trauma education.

Weaknesses:

1. The results may be biased due to the low return rate (10%-25%) of surveys from EMS providers, nurses and physicians.
2. The survey format was necessary given the nature of the study. The value of this report is the issues it identifies. These issues will require more objective study (which the authors clearly point out). It must still be stated that the document is mostly comprised of perceptual data. Therefore the recommendations for increasing access to education are not evidence based.
3. There were no questions related to whether EMS agencies took advantage of existing programs for funding trauma education (i.e. the EMS Grants Program).
4. The document states that the ACSCOT developed the BTLS course. BTLS was developed by an independent group of EMS physicians under the guidance of John Campbell, MD.
5. The tables should have been better labeled.

***Trauma Committee Review of Special Study for Report F:
“The Roles of Hospitals That Are Not Trauma Centers In The State Of Ohio’s
Trauma System”***

General Description/Stated Goals:

The goals of this project included:

1. Profiling existing Ohio non-trauma center resources in terms of emergency care, laboratory, blood bank, in-patient care, diagnostic capabilities, surgical intensive care, and rehabilitation.
2. Profiling existing geographical relationships between non-trauma centers and trauma centers.
3. Measuring the impact of state trauma triage protocols on non-trauma hospitals.
4. Determining the level of collaboration between current non-trauma hospitals and trauma center hospitals on issues regarding patient care and follow-up.

To accomplish these goals, statistical information from hospitals was collected. Fact sheets identifying the number of trauma centers, projected number of trauma centers, number of staffed beds, number of ED injury visits, number of OR cases, and number of trauma center transfers within individual regions and throughout the state were developed. Additionally, subjective observations regarding the effect of the trauma legislation were compiled.

Key findings:

1. Ninety-six percent of all hospitals consider themselves to be very or somewhat familiar with Ohio’s trauma system.
2. Ninety percent of all hospitals thought trauma related communications were timely, useful, and understandable.
3. Over two-thirds of the respondents said they need more information about the trauma system. At least forty percent of all hospitals wanted more information about trauma performance improvement, peer review, and hospital trauma protocols.
4. Forty-three percent of hospitals had problems implementing required trauma system elements.
5. Twelve percent of hospitals believe trauma system implementation had a negative effect on their community.
6. Non-trauma centers were more likely to report a negative impact of the trauma legislation when compared to trauma centers.

Strengths:

1. The response rate to the survey was excellent (100%).

2. The regional and state data sheets provide good baseline data with regard to number of trauma centers as well as emergency department, ICU, acute care and pediatric beds, and emergency department visits for injuries.
3. The authors correctly identify that performing the study 6 months after trauma system implementation is too short of a time span.
4. The report identifies areas for state educational initiatives regarding the state trauma system.
5. It may be useful to compare the perceptions identified in the study to more objective measures of the effect of the trauma legislation.

Weaknesses:

1. The study title misrepresents the content. There is no discussion of the “role” of acute care hospitals in the trauma system.
2. Most of the report contains opinions which are not supported by fact. For instance, opinions regarding the effect of the trauma legislation on quality of trauma care were presented without any supporting data for these opinions. This is true for both the positive and negative effects stated in the study.
3. The study included only hospitals. EMS organizations, public officials, and local citizens could have provided helpful perceptions regarding the role of the non-trauma hospital.
4. Data for number of operative cases, and number of acute care hospital patients transferred to a trauma center are not trauma specific.
5. The study would have better served trauma system development if it had asked the hospitals what indicators should be measured to evaluate the trauma system so that baseline data could be collected.
6. The authors recommend the study be repeated one year after trauma system implementation. The effects of the trauma system would be better measured by waiting at least two years after implementation.

Comment on Study Recommendations:

The authors recommend one-on-one interviews with a random selection of non-trauma hospital CEO's and Emergency Supervisors to further gauge the effect of the trauma legislation. The State Trauma Committee believes the collection of objective data would be more meaningful toward trauma system development.



Trauma Committee Review of Special Study for Report G: “The Impact of Trauma on Minority Children”

General Description/Stated Goals:

The objectives of this study included:

1. Identify causes and outcomes of injuries among Ohio’s pediatric minority populations.
2. Identify rate of injury with regard to cause and outcome by location for each minority group.
3. Compare the rates of missing data across minority groups and location.
4. Compare the rates of patients discharged to rehabilitation facilities with an Injury Severity Score of > 16 across minority groups.
5. Compare the time from 911 call logged to arrival in the emergency department across minority groups. The times for Caucasian patients were used to determine if there were differences across racial groups.

These objectives were met by reviewing the records of children listed in the trauma registries of the regional pediatric trauma centers in Ohio. Patients were included in the final study group if they were less than 16 years of age, transported directly from the scene, and admitted to the hospital for the treatment of an injury (or died in the emergency department). Data from the US Census (2000) and Ohio Vital Statistics were also used in this evaluation.

Key findings:

1. Year 2000 census data indicates that minorities accounted for sixteen percent of Ohioans less than 16 years of age. (African Americans-12.3%, Native Americans-0.1%, Asians, 0.3%, Hispanic-1.1%, and Other-2.2%)
2. There were 1900 injury deaths in children from 1996-2001. Twenty-seven percent were of them were among minority children.
3. Of the 6084 direct from the scene admissions to regional pediatric trauma centers from 1998-2001, thirty-four percent (2060) were among minorities. African Americans accounted for twenty-eight percent of the total admissions.
4. African Americans have the highest rate of death and injury per 100,000 children. The relative risk of African Americans to injury death and trauma admissions is two to three times as great as the Caucasian population. Hispanics are at equal risk when compared to whites. Native Americans are at a little less risk and Asians are at substantially less risk when compared to Caucasians.

5. Hospital length of stay for minorities was the same as for Caucasians.
6. Risk of injury admission relative to the white population was led by burns (6.6 times as likely as Caucasians), followed by pedestrian injuries, gunshot wounds, assaults, drowning, and crush injuries.
7. The pattern of suicide injuries suggests prevention interventions should begin around age 10.
8. There was no relationship between distance to an EMS agency and the proportion of minorities within a given census block. In urban areas most residents are within three miles of an EMS agency regardless of minority status.

Strengths/Comment:

1. The study should provide valuable information for directing targeted injury prevention initiatives across the state.
2. The study maximized the use of data available in Ohio. There was good explanation of the data including strengths and limitations.
3. The study presents a clear data-based observation of how injuries among minority children compare to those in the Caucasian population.

Weaknesses:

1. While not practical, the study would have potentially been strengthened if all injured children would have been included. (That is, not only admissions directly from the scene to a trauma center.) The result is an underreporting of minority groups who may live in more rural areas of the state.
2. The study report could be strengthened by a literature review of how injury rates and deaths have historically compared between different races/ethnicities.
3. The authors should have included recommendations for addressing the differences observed.

Organizations

The following agencies and organizations were invited to review a preliminary copy of the studies and research conducted for this report and to provide feedback and comments to the Division of EMS for inclusion in the final publication of this report. Seven of these organizations requested copies of one or more of the research studies, however, none provided feedback or comments for inclusion in the final publication of this report.

Alliance of Ohio Trauma Registrars
Association of Ohio Children's Hospitals*
Association of Ohio Health Commissioners
Governors Council on People with Disabilities
Health Forum of Ohio*
Northern Ohio Firefighters
Ohio Ambulance and Medical Transportation Association
Ohio Association of Critical Care Transport
Ohio Association of Emergency Medical Services
Ohio Association of Professional Firefighters
Ohio Chapter of the American Academy of Pediatrics
Ohio Chapter of the American College of Emergency Physicians*
Ohio Chapter of the American College of Surgeons*
Ohio Dental Association
Ohio Emergency Medical Technician Instructor Association
Ohio Fire Chiefs Association
Ohio Hospital Association*
Ohio Instructor Coordinators Society*
Ohio Nurses Association
Ohio Orthopedic Society
Ohio Osteopathic Association
Ohio Rehabilitation Association
Ohio Society of Physical Medicine & Rehabilitation
Ohio Society of Trauma Nurse Coordinators
Ohio State Coroners Association
Ohio State Council Emergency Nurses Association
Ohio State Firefighters Association
Ohio State Medical Association
Ohio State Neurological Society
Ohio Department of Health
Ohio Rehabilitation Services Commission*

* Requested a copy of one or more reports

Research Studies

Complete copies of the seven research studies performed in support of this report are available from the Department of Public Safety, Division of Emergency Medical Services. Copies may be obtained by sending a written request to

Ohio Public Safety
Division of EMS, 1st Floor
EMS/Trauma Special Reports
1970 W. Broad St.
Columbus, Ohio, 43223

Or via an e-mail request to mglenn@dps.state.oh.us.

Please include your name and a complete mailing address

Electronic Copies (PDF format) may be downloaded from the EMS website, under the Trauma link at http://www.state.oh.us/odps/division/ems/ems_local/default.htm



Table of Contents

Executive Summary	3
Common Themes and Core Recommendations to Prevent Injury in Ohio	4
Introduction and Background	7
Acknowledgments	8
Message from the Commission Chair	10
The Commission's Work	11
Overview of Injury in Ohio	12
Overall Goals	13
Intentional Vs. Unintentional Injuries	17
Costs and Consequences	18
Risk Factors	19
Low Income	19
Age	20
Young Ohioans	20
Older Ohioans	22
Gender	23
Race and Ethnicity	23
Geography	23
Common Themes	24
The Cost-Benefit of Injury Prevention	24
The Need for Improved Injury Surveillance	25
The Need for Increased Statewide Coordination of Efforts	26
The Role of Alcohol	27
Prevention Concepts and Strategies	28
Core and Expanded, Injury-Specific Recommendations to Prevent Injury in Ohio	30
Appendix	35
Appendix A	36
Anatomic and Physiologic Features that Increase Children's Risk for Injury	36
Anatomic and Physiologic Features that Increase Older Persons' Risk for Injury	37
Behavioral and Developmental Features that Increase the Occurrence of Injury	38
Appendix B: Ohio Injury Data Sources	39
Appendix C: National Injury Data Sources	42
Appendix D: House Bill 138, Section 6	44
Appendix E: U.S. Injury Rate Tables, Healthy People 2010	45
References	46

Reports for individual injury areas (e.g. fire/burn, motor vehicle-related injury, etc.)
are available electronically at
www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm



Photo courtesy of the National SAFE KIDS Campaign

Injury is the leading cause of death and disability for Ohioans ages 1 through 34 and the 6th leading cause of death for all age groups.

More than 5,000 Ohioans are killed each year from injury-related causes.

Motor vehicles and firearms are the leading causes of injury death overall.



EXECUTIVE SUMMARY

The Ohio Commission on the Prevention of Injury

Ohio's 123rd General Assembly passed House Bill 138 authorizing a statewide trauma system in November 2000. Section Five of this comprehensive legislation required the Ohio Department of Health to form a commission on the prevention of injury, with particular emphasis on the pediatric and geriatric populations in Ohio. The result of the commission's work is this comprehensive report examining the current status of injuries in Ohio with recommendations for future action. The report includes information on unintentional injuries, such as motor vehicle traffic crashes, falls, and drowning, and intentional injuries, including suicide, homicide and family violence. It is intended to guide subsequent statewide activities, including adoption of a state strategic plan for injury prevention, to make Ohio a safer and healthier place to live, work and play.

The Injury Problem

The consequences of injury can be far-reaching and severe. Injuries are the leading cause of death and disability for Ohioans ages 1 through 34 and the sixth leading cause of death for all age groups. More than 5,000 Ohioans are killed each year from injury-related causes. Motor vehicles and firearms are the two leading causes of injury death overall. Of the millions of Ohioans who survive injuries, many suffer long-term consequences such as permanent disability, time lost from work and family, costly medical expenses and pain and suffering. Injury leads to huge societal costs as well, amounting to billions of dollars annually in health care expenses, lost productivity, rehabilitation and criminal justice system expenses among others. The good news is that injuries largely follow predictable patterns and are therefore, preventable.

Common Themes

The consensus-based process used to develop this report led to the identification of the following overarching themes. These themes provide the foundation for core recommendations in this report. Risk factors and prevention strategies for unintentional and intentional injuries often differ, however there are factors common to both. Further examination of these common factors or intersection points will facilitate consolidating prevention efforts, and potentially reducing program-related costs. Decision makers and advocates addressing both should decide where consolidation efforts make sense.

- **Injuries are costly. Injury prevention saves lives and money.**
Injuries are associated with long-term disability, requiring in-depth and long-term health care services, reducing the participating workforce and consuming already scarce public resources. Investment in prevention programs prevents the much higher costs of dealing with injury consequences.
- **Improved injury surveillance efforts and program evaluation are needed.**
Monitoring changes in injury frequency and patterns is necessary for planning and evaluation. Deaths caused by injuries are captured statewide, however, deaths only represent the tip of the iceberg of the injury problem. Injury data in Ohio are incomplete and inadequate for nearly all injury categories.
- **Improved statewide coordination of programs is needed.**
Many statewide and local prevention efforts are underway, each targeting the injury problem from a unique perspective. Improved statewide coordination of injury prevention efforts would benefit all involved.
- **Injuries disproportionately affect those living in poverty, and the young and the old.**
Special programs targeted at these populations are important.
- **Alcohol use is an important risk factor for injury.**
Alcohol and other drug abuse is a far more complicated issue than can be addressed comprehensively in this report. There is a clear association between alcohol use and increased risk for injury.
- **Legislation can be an effective strategy for preventing injuries.**
Where appropriate, state and local legislation and policies that lead to the prevention of injuries should be enacted or strengthened, and their effects should be evaluated.

Conclusions

This report serves as a starting point. The most challenging work lies ahead in addressing the recommendations resulting from the commission's work. A coordinated statewide effort is needed to more effectively target limited resources and share information among those working to prevent injuries in Ohio. The identification of high-risk groups for injury prevention efforts is critical because resources are scarce. Improved statewide data are clearly needed to identify patterns of injury and associated risk factors. Injury prevention efforts are cost-effective and can save state dollars in health care expenses, worker compensation claims, law enforcement and criminal justice-related costs, rehabilitation expenses and lost productivity.

Common Themes and Core Recommendations to Prevent Injury in Ohio

Theme: *Injuries are costly. Injury prevention saves lives and money.*

A. Seek creative and collaborative solutions to funding.

1. Enhance communication and collaboration among key stakeholders.
2. Encourage insurance companies, employers and others to cover injury prevention programs and services to reduce health-care costs.

B. Provide state funding that adequately addresses injury - a leading cause of morbidity and mortality in Ohio.

Theme: *Improved injury surveillance efforts and program evaluation are needed.*

C. Improve injury surveillance efforts.

1. Develop and maintain injury data infrastructures as discussed below. Collect cost and payer information when possible to allow cost/benefit analyses of injury prevention interventions.
2. Form an ongoing, interagency workgroup to review and make recommendations regarding data needs and opportunities. The workgroup should consider coordination, linking and quality improvement of data-collection efforts. It should include representatives familiar with the relevant databases. This group should explore:
 - Funding opportunities to support data linkage.
 - Mechanisms to improve quality and access to data.
3. Continue to provide support for the:
 - Development and maintenance of the Ohio Emergency Medical Services Incident Reporting System (EMSIRS) and the Ohio Trauma Registry through the Ohio Department of Public Safety.
 - Implementation of the Ohio Youth Risk Behavior Survey (YRBS) and the Ohio Behavioral Risk Factor Surveillance Survey (BRFSS).
 - Collection of licensed child care center serious injury data through the Ohio Department of Job and Family Services.

4. Support new uses of injury data through:
 - The development of a Crash Outcomes Data Evaluation System (CODES) in Ohio. CODES links traffic crash reports, Emergency Medical Services Incident Reporting System (EMSIRS) data and hospital discharge data. Funding is available from the National Highway Traffic Safety Administration.
 - Ohio's participation in the Centers for Disease Control and Prevention's (CDC's) National Violent Death Reporting System (NVDRS).
 - External cause of injury coding (e-coding) of and increased access to the full set of Ohio hospital discharge data.
5. Create a permanent and stable funding mechanism for the development of:
 - A statewide emergency department surveillance system that uses the CDC's *Data Elements for Emergency Department Systems*. (www.cdc.gov/ncipc/pub-res/deedspage.htm)
 - A statewide coroners' database.
 - A statewide school injury surveillance system.
 - An occupational injury surveillance system based on the U.S. Bureau of Labor Statistics injury data collection system.
 - A statewide toxic exposure data collection system.
 - Incentives (e.g., related grant funding, etc.) to improve records completion for all statewide injury databases.

D. Promote the use of injury prevention guidelines and evaluation measures that are based upon current evidence-based research and literature.

As part of the statewide coalition (described below), create a committee with responsibility for ongoing review of the effectiveness of prevention programs.

Common Themes and Core Recommendations to Prevent Injury in Ohio

Theme: Improved statewide coordination of programs is needed.

E. Coordinate the development of leadership and infrastructure to identify, promote and respond to injury prevention needs at the state and local level.

1. Implement recommendations from the State and Territorial Injury Prevention Directors' Association's (STIPDA) report, *An Assessment of the Ohio Injury Program, March 19-22, 2001*.
2. Strengthen the structure and funding of the Ohio Department of Health's Injury Prevention Section to provide technical assistance, training and coordination of activities, and support to state and local injury prevention efforts.
3. Create a statewide, interdisciplinary injury prevention coalition and provide a permanent funding mechanism to hire a full-time coordinator.

F. Coordinate EMS, trauma care and public health agencies with other injury prevention programs at the national, state and local levels to increase collaboration.

1. Increase interagency collaboration and coordination between state agencies and organizations concerned with the prevention of injury, in particular the Ohio departments of Health and Public Safety, including the EMS Board and Trauma Committee, the Bureau of Workers' Compensation, Ohio departments of Education, Mental Health, Aging, Transportation, Natural Resources and other relevant agencies.

G. Promote the use of coordinated, community prevention programs - that are multifaceted, evidence-based, and use effective evaluation by public health agencies, trauma centers, emergency medical services and other programs.

1. As part of the statewide coalition, create a committee with responsibility for injury prevention education.

2. Increase awareness, through statewide public education programs, that injury is a preventable public health problem and promote strategies for prevention through collaborative community programs.
 - Create an injury prevention Web site, listserve and toll-free referral number.
 - Promote materials to health care, government, and other groups working with at-risk populations.
3. Provide relevant training on injury surveillance and prevention strategies for professionals including: policy makers, law enforcement, nurses, physicians, EMS, teachers, child care professionals, extended care facility and senior care workers, employers, public health professionals and others.
4. Incorporate age-appropriate education on injury prevention, life skills, conflict resolution, parenting skills, bullying and other related issues into school curricula. Provide and promote standardized training materials for classroom use by teachers and other school professionals.

Theme: Injuries disproportionately affect those living in poverty, and the young and the old.

H. Promote injury prevention programs that focus on populations most at risk based on injury surveillance. Children and older adults living in poverty should be high priority.

Theme: Alcohol use is an important risk factor for injury.

- I. Fund and support initiatives that address prevention of alcohol and other drug-related injuries. These initiatives should include education, legislation, coalition building, and screening and intervention by health care professionals.

Common Themes and Core Recommendations to Prevent Injury in Ohio

Theme: Legislation can be an effective strategy for preventing injuries.

J. Enact or strengthen state and local legislation and policies which lead to the prevention of injuries.

1. The statewide coalition should monitor and advocate for policies and legislation which enhance the safety of Ohioans.
2. Provide information and resources to relevant agencies to support injury prevention legislation.
3. Enact legislation and policy to prevent injuries. Refer to pages 31-32 for specific policy and legislative recommendations.



Photo courtesy of the National SAFE KIDS Campaign



INJURY IN OHIO

A Report from the
Ohio Commission on the Prevention of Injury

November 2003

Acknowledgments

COMMISSION CHAIR

Gary A. Smith, MD, DrPH
Director, Center for Injury Research & Policy,
Columbus Children's Research Institute, Children's Hospital,
Ohio Chapter/American Academy of Pediatrics.

STEERING COMMITTEE MEMBERS

Christy Beeghly, MPH
Center for Injury Research and Policy
Columbus Children's Hospital

Lowell W. Gerson, PhD
Northeastern Ohio Universities College of Medicine
Ohio Public Health Association

William D. Hayes, PhD
Assistant Deputy Director
Ohio Health Plans
Ohio Department of Job and Family Services

Benita Jackson, MD, MPH
Ohio State University
School of Public Health

Dee Jepsen, MS
Ohio State University Extension
Food, Agriculture & Biological Engineering

Wendy J. Pomerantz, MD, MS
Children's Hospital Medical Center
Division of Emergency Medicine
Ohio Chapter AAP

Mike Smeltzer, MPH
Columbus Health Department
Ohio Public Health Association

COMMISSION MEMBERS

Sandy F. Anderson, MBA, MSN, RN
Regional Trauma Consultant
OhioHealth
Ohio Society of Trauma Nurse Coordinators

Anne R. Bacon
Ohio EMS for Children Program Coordinator
Ohio Department of Public Safety

Robert Brown, MD
Columbus Children's Hospital
Ohio Coalition on Suicide Prevention

William G. Crum
Trauma Victim Advocate

A. Peter Ekeh, MD, MPH, FACS
Department of Surgery
Wright State University

Edward Lamp, PhD
Trauma Victim Advocate

Beverley Laubert
Chief of Elder Rights Division
Ohio Department of Aging

Melinda Moore
Ohio Coalition on Suicide Prevention

Cheryl Markino
Director of Public Relations
Ohio Osteopathic Association

Eric Marsh, MSN, RN
Program Manager, Pediatric Trauma Center
Rainbow Babies & Children's Hospital of
University Hospitals of Cleveland

Sidney F. Miller, MD, FACS
Department of Surgery
Wright State University School of Medicine

Lisa A. Pardi, MSN, RN, CPNP
Akron Children's Hospital
Ohio Children's Hospital Association

Dave Spencer
Supt. of Safety & Hygiene
Ohio Bureau of Workers' Compensation

Hilary A. Stai
Assistant Chief of Elder Rights Division
Ohio Department of Aging

Rich Van Horn
Deer Creek State Park
Ohio Department of Natural Resources

Owen Wagner
Division of Labor & Worker Safety
Bureau of Occupational Safety and Health
Ohio Department of Commerce

OHIO DEPARTMENT OF HEALTH STAFF

Jamie M. Blair, APRN, BC, Chief,
Bureau of Community Health Services
and Systems Development

Charlene Buckner, RN
Injury Prevention Section

James Bryant, MD, Chief
Bureau for Children with Medical Handicaps

Nan Alexander Migliozi, MSN, RN, Chief
Injury Prevention Section

Mike Moser, RS
Injury Prevention Section

Melvin Stallworth
Injury Prevention Section

Joyce Wells, MSN, RN
Graduate Student Practice Placement
Capital University

OTHER ACKNOWLEDGMENTS

Special thanks go to the following individuals for their work in supporting the commission:

Virginia Haller, MD, Ohio Department of Health, for her devoted support of and invaluable insights into the commission's work and report preparation.

Pamela Leimbach, administrative assistant, Ohio Department of Health, Bureau for Children with Medical Handicaps for her administrative support in scheduling and coordinating meetings, and in recording, preparing and distributing commission meeting minutes in an always reliable and timely manner.

Mike Glenn, RN, State Trauma Coordinator, Ohio Department of Public Safety for his support throughout the process.

Christy Beeghly, MPH, Center for Injury Research and Policy, Columbus Children's Hospital, for her knowledge and input regarding injury prevention and her outstanding contributions to the preparation of the commission's report.

We would like to acknowledge the following organizations for their contributions:

The Ohio State Medical Association for providing refreshments and excellent accommodations for the Commission's meetings.

The National SAFE KIDS Coalition, the USDA Natural Resources Conservation Service and the AAA Foundation for Traffic Safety for permission to use their photographs throughout the report chapters.

Printing of this report was made possible through the support of the Ohio Department of Health, with partial support from the Ohio Department of Public Safety.

This report is dedicated to the memory of Rich Van Horn, Ohio Department of Natural Resources.

Message from the Commission Chair

November, 2003

Dear Colleagues,

Injury is the great modern plague, and Ohio's challenge is clear. We must apply to injury the same public health approaches that have been successful in combating many other diseases and public health problems. Prevention of injury is within our grasp.

The magnitude of the injury problem in Ohio is staggering. Injury claims the lives of more than 5,000 Ohioans each year and is the leading cause of death and disability among Ohio citizens from age one through 34 years. The costs and long-term consequences of injury on the healthcare system, the workplace, and among survivors and their families are enormous. By any measure, injury is the most significant public health problem facing our state's population.

The Ohio Commission on the Prevention of Injury, whose creation was authorized by House Bill 138 in the year 2000, brought together experts in multiple disciplines from across the state. This report is the product of two years of work by commission members. It is a consensus document that incorporates the best information available on existing and potential injury prevention programs in Ohio. Though there are many existing activities to prevent injuries in our state, there are also critical gaps in our efforts to address the problem. There is a lack of injury surveillance systems that would provide the information needed to focus our limited resources more effectively. Ongoing prevention efforts too often lack coordination among state and local agencies and groups in the private sector. Indeed, many other states lead Ohio in efforts to prevent injury among their citizens. While acknowledging the successes of ongoing programs, this report makes recommendations for improvement of existing programs and implementation of new injury prevention efforts.

I wish to thank the members of the commission for their hard work and dedication. I am impressed by the collective knowledge, commitment and compassion that this group has demonstrated during the development of this report. I wish to thank Director Nick Baird, MD and Dr. Virginia Haller and other members of the Ohio Department of Health for their support of the Commission's work. I also wish to recognize and thank the representatives of other Ohio governmental agencies, the state legislature, and other professional and advocacy groups from around the state for their invaluable contributions to the commission's report. Special thanks goes to Ms. Pamela Leimbach for her administrative assistance, and to Ms. Christy Beeghly for her outstanding contributions to the final report.

It is my hope, and that of the entire commission, that this report will serve as a guide for new statewide efforts to combat the leading public health problem of injury. This report provides a blueprint for a state strategic plan for the prevention of injury. Through increased collaboration of state government, professional and advocacy organizations, and the private sector, and with increased commitment of resources that are commensurate with the magnitude of this public health problem, the high financial costs of injury will be reduced, and Ohioans will enjoy safer and healthier lives.

Gary A. Smith, MD, DrPH
Director, Center for Injury Research and Policy
Columbus Children's Research Institute, Children's Hospital

The Ohio Commission on the Prevention of Injury

The Commission's Work

Ohio's 123rd General Assembly passed House Bill 138, authorizing a statewide trauma system in November 2000. Section Five of this legislation required the Ohio Department of Health to form a multi-disciplinary commission on the prevention of injury, with particular emphasis on the pediatric and geriatric populations in Ohio (*Appendix D contains the full text of Section Five of H.B. 138*).

In October 2001, commission members from across the state first gathered to discuss the current status of injuries and prevention efforts in Ohio. They developed a strategy and over the next two years, regularly convened to produce a consensus-based report.

Committees were formed to examine existing injury policies, programs and data sources, and document needs. Commission members identified chapter topics, drafted and carefully reviewed chapters, and achieved consensus in issuing recommendations. Common themes and needs emerged after assessing individual injury areas. The process resulted in core recommendations for improving injury prevention efforts in Ohio. The result of the commission's work is this comprehensive report examining the current status of injuries in Ohio with recommendations for future action. Reports for individual injury areas (e.g. fire/burn, motor vehicle-related injury, etc.) are available electronically at www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm

Goals

The long-term goal of the Ohio Commission on the Prevention of Injury is to reduce injury and injury-related death to Ohioans. Implementation of the commission's report recommendations will facilitate achievement of this goal.

The commission largely used Healthy People 2010 (HP 2010) as a guideline for setting goals for Ohio. HP 2010 is a statement of national health objectives designed to identify the most significant preventable threats to health and to establish national goals to reduce these threats. The objectives are built on scientific knowledge and are designed to measure progress over time. Thirty-nine HP 2010 objectives relate to unintentional and intentional injury. HP 2010 objectives related to injury are defined throughout this report for most of the injury topics and, where available, Ohio injury rates are compared to those of the country as a whole. Additional information about HP 2010 and the methods used to set national goals can be found at www.healthypeople.gov/default.htm.



Photo courtesy of the National SAFE KIDS Campaign

INJURY IN OHIO

Defining the Problem

Injury can be defined as physical damage caused by a transfer of energy to tissues of the body. This energy can come in various forms, kinetic/mechanical, thermal, chemical or electric. Injury also can be caused by a lack of needed elements such as heat or oxygen. Injury can result from unintentional (accidental) or intentional acts.

Injuries are largely classified by the:

- Events and activities that preceded them (e.g. motor vehicle-related, occupational-related).
- Outcome or result of the transfer of energy (e.g. traumatic brain injury, burns).
- Intention of the acts causing the injury (e.g. abuse, suicide, homicide).

This report will group injuries into these categories to organize a discussion of the topics. Overlap among these categories exist, for example, motor-vehicle crashes can cause traumatic brain injuries and burns can be used as a form of abuse. The report's chapters reflect this overlap as appropriate.

Throughout this report, "unintentional injuries" will be used to describe those injuries resulting from accidents. The word "accident" suggests something unpredictable, random and therefore not preventable. Most injuries are predictable and preventable. Using the word "accident" hides this fact.

Given the perspective that injuries are predictable and preventable, action can be taken to intervene. Epidemiologic studies and surveillance systems provide information to identify how, when and where injuries typically occur. We can identify who may be at the highest risk for injuries. We can also target interventions to prevent specific types of injuries.



Photo courtesy of the National SAFE KIDS Campaign

Individual Injury Area Reports

The common themes and core recommendations found in this report are based on the findings of individual injury area reports (e.g. fire/burn, motor vehicle-related injury, etc.) that are available electronically at: www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm

CDC State of Ohio Injury Profile

The Centers for Disease Control and Prevention has created injury profiles for each state to document the injury problem and compare states against a national profile. Ohio's profile can be found at: www.cdc.gov/ncipc/StateProfiles/sip_oh.pdf

Overall Goals

Reduce injury deaths of all causes and intents.

Goal	37.0 deaths per 100,000 (better than the best state)
OH 1998	43.7
US 1998	54.4

Data Source: NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates.

Reduce deaths caused by unintentional injuries.

HP 2010 Goal	17.5 deaths per 100,000
OH 1998	29.5
US 1998	35.0

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

Reduce deaths caused by violence.

Goal	10.0 deaths per 100,000 (better than the best state)
OH 1988	13.8
US 1998	18.0

Data Source: NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates.

Reduce hospital emergency department visits caused by injuries.

HP 2010 Goal	126 hospital emergency department visits per 1,000.
OH	Identify baseline
US 1997	131

Data source: National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

Increase the number of states and the District of Columbia with statewide emergency department surveillance systems that collect data on external causes of injury.

HP 2010	All states and the District of Columbia.
OH	No system in place
US 1998	12 States

Data source: External Cause of Injury Survey, American Public Health Association (APHA).

Increase the number of states and the District of Columbia that collect data on external causes of injury through hospital discharge data systems.

HP 2010	All states and the District of Columbia.
OH	System exists but data is not easily accessed
US 1998	23 States

Data source: External Cause of Injury Survey, American Public Health Association (APHA).

DATA

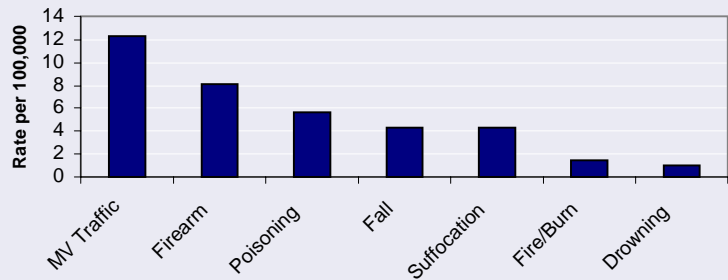
Injury is one of the great modern plagues. When ranked among other public health problems, injury is arguably the leading threat to the health and well being of the general population in the United States. In 2000, intentional and unintentional injuries caused more than 148,000 deaths, 1.4 million hospitalizations and 29.5 million emergency department (ED) visits in the United States.

Injury is the leading cause of death and disability for Ohioans ages 1 to 34 and the sixth leading cause of death for all age groups. Thousands of Ohioans are killed each year from injury-related causes. More than 5,100 Ohioans died from injuries in 2000. Motor vehicle traffic, firearms, poisoning, falls, suffocation, fire/burn and drowning are the leading causes of injury death per 100,000 Ohioans (*Figure 1*). During 1999-2000, Ohio's injury death rate was 45.8 deaths per 100,000, which was less than the national rate of 54.0 but still higher than the HP 2010 target of 37.0 deaths per 100,000.

Injury death rates have remained relatively constant in the United States during the 20th century. In contrast, disease rates have declined (*Figure 2*). By 1980, death rates from tuberculosis and gastrointestinal disorders had declined by 99 percent compared to the turn of the century. Death rates from influenza and pneumonia declined by 85 percent. The decreased rates were a result of a focused energy and application of scientific principles to disease control. Infectious disease rates have decreased due to a better understanding of disease etiology, improved treatment and sanitary conditions, and targeted prevention

Figure 1.

Leading Causes of Injury Death per 100,000 Ohioans, 1999-2000

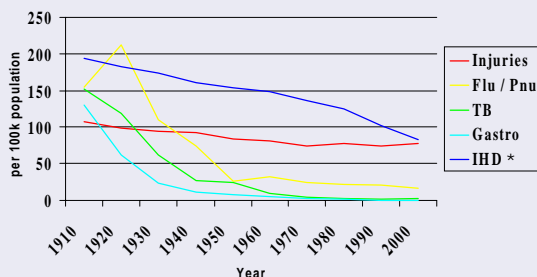


efforts. In contrast to disease, during this century, injury death rates have declined by only 30 percent. Injury is at present responsible for three times as many deaths as are influenza and pneumonia.

Unintentional causes lead to the greatest proportion of injuries and injury-related death. During one year in Ohio, unintentional injury fatalities exceed that of 12 jet crashes, each causing 260 casualties. Imagine one large jet crash every month in Ohio. This is the equivalent in fatalities to those that resulted from the 2001 terrorist attack on the World Trade Center. For the entire United States, annual injury fatalities equal more than 360 jumbo jet crashes with no survivors. That is nearly one jet crash **each day**. Such catastrophic events would merit immediate public action and attention. However, because injury deaths occur in isolation or in small clusters, they often go unnoticed except by those directly affected by the loss.

Figure 2.

Death Rates from Injuries and Other Causes, United States, 1910 - 2000



* Ischemic Heart Disease

During one year in Ohio, the number of deaths caused by unintentional injuries exceeds that of one large jet crash per month, each causing 260 casualties.



Many perceive these deaths to be accidents, unforeseen tragedies happening by chance. They are not.

The leading causes of unintentional injury death in Ohio are motor vehicle traffic, falls, poisonings, suffocations, fire/burns and drowning. Motor vehicle traffic accounted for 40 percent of unintentional injury deaths in 1999-2000.

When measured in Years of Potential Life Lost (YPLL), injuries account for almost one-third of all premature death (YPLL before age 65) in

the United States. They account for more YPLL than heart disease, cancer and stroke combined, which are the next leading causes of YPLL in the United States. Injury accounts for so many YPLL because it is the leading cause of death from ages 1 - 34 years.

In Ohio during 1999-2000, injuries accounted for the most YPLL before age 65 (*Figure 3*) and unintentional injuries alone accounted for the second most YPLL, after cancer (malignant neoplasms).

Figure 3.

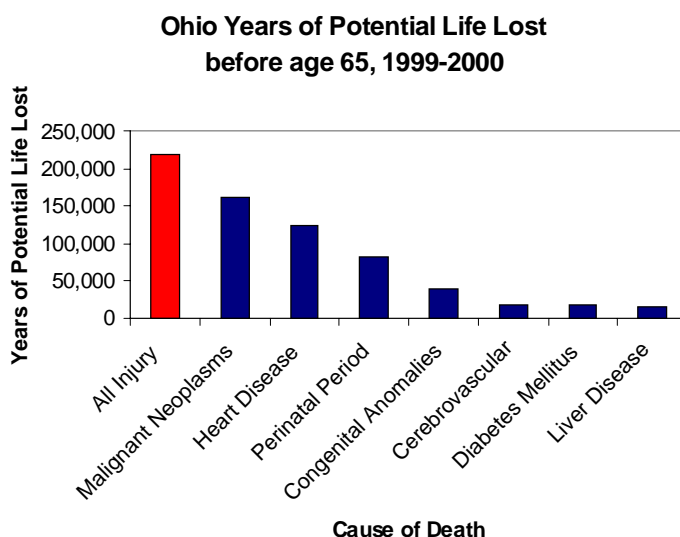
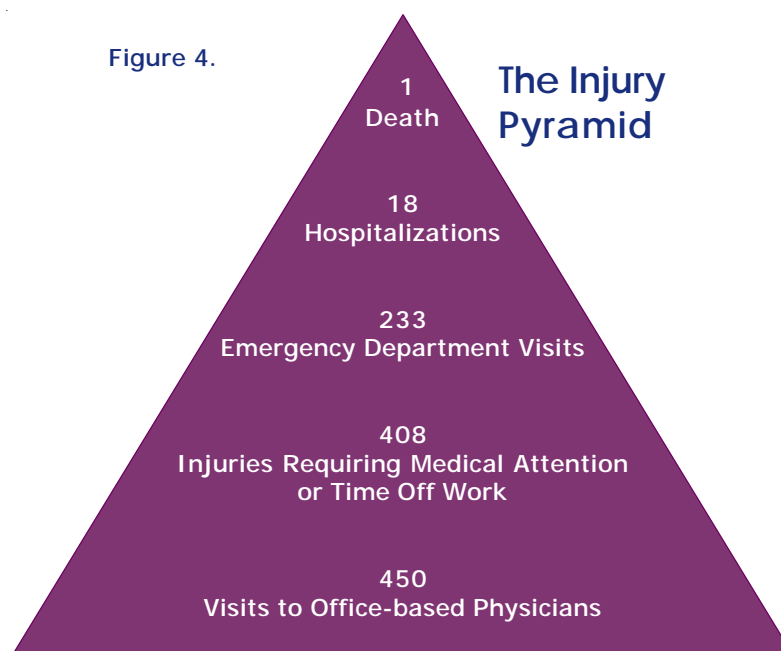


Figure 4.



Source: National Center for Health Statistics (1999)

Although fatalities are the most severe and final consequence of injuries, they represent only the tip of the iceberg when examining the burden of injury. The injury pyramid (*Figure 4*) depicts that for each injury death in the United States, there are approximately 18 hospitalizations and 233 emergency department visits. At this time, we do not have corresponding Ohio data for non-fatal injuries, however, estimates can be made based on the injury pyramid. Given that approximately 5,000 Ohioans die from injuries each year, the Ohio injury pyramid is presented below (*Figure 5*).

Of the millions of Ohioans who survive injuries, many suffer long-term consequences such as permanent disability, time lost from work and family, costly medical expenses and pain and suffering.

During 2000 in the United States, unintentional falls were the leading cause of non-fatal injury for all ages, followed by unintentional struck by/against and unintentional motor vehicle occupant as the second and third causes, respectively (*Figure 6*). Corresponding Ohio-specific data is not available for non-fatal injuries.

Figure 5.

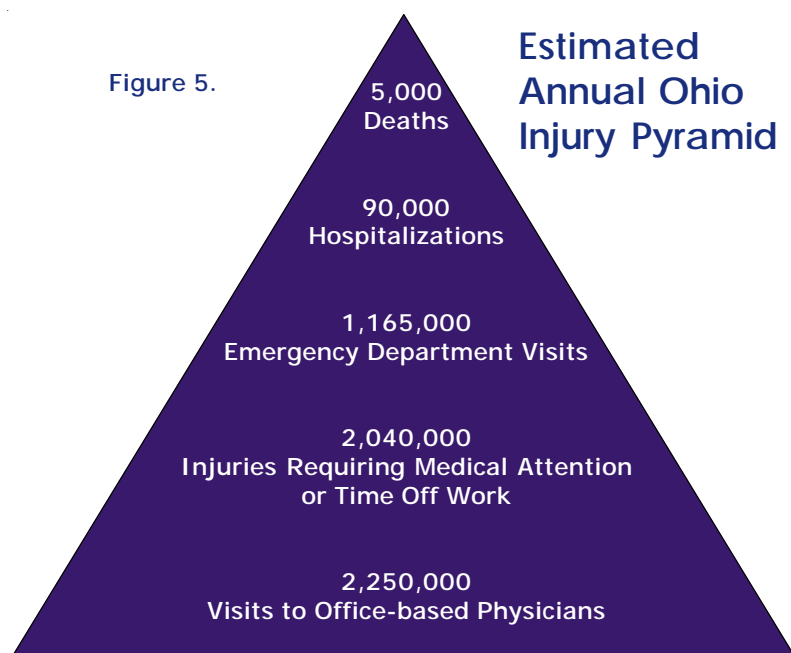
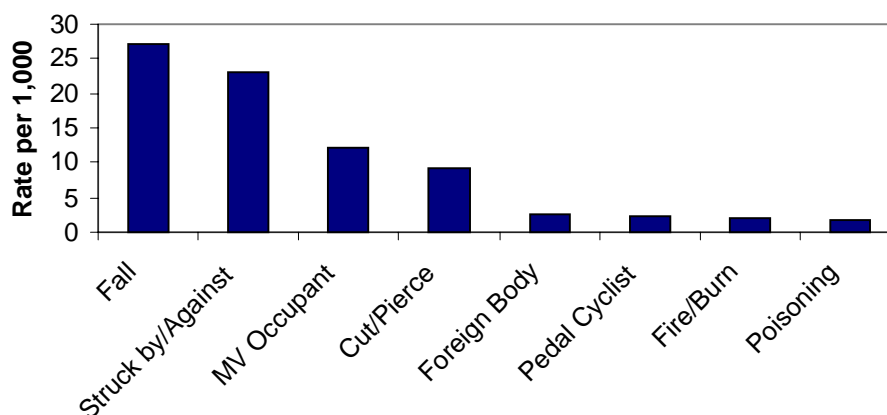


Figure 6.

**Leading Causes of Non-fatal Injury in the U.S.
per 1,000, 2000**



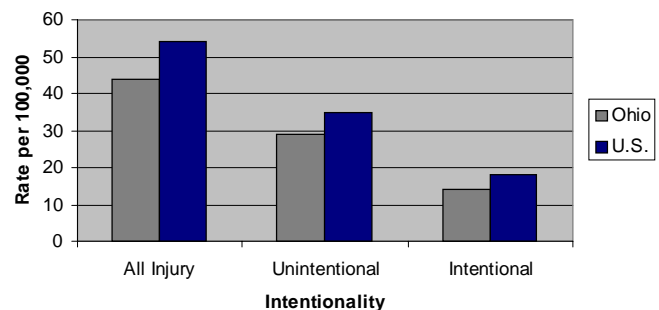
INTENTIONAL Vs. UNINTENTIONAL

This report discusses injuries resulting from both intentional and unintentional acts. There are clearly fundamental differences in the underlying causes of intentional and unintentional injuries. Efforts to prevent intentional injuries often involve more complex issues including mental health, family and group dynamics.

Approximately two-thirds of injuries are unintentional and one-third are intentional (*Figure 7*). During 1999–2000 in Ohio, the violence-related injury death rate was 13.8 per 100,000 compared to the U.S. rate of 16.9 per 100,000. These figures include suicides, homicides and legal intervention. Homicide alone was within the top eight leading causes of death in Ohio during 1999–2000 for all age groups from 1 to 44 years. The violence-related injury death rate in Ohio varies by age group and race (*Figure 8*). Black individuals in age groups from 15 to 39 years suffer the highest intentional injury death rates.

Figure 7.

Ohio and U.S. Injury Death Rates, 1998

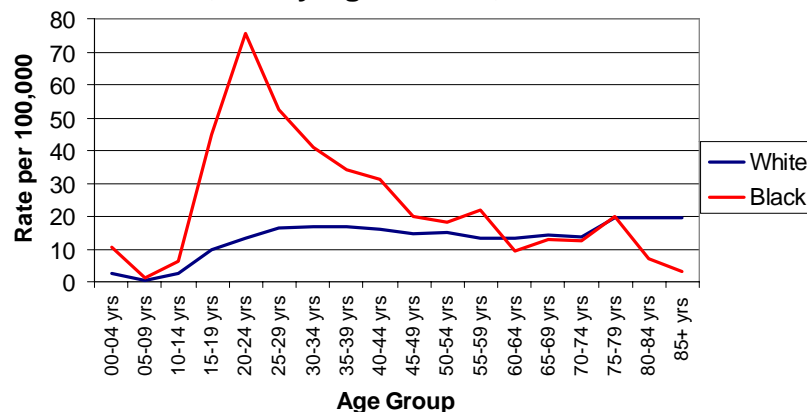


Nationally, nonfatal violence-related injury rates increase up to age 24 and then decrease with age. During 2000, injury rates ranged from 217.5 per 100,000 ages 0-4, to a high of 1,828.6 per 100,000 ages 20-24, to a low of 50.3 per 100,000 ages 85 and older. The leading cause of violence-related nonfatal injury for all age groups is struck by/against assault followed by self-harm poisoning, however, the leading causes vary considerably among age groups.

Although there are fundamental differences in addressing intentional and unintentional injuries, factors common to both exist. Examining these common factors or intersection points will facilitate consolidating prevention efforts, and possibly reducing program-related costs. It is critical that planners and decision makers from concern with either type of intent sit at the table and decide where consolidation makes sense. Specific examples of such approaches are outlined in the intentional injury chapters that can be found online at www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm.

Figure 8.

Ohio Intentional Injury Death Rates per 100,000 by Age & Race, 1996-1998



COSTS & CONSEQUENCES

The greatest cost of injury is measured in human suffering and loss. At the same time, the financial repercussions are staggering. In the United States, more than \$224 billion is spent annually on medical care, rehabilitation and lost income and productivity resulting from injury. The federal government pays about \$12.6 billion each year in injury-related medical costs and about \$18.4 billion in death and disability benefits. Insurance companies and other private sources pay approximately \$161 billion (*CDC Injury Fact Book 2001-2002*). Injury-related deaths and disabilities have a profound negative effect on the productivity of the U.S. workforce.

The total monetary cost of fatal injury incidences in Ohio from 1993 to 1997 for persons aged 24 years and younger was more than \$1 billion (*Table 1*). This total includes medical, legal, administrative costs and estimated lifetime productivity loss. Motor vehicle-related deaths account for 53 percent and firearm-related deaths account for 28 percent of the costs.

In State fiscal year (SFY) 2002, Ohio Medicaid provided health care services associated with an *inpatient diagnosis* of trauma for 11,616 people. Ohio Medicaid spent more than \$201 million in state and federal funds in SFY 2002 for services directly related to their trauma. This figure

understates total trauma spending because it does *not* include prescription drug or skilled nursing facility costs for services related to their trauma, and it does not include anyone with an outpatient diagnosis of trauma.

A recent assessment of injury-related Ohio Medicaid spending over a four-year period reveals the following. In SFY 1999, 9,096 Ohio Medicaid consumers used health care services due to a trauma incident occurring during SFY 1999. These consumers spent approximately \$235 million in total health care expenditures during the first year after the injury. One-third, or at least \$78 million, of these health care expenditures was directly related to the injury. Over the four-year period following the trauma incident, Ohio Medicaid spent \$566 million in total health care expenditures for this group, of which \$92.8 million was directly tied to the trauma.

Those connected with the victim also experience the consequences of the injury. A non-injured spouse may need to provide full-time care to a disabled spouse, resulting in loss of work productivity and possibly lost income for two individuals. Children are profoundly affected when parents are injured and can no longer care for them. These significant costs are more difficult to calculate.

Table 1.

Ohio Fatal Injury Incidences, Estimated Costs for Ages 0-24, 1993-97				
Cause of Death (All Intents)	Total Monetary Cost of Injuries	Total Years Potential Life Lost	Mean Annual Frequencies	Average Rate/100,000
MV Traffic	\$545,152,173.00	27,948	456.6	11.6
Firearm	\$298,899,271.00	16,753	279.6	7.1
Fire/Burn	\$48,015,535.00	3,599	51.8	1.3
Drowning/Submersion	\$47,796,514.00	3,219	48.8	1.2
Suffocation	\$47,382,041.00	3,223	48.6	1.2
Poisoning	\$20,877,871.00	1,152	19.4	0.5
Falls	\$11,856,837.00	732	11.6	0.3
Other Transport	\$10,343,542.00	596	9.8	0.3
Non MV Pedestrian	\$9,218,230.00	593	9.2	0.2
Cut/Pierce	\$5,139,705.00	287	4.8	0.1
Machinery	\$4,409,630.00	257	4.2	0.1
Struck by/Against	\$3,451,992.00	243	3.6	0.1
Non MV Pedal Cyclist	\$1,207,458.00	77	1.2	0
Natural/Environmental	\$818,553.00	50	0.8	0
Total	\$1,054,569,352.00	58,729	1042.8	26.6

Source: Children's Safety Network National Injury Data Technical Assistance Center and Children's Safety Network Economics and Insurance Resource Center.

RISK FACTORS

Factors that place a certain group of individuals at a higher risk for injury must be identified to effectively target prevention efforts. Risk factors vary according to the type of injury, however, there are some risk factors that are common to nearly every injury category.

LOW INCOME

Poverty is a risk factor for injury. Children from low income families are twice as likely to die in a motor vehicle crash, four times more likely to drown and five times more likely to die in a fire (*NSKC, Children at Risk Fact Sheet. Washington, DC, 2003*).

Approximately one out of 10 Ohioans were defined as having poverty status in 1999. Fourteen percent of children younger than 18 years and 8 percent of elders older than 64 years were living in poverty.

For these individuals, housing may be substandard and more hazardous. They may be living in neighborhoods with busy streets and without safe recreation spaces for children. In addition, increased exposure to physical hazards and lack of access to health care are contributing factors affecting the occurrence and severity of injury. Individuals living in poverty may not have access to prevention education or the resources to obtain safety devices such as child safety seats, bicycle helmets and smoke alarms. Other factors related to low income that may increase one's risk for injury include single-parent households, lack of education and young maternal age.

Violence and poverty have been positively correlated. Stress and frustration may lead to a higher likelihood of abuse and participation in violence-related activities.

Children from low-income families are twice as likely to die in a motor vehicle crash, four times more likely to drown and five times more likely to die in a fire.



Photo courtesy of the National SAFE KIDS Campaign

AGE

As recognized by the legislators who drafted House Bill 138, age is a significant factor affecting the occurrence and severity of injury. Children and older adults are disproportionately affected by injuries. As a result, the commission was given a specific mandate to emphasize the injury prevention needs of these groups. Where relevant, the authors of the report's chapters have brought attention to these issues.

Young Ohioans

Children are not small adults. They are developmentally, anatomically and physiologically different than adults. These differences place them at greater risk for injury and affect the severity of the injury. In addition, the developmental and cognitive abilities of children play a significant role in their vulnerability to injury. Appendix A contains tables listing some of the physical differences and describing the injury risks to children by age group.

Injuries take a significant toll on the young. Former Surgeon General C. Everett Koop said on the subject of childhood injury, "If some infectious disease came along that affected one out of every four children in the United States, there would be a huge public outcry and we would be told to spare no expense to find the cure – and to be quick about it."

- During the preschool, elementary and middle school years, injury accounts for approximately as many deaths as all other causes combined.
- Every day in the United States, more than 28,000 youth ages 19 years and younger are injured seriously enough to require medical treatment in an emergency department, totaling more than 10 million annually.
- Each year in the United States, more than 17,000 youth ages 19 years and younger will die as a result of injury (22.5 per 100,000). More than 630 will die in Ohio (20.0 per 100,000).
- Injuries have been the leading cause of death in children for nearly 40 years.
- One in four children will suffer an injury during the next year that will require medical attention.
- It is estimated that as many as 90 percent of unintentional injuries can be prevented.

Regardless of how the injury problem is measured, injury rises to the top of the list of public health threats to children.



**"If some infectious disease came along that affected one out of every four children in the United States, there would be a huge public outcry and we would be told to spare no expense to find the cure – and to be quick about it."
Former Surgeon General
C. Everett Koop**



Infants and Young Children

During the first year of life, risk of death due to injury is very high. In absolute numbers, more children die due to injury during this year than during any single one-year period during the preschool and early school years.

During 1999-2000 in Ohio, the unintentional injury death rate for infants younger than 1 year of age was 33 per 100,000. This is the highest age-specific unintentional injury death rate until age 17. The leading causes of unintentional injury death for infants are suffocation, fire/burn, motor vehicle traffic and drowning. Suffocation accounted for 72 percent of the deaths in 1999-2000.

For young children aged 1 to 4 years, fire/burn, motor vehicle traffic crashes and drowning accounted for 72 percent of unintentional injury deaths in Ohio during 1999-2000. Homicide was the second leading cause of death for this age group.

Children

For children aged 5 to 14 years, motor vehicle crashes, drowning and fire/burns accounted for more than 72 percent of the unintentional injury deaths in Ohio during 1999-2000. For children ages 5 to 9 years, homicide was the fourth-leading cause of death. For children ages 10 to 14 years, suicide was the third-leading cause and homicide was the fifth-leading cause of death. Firearms are the cause of death in nearly half of the homicides for ages 5-14.

For children ages 1 to 14, the leading cause of non-fatal intentional injury is struck by/against assault, followed by sexual assault.



Teens and Young Adults

During the teenage and young adult developmental period, risk-taking behavior, use of alcohol/other drugs and peer pressure contribute to a high risk for unintentional and intentional injury.

During 1999-2000 in Ohio, unintentional injuries, suicides and homicides were the three leading causes of death, respectively for youth ages 15 to 19. Firearms were the cause of death in 67 percent of homicides and 46 percent of suicides. Suffocation was the cause of death in 40 percent of suicides in this age group.

The Ohio Youth Risk Behavior Survey (YRBS) is a biennial survey conducted among 2,000 randomly sampled Ohio high school students to assess health-related risk factors. Summary findings related to unintentional and intentional injury from the 1999 YRBS are described below.

From 1993 to 1999, fewer teens reported carrying a weapon such as a gun, knife or club both on and off school property. Fewer students were involved in physical fights. Although Ohio's teenagers are less violent than in past years, there is still room for improvement. Fourteen percent of female students have been forced to have sexual intercourse when they did not want to. One out of 10 students were hit, slapped or physically hurt by their boyfriend or girlfriend in the last 12 months. Eight percent of Ohio high school students actually attempted suicide in 1999.

More Ohio teens are buckling up. Sixteen percent of teens reported that they never or rarely wore a seatbelt when riding in a car in 1999, a 33 percent decrease over the 24 percent in 1997 but still too high. Very few teens are wearing a helmet while riding a bicycle (92 percent rarely or never wear one). Helmet use while riding a motorcycle is more frequent, with 39 percent rarely or never wearing a helmet. Unfortunately, there has been a 41 percent increase in the percentage of teens who drive a vehicle after drinking alcohol (12 percent in 1993 to 17 percent in 1999). Trend data from 1993 through 1999 indicate a steady increase in males, females, white and African-American students driving a car or other vehicle after drinking alcohol.

Nationwide, unintentional struck by/against was the leading causes of non-fatal injury followed by motor vehicle traffic as the second-leading cause for ages 15-19.

Older Ohioans

At the other end of the age continuum, elders have an elevated risk for injury (*Figures 9 & 10*). As with children, anatomical, physiological and cognitive changes help to explain the heightened risk. Sight, balance and coordination may wane which may lead to a fall. Elders may be socially isolated and dependent leading to a higher risk for abuse or suicide. Reaction times may increase leading to risk for motor vehicle crashes. Poor sight or decreased mental capacity may lead to unintentional medication overdoses or poisonings. In addition, physical changes may lead to greater severity of injuries and less resiliency. Appendix A contains tables listing some of the physical and cognitive changes that cause greater injury risk for elders.

Ohio's population 60 years and older comprises more than 15 percent of the state's total and the percentage who are 85 years and older is rising steadily. If ignored, the injury problem to elders will grow as more Ohioans age into the risk category.

In Ohio during 1999-2000, motor vehicle traffic was the leading cause of unintentional injury death, followed by falls and suffocation for ages 65 to 74. For those over the age of 75 years, falls account for the most unintentional injury deaths, followed by motor vehicle traffic and suffocation. Nationwide, unintentional falls are the leading cause of nonfatal injuries in this age group also.



Figure 9.

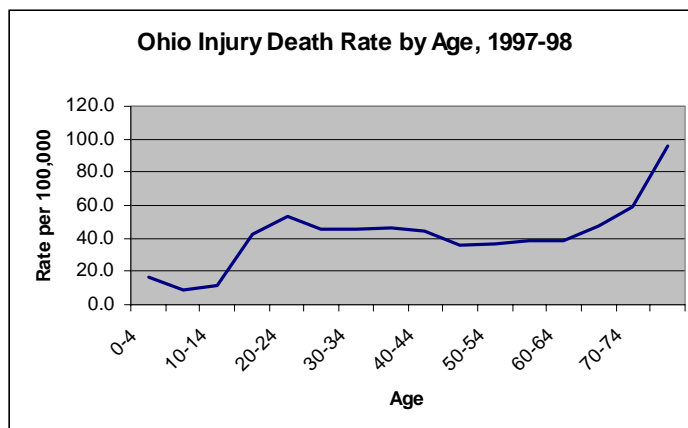
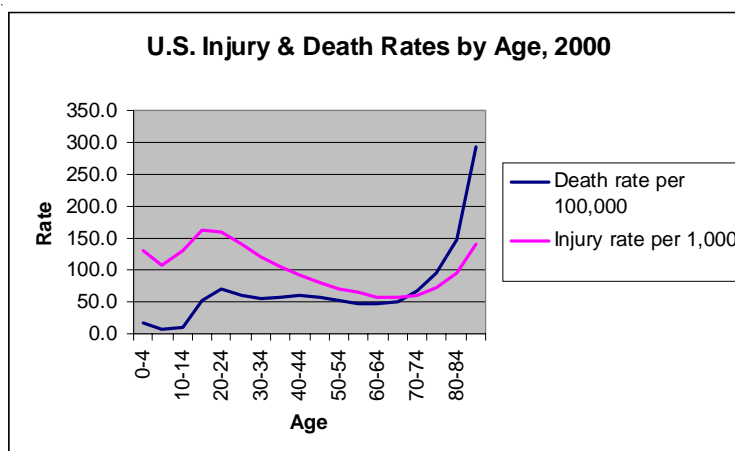


Figure 10.



GENDER

At most ages and for most causes of injury, males are at higher risk than females. Males are at higher risk than females for motor vehicle crashes, falls, drowning, homicide and suicide completion.

Although in general males are at an increased risk for injury, females are at an increased risk for specific injuries. These include hip fractures from fall-related injuries, intimate partner violence and sexual assault. Females are at much higher risk for fatal and nonfatal injury from intimate partner violence. In a national survey, one out of four women reported being raped or physically assaulted by an intimate partner at some time in their lives; only 8 percent of men reported such as experience. Women are more likely to attempt suicide than men.



Photo courtesy of the National SAFE KIDS Campaign

RACE AND ETHNICITY

Racial disparities in injury rates have been noted. African Americans have the highest overall injury rate of nearly all other racial and ethnic groups. However, many of these differences disappear when socioeconomic status is controlled. Racial disparities appear to relate more to living in impoverished neighborhoods as discussed above, than with race or ethnicity.

African Americans in Ohio are disproportionately more likely to be living in poverty, and thus are at an increased risk for injury. More than 25 percent of African Americans in Ohio are living in poverty, compared to 8 percent of whites.

For Ohio African Americans aged 15-24 and 25-34 years, homicide exceeded unintentional injuries as the leading cause of death in 1999-2000. Homicide was the fourth- and fifth- leading cause of death respectively, for whites in these age groups.

GEOGRAPHY

Individuals living in rural areas are at greater risk from unintentional injury-related death than those living in urban areas. Rural areas are less likely to have organized systems of trauma care, resulting in prolonged response and transport times. Nearly one-fourth of Ohio's population lives in rural areas as defined by the U.S. Census Bureau.

In contrast, living in an inner city places one at greater risk for nonfatal injuries than those living in rural and suburban areas. Proximity to quality medical care may affect injury survival rates in urban areas.



*Photo courtesy of USDA Natural Resources Conservation Service,
<http://photogallery.nrcs.usda.gov>*

COMMON THEMES

The consensus-based process used by the commission members to develop this report led to the identification of common, overarching themes. These themes provided the foundation for core recommendations in this report. A brief discussion of the manner in which these recurring themes affect injury will be discussed.

THE COST BENEFIT OF PREVENTION

Injuries are extremely costly to individuals and society. The good news is that prevention efforts confer benefits outweighing the costs.

If bicycle helmets, working smoke alarms and child vehicle restraints were considered as important for health as immunizations and other preventive medications (e.g. blood pressure medication), millions of dollars would be saved. A paradigm shift is indicated that views safety interventions as a part of routine health and wellness – a “vaccine” against injury. Those entities benefiting from the prevention of injuries include insurance companies, health care facilities, employers and government.

Following are a few examples of the cost benefit of preventing injuries:

- For every dollar spent on a bicycle helmet, \$30 is saved in direct medical care costs and other costs to society.
- For every dollar spent on a child safety seats, \$32 is saved in direct medical costs and other costs to society.
- For every dollar spent on a smoke alarm, \$69 can be saved in fire-related costs.
- For every dollar spent on poison control centers, \$7 is saved in medical costs.

If bicycle helmets, working smoke alarms and child vehicle restraints were considered as important for health as immunizations and other preventive medications (e.g. blood pressure medication), millions of dollars would be saved.



Photos courtesy of the National SAFE KIDS Campaign

THE NEED FOR IMPROVED INJURY SURVEILLANCE

Strategies to prevent and reduce injury take a population-based approach similar to other public health strategies to prevent and control disease. Comprehensive, population-level injury data, which is lacking in Ohio, is important for a number of reasons. Decision makers and program administrators use injury data to assess needs and identify funding priorities. Program planners and coordinators use data for quality improvement and program evaluation. Health care institutions use data for quality improvement purposes. Data linkages provide a view of the entire spectrum of injury from risk factors to costs, outcomes and long-term impact on society.

The lack of statewide injury surveillance impedes our ability to adequately describe the injury problem in Ohio. Several injury databases recommended by the Centers for Disease Control and Prevention and the State and Territorial Injury Prevention Directors Association are either in their infancy stages of development, being contemplated or have not been explored in Ohio. Existing Ohio injury databases include death records, EMS incident reporting, a statewide trauma registry, child abuse/neglect reports, adult protective services, traffic crash reports, crime statistics, fire incident reporting, occupational-related injuries, child fatality review, hospital discharge and farm-related injuries. A table further describing the data available from each of these sources, restrictions to access the data and the years for which data are available, can be found in the Appendix.

Most of these databases exist in isolation at this time. They are housed and controlled by separate agencies and are not linked to other sources of data. Analysis and reporting of the data occurs often within this context and



Photo courtesy of the National SAFE KIDS Campaign

without a broader perspective of the data's use to other groups. These databases will be most useful if continuing discussions guide analysis of the data. A workgroup should be formed including representatives familiar with those databases. This group can identify opportunities for linkage and sharing of data as well as broader reporting and uses of the data

to improve administrative decision-making abilities. They can also make recommendations for the development of new surveillance systems.

A statewide injury surveillance system that tracks all injuries is a most pressing need. This system should include injuries treated at urgent care centers, emergency

departments and hospitals, and it should have the capability to link injury records from events preceding the injury to long-term outcomes. Injury data from schools, child care centers and long-term care facilities are useful sources that should be considered.

Ohio will have the opportunity to focus injury prevention activities on the needs of high risk populations in this state as data collection grows and data analysis matures. This is preferred to implementing programs based on the assumption that the Ohio population mirrors that of the nation.

A statewide injury surveillance system that tracks all injuries is a most pressing need. This system should include injuries treated at urgent care centers, emergency departments and hospitals, and it should have the capability to link injury records from events preceding the injury to long-term outcomes.

THE NEED FOR INCREASED STATEWIDE COORDINATION OF EFFORTS

Many statewide and local prevention efforts are underway, each targeting the injury problem from a unique perspective. Participation on the commission provided members with the opportunity to view injuries from a broader perspective than that of their parent organizations. For example, those regularly addressing intentional injuries to children learned about the problem of injuries occurring in the workplace. Those focusing on pediatric injury prevention had the opportunity to learn how elders are disproportionately affected by injury as well. Members learned about new resources and sources of data available to them. Due to the important knowledge and resources shared by commission members, it is apparent that improved statewide coordination of injury prevention efforts would benefit all involved.

Interagency collaboration and coordination between state agencies and organizations concerned with the prevention of injury should be enhanced. Key organizations include the Ohio departments of Health and Public Safety, including the EMS Board and Trauma Committee, the Bureau of Workers' Compensation, Ohio departments of Education, Mental Health, Aging, Job and Family Services, Transportation, and Natural Resources. In addition, representatives from other stakeholder organizations should be invited to collaborate at the state level. These groups include the Ohio Hospital Association, the Ohio Children's Hospital Association, elder advocacy groups, Commission on Minority Health, Ohio PTA Association, Ohio Public Health Association, Association of Ohio Health Commissioners, MADD, regional trauma groups, law enforcement organizations, etc.

State-level infrastructure and leadership requires continuing support to increase coordination of efforts. This support will enable the provision of technical assistance, training, and coordination to state and local injury prevention efforts.

One strategy to increase coordination involves the creation of a statewide, interdisciplinary injury prevention coalition. The coalition would increase sharing of resources and data, and eliminate duplication of efforts. Funding for a full-time coordinator should be provided. Key responsibilities of this position should include the following:

- Facilitate the translation of report recommendations into action.
- Seek ways to improve communication, such as through the creation of a state injury prevention Web site, listserve and newsletter.
- Reduce duplication of prevention efforts, such as through the creation of a single point of contact toll-free referral number.
- Improve access to injury data.
- Seek additional funding for statewide coalition efforts.
- Improve the dissemination of well-evaluated and evidence-based prevention strategies.
- Facilitate the coordination of new committees/work groups developed as a result of the report recommendations.
- Serve as a state-level advocate for injury prevention, particularly focusing on the needs of the young and the old, the impoverished and other high-risk groups.
- Cultivate and coordinate expertise in various risk areas, such as through the development of a speaker's bureau and media contact list.

THE ROLE OF ALCOHOL

Alcohol is a risk or contributing factor in almost every category of injury, both intentional and unintentional. One of the most dramatic examples is the effect that alcohol has had on motor vehicle crashes. In 2002, alcohol was a factor in 40 percent of the motor vehicle injury-related deaths in Ohio. Alcohol use has also been linked to a substantial number of the injuries and deaths resulting from falls, fires and drownings. It also contributes to the incidence of physical fighting, homicide, suicide, family violence and sexual assault. Alcohol has been found to play a role in more than half of homicides and sexual assaults, more than half of burns, almost half of hypothermia and frost bite cases, and 40 percent of falls.

There are multiple ways in which alcohol and other drug use increases the risk for injury.

Intoxication:

- Decreases the level of alertness.
- Impairs motor function, diminishing coordination and balance, and increasing reaction time.
- Impairs judgment and results in poor decision making.
- Diminishes perception and cognitive abilities.
- Increases risk taking behavior and feelings of invulnerability (especially among adolescents and young adults).
- Reduces inhibitions and intensifies feelings of anger and depression.
- Is associated with increased violent behavior.

Additionally, chronic use may render a person more medically fragile, resulting in more severe injuries and less resiliency.

Although alcohol and other drug treatment approaches are somewhat beyond the scope of this report, the commission advocates for continued support of successful initiatives that address prevention of alcohol and other drug-related injuries. For example, programs that limit youth access to alcohol, provide treatment for those who abuse alcohol and other drugs, counsel high-risk groups about the role of alcohol in injury and enforce relevant laws are likely to have a measurable effect on injury rates.



Photo courtesy of the AAA Foundation for Traffic Safety



PREVENTION CONCEPTS & STRATEGIES

A science of injury prevention has emerged through the work of pioneers, such as William Haddon and Susan Baker, who have shown that injuries, like diseases, have predictable epidemiologic patterns and are largely preventable. Injury research and prevention efforts have gained the attention of the U.S. Congress, especially following the publication of *Injury in America: A Continuing Public Health Problem* by the National Research Council and the Institute of Medicine in 1985. In June 1992, a National Center for Injury Prevention was created at the Centers for Disease Control and Prevention (CDC) in Atlanta.

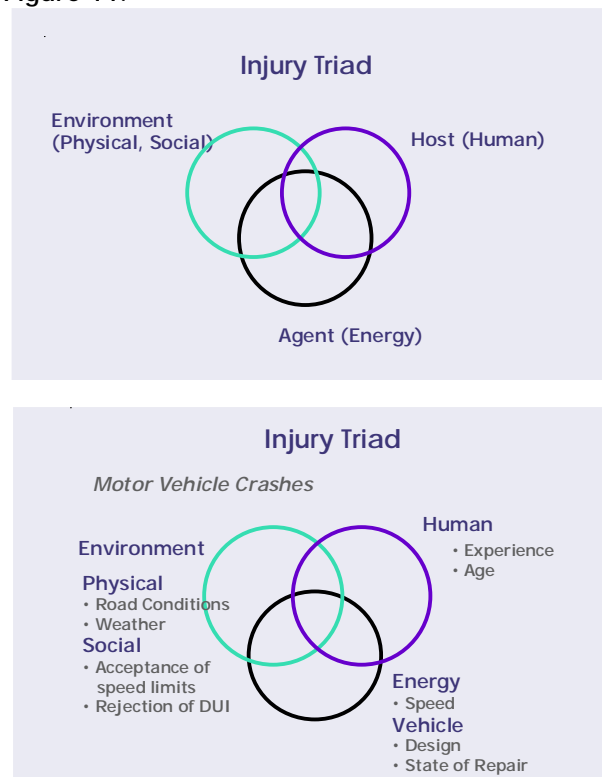
The Injury Triad

Contributing factors to injury are generally divided into three groups: host, environment (often subdivided into sociocultural and physical) and agent factors, frequently called the epidemiologic triad. The agent in the case of injury is the energy that is transferred or the cause of energy (e.g. fire/heat, car, gunshot, fall). The injury triad (Figure 11) presents examples of these factors for the case of motor vehicle crashes. Using prevention strategies that attack the injury triad from all directions will have the greatest likelihood of success. Therefore, a combination of strategies that address all of the factors, including host, environment and agent factors, should be used. Strategies should be prioritized based on the availability of resources and the highest probability of success.

The Injury Can be Prevented without Preventing the Event

A key concept in injury-prevention science is preventing the injury without preventing the event. For example, a child can be in a car crash but be protected by a properly fitting restraint system. The amount of energy transferred to the body does not exceed tissue tolerances and no injury occurs. However, given a similar crash where a child is improperly secured and is ejected from the vehicle, a serious injury is almost certain to occur due to the large amount of energy transfer. Injury-causing agents will be difficult to eliminate but we can modify many host and environment factors to mitigate energy transfer and reduce the risk of serious injury.

Figure 11.

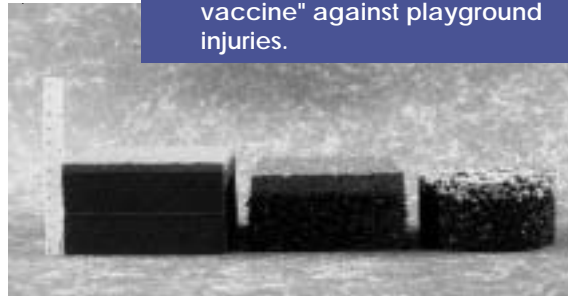


Use Passive Strategies When Possible

The epidemiologic triad (host, agent, environment factors) has been used to understand medical illnesses for more than a century. Regarding medical illnesses, we know that vaccines (passive strategy) are more effective public health tools than attempting to change behavior in high-risk groups (active strategy). This concept can also be applied to the science of injury control. When educational or other active strategies are used, they should be coupled with passive strategies when possible. These strategies do not require action by an individual for protection to occur. Using playground injuries as an example, an individual does not need to know that the playground equipment was designed to prevent entrapment. Passive protective strategies are very much like vaccines. The protection is automatically present, and the protective strategy will go into action when needed. "Technological vaccines" such as energy-absorbing playground surfacing, stationary activity centers (as opposed to wheeled baby walkers), flame-retardant sleepwear, roll-over protective structures on tractors, child-resistant medication packaging and

the motor vehicle airbag have been successfully employed to prevent a variety of types of injury. In addition, other passive strategies such as sidewalks, window guards and pool fences are used to separate individuals from potential hazards.

Unitary Rubberized Playground Surfacing: A "technological vaccine" against playground injuries.



parents that they should use child restraints is simply not enough.

Enactment and enforcement of laws and policies also are recommended strategies for preventing injuries. For example, employers can develop workplace policies that protect employees from harm. State government can enact legislation requiring the use of bicycle helmets.

Supervision Alone Fails to Prevent Injury

Injury prevention theory dictates that strategies requiring frequent action or vigilance on the part of an individual are least likely to succeed. Adult supervision is the most common active strategy recommended to prevent injury to children. Although supervision is clearly desirable, when used alone it frequently fails to prevent injury. Many consumer product-related injuries to children occur with an adult immediately present at the moment of injury. Because injuries take only a moment to occur, and characteristically occur unexpectedly, and because even the best parent in the world cannot watch their child 100 percent of the time, supervision alone cannot be relied on to effectively prevent injury.



As discussed above in regard to the epidemiologic triad, multifaceted prevention programs that combine strategies are most likely to be effective. For example, a successful program to increase booster seat use among young children could involve the following strategies.

- Spreading awareness of the importance of booster seat use through a public awareness campaign in partnership with local media.
- Offering booster seat educational courses to parents of young children.
- Providing booster seat distribution programs in low-income, high-risk communities.
- Enacting legislation requiring children to be restrained in an appropriate restraint until the adult seat belt fits them properly.
- Working with law enforcement to raise awareness of new laws and available resources.
- Designing motor vehicles with built-in child restraint systems.

Effective Active Strategies

There are, however, injury-prevention strategies that inevitably rely on behavior change. Engineers can design a better bicycle helmet, but it will prevent head injury only if it is used consistently and properly. Therefore, active strategies need to be developed and evaluated to determine the most effective methods for changing behavior and therefore, reducing the risk of injury. We know from health education and behavior theories and the experiences of other public health issues that knowledge alone does not change behavior. Most people know that cigarette smoking is hazardous to one's health. This fact does not prevent millions of people from using tobacco products daily. Educational strategies must reduce real and perceived barriers to positive behavior change. In the case of child restraints, barriers to use may be inability to read installation instructions or not being able to afford the restraint. Although an important first step, informing

Injury Prevention Occurs in the Community

Unlike some diseases that can be effectively prevented without leaving the clinician's office, injury cannot be effectively fought without attacking it where it occurs in the community. Instead of providing vaccination against infectious diseases in the office or clinic, injury prevention programs use "technological vaccines" in the home and community (such as energy-absorbing surfaces under playground equipment or airbags in motor vehicles) to passively "immunize" against injury. Injury prevention strategies involving collaboration and community involvement are more likely to be successful. Coalition development is a strategy that has been effectively used to mobilize communities to address the injury problems that most affect them.

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

In addition to common themes and core recommendations, this section outlines injury-specific recommendations developed through consensus. Supporting information for injury-specific recommendations can be found in individual reports on the subjects. These documents are available electronically at www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm.

Theme: Injuries are costly. Injury prevention saves lives and money.

A. Seek creative and collaborative solutions to funding.

1. Enhance communication and collaboration among key stakeholders.
2. Encourage insurance companies, employers and others to cover injury prevention programs and services to reduce healthcare costs.

B. Provide state funding that adequately addresses injury - a leading cause of morbidity and mortality in Ohio.

Theme: Improved injury surveillance efforts and program evaluation are needed.

C. Improve injury surveillance efforts.

1. Develop and maintain injury data infrastructures as discussed below. Collect cost and payer information when possible to allow cost/benefit analyses of injury prevention interventions.
2. Form an ongoing, interagency workgroup to review and make recommendations regarding data needs and opportunities. The workgroup should consider coordination, linking and quality improvement of data collection efforts. It should include representatives familiar with the relevant databases. This group should explore:
 - Funding opportunities to support data linkage.
 - Mechanisms to improve quality and access to data.
3. Continue to provide support for the:
 - Development and maintenance of the Ohio Emergency Medical Services Incident Reporting System (EMSIRS) and the Ohio Trauma Registry through the Ohio Department of Public Safety.
 - Implementation of the Ohio Youth Risk Behavior Survey (YRBS) and the Ohio Behavioral Risk Factor Surveillance Survey (BRFSS).
 - Collection of licensed child care center serious injury data through the Ohio Department of Job and Family Services.
4. Support new uses for injury data through:
 - The development of a Crash Outcomes Data Evaluation System (CODES) in Ohio. CODES links traffic crash reports, Emergency Medical Services Incident Reporting System (EMSIRS) data and hospital discharge data. Funding is available from the National Highway Traffic Safety Administration.
 - Ohio's participation in the Centers for Disease Control and Prevention's (CDC's) National Violent Death Reporting System (NVDRS).
 - External cause of injury coding (e-coding) of and increased access to the full set of Ohio hospital discharge data.
5. Create a permanent and stable funding mechanism for the development of:
 - A statewide emergency department surveillance system that uses the CDC's *Data Elements for Emergency Department Systems*. (www.cdc.gov/ncipc/pub-res/deedspage.htm)
 - A statewide coroners' database.
 - A statewide school injury surveillance system.
 - An occupational injury surveillance system based on the U.S. Bureau of Labor Statistics' system.
 - A statewide toxic exposure data collection system.
 - Incentives (e.g., related grant funding, etc.) to improve records completion for all statewide injury databases.

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

Injury-specific Data Surveillance Recommendations:

6. Create a standardized list of data elements or report form for child maltreatment reporting in health care facilities. Create a database to track maltreatment-related injuries.
7. Encourage the development and use of standardized elder abuse assessment tools, record keeping and referral tracking systems in health care facilities. Create a database to track injuries resulting from elder abuse.
8. Encourage the development and use of standardized intimate partner violence assessment tools, record keeping and referral tracking systems in health care facilities. Create a database to track injuries resulting from intimate partner violence.
9. Encourage the development of Domestic Violence Fatality Review in all 88 counties based on existing county programs and the Ohio Child Fatality Review Program.
10. Classify burn and fire injuries of greater than 5 percent body surface area as a reportable disease and develop a surveillance database.
11. Develop a poison exposure surveillance system to include deaths, hospitalizations, emergency department visits and all exposure incidents reported to Ohio poison control centers.
12. Create a statewide surveillance system to track suicide attempts and completions.
13. Create a statewide surveillance system to track firearm-related injuries.
14. Require law enforcement traffic crash reports to collect information on potential distractions.

D. Promote the use of injury prevention guidelines and evaluation measures that are based upon current evidence-based research and literature.

As part of the statewide coalition (described below), create a committee with responsibility for ongoing review of the effectiveness of prevention programs.

Theme: Improved statewide coordination of programs is needed.

E. Continue to develop leadership and infrastructure to identify, promote, and respond to injury prevention needs at the state and local level.

1. Implement recommendations from the State and Territorial Injury Prevention Directors' Association's (STIPDA) report, *An Assessment of the Ohio Injury Program, March 19-22, 2001*.
2. Strengthen the structure and funding of the Ohio Department of Health's Injury Prevention Section to provide technical assistance, training and coordination of activities, and support to state and local injury prevention efforts.
3. Create a statewide, interdisciplinary injury prevention coalition and provide a permanent funding mechanism to hire a full-time coordinator.

Injury-specific Recommendations

4. Create a permanent and stable funding mechanism for voluntary home visit programs of two years or greater duration per client in an effort to prevent child maltreatment. Target high-risk groups such as low-income families, families having children with disabilities and single parents without support.
5. Create a permanent and stable funding mechanism to maintain statewide suicide prevention and response initiatives.
6. Provide incentives for local government to construct "safe" communities for cyclists and pedestrians.
7. Create a permanent and stable funding mechanism to sustain the operation of the three existing regional poison control centers in Ohio.
8. Provide funding for a coordinated, annual, statewide smoke alarm awareness day to offer inspections, battery replacements and new installations as needed to low income families, families with young children and older adults.

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

9. Provide funding for a multifaceted statewide campaign to increase helmet use among bicycle and other non-powered vehicle users. The campaign should include education, helmet subsidies or giveaways, and legislation.
10. Provide funding for a statewide education and awareness program to prevent unintentional poisoning by elders and children younger than 5 years, and evaluate its effectiveness.
11. Implement a statewide outreach and education program to raise awareness among potential employers of the policies and regulations in existence to protect youthful workers from injury.
12. Implement a statewide awareness and education program targeting parents about firearm-related injuries.
13. Provide increased support of child restraint distribution, installation and education programs.
14. Establish and support driving alternatives to serve older drivers with a diminished ability to drive

F. Coordinate and link EMS, trauma care and public health agencies with other injury prevention programs at the national, state and local levels to increase collaboration.

1. Increase interagency collaboration and coordination between state agencies and organizations concerned with the prevention of injury, in particular the Ohio departments of Health and Public Safety, including the EMS Board and Trauma Committee, Bureau of Workers' Compensation, Ohio departments of Education, Mental Health, Aging, Transportation, Natural Resources and other relevant agencies.

Injury-specific Recommendations:

2. Encourage a collaborative response to intimate partner violence and child maltreatment in all counties.
3. Encourage a collaborative response to elder abuse in all counties.

G. Promote the use of community prevention programs - that are multifaceted, evidence-based and use effective evaluation by public health agencies, trauma centers, emergency medical services and other programs.

1. As part of the statewide coalition, create a committee with responsibility for injury prevention education.
2. Increase awareness through statewide public education programs that injury is a preventable public health problem and promote strategies for prevention through collaborative community programs.
 - Create an injury prevention Web site, listserve and toll free referral number.
 - Promote materials to health care, government and other groups working with at-risk populations.
3. Provide relevant training on injury surveillance and prevention strategies for professionals including: policy makers, law enforcement, nurses, physicians, EMS, teachers, child care professionals, extended care facility and senior care workers, employers, public health professionals and others.
4. Incorporate age-appropriate education on injury prevention, life skills, conflict resolution, parenting skills, bullying and other related issues into school curricula. Provide and promote standardized training materials for classroom use by teachers and other school professionals.

Injury-specific Recommendations:

5. Provide funding for and require the development of a standardized six-hour child maltreatment training curriculum for licensed child care centers. This responsibility should be given to the Ohio Department of Job and Family Services, Child Care Licensing Section. The training is currently required in the Ohio Administrative Code.
6. Support evidence-based programs for youth that provide instruction in life skills and anger management to encourage positive solutions and nonviolent responses to conflicts and problems.

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

Theme: *Injuries disproportionately affect those living in poverty and the young and the old.*

H. Promote injury prevention programs that focus on populations most at risk based on injury surveillance. Children and older adults living in poverty should be high priority.

Theme: *Alcohol use is an important risk factor for injury.*

I. Fund and support initiatives that address prevention of alcohol- and other drug-related injuries. These initiatives should include education, legislation, coalition building, and screening and intervention by health care professionals.

Theme: *Legislation can be an effective strategy for preventing injuries.*

J. Enact or strengthen state and local legislation and policies which lead to the prevention of injuries.

1. The statewide coalition should monitor and advocate for policies and legislation which enhance the safety of Ohioans.
2. Provide information and resources to relevant agencies to support injury prevention legislation.
3. Enact legislation and policies to prevent injuries.

Injury-specific Recommendations:

4. Enact state legislation based on the American Academy of Pediatrics' Residential Swimming Pool Safety Act:
 - Require four-sided fencing on all new residential swimming pool construction.
 - Require four sided fencing be added to all existing residential swimming pools at the time of sale of the house.
 - Provide a one-time tax credit of \$100 to add four-sided fencing to any existing residential swimming pool.

5. Expand existing state legislation to require that all persons riding in a boat shorter than 18 feet in length, regardless of age, wear a personal flotation device.
6. Mandate the installation of protective window guards on windows not designated as emergency exits in multiple-residence dwellings where young children may live.
7. Enact legislation requiring new public and school playgrounds to be constructed according to the U.S. Consumer Product Safety Commission's (CPSC) guidelines for playground surfacing and equipment. Encourage communities to renovate existing playgrounds accordingly.
8. Support federal legislation to reinstate flammability standards for children's sleepwear, particularly for children ages 0-7 years. Enact similar state legislation.
9. Support national standards mandating "fire-safe" cigarettes.
10. Enact legislation requiring helmet use by bicycle and other non-powered vehicle riders when riding on public roads.
11. Support legislation requiring energy-absorbing handlebars and other safety design improvements on new bicycles.
12. Enact a stronger motorcycle helmet law that applies to riders of all ages. (Current law applies only to riders younger than age 18.)
13. Support increased enforcement of Ohio's recently enacted .08 percent blood alcohol concentration (BAC) law for motor vehicle operators.
14. Increase penalties for driving under the influence of alcohol and other drugs.
15. Increase penalties for underage alcohol drinkers, their parents and those who provide alcohol to underage drinkers.
16. Enact legislation requiring children's products sold in Ohio to conform to the safety standards of the Consumer Product Safety Commission. Prohibit the sale of recalled products. (See Children's Product Safety Act at www.kidsindanger.org for model legislation).

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

17. Create a task force to review child maltreatment laws and recommend improvements. This group should consider:
 - Requiring standard terminology and objectivity in defining abuse.
 - Developing an objective, medical definition of abuse for health care professionals. The American Academy of Pediatrics has a definition of physical abuse.
 - Banning the use of corporal punishment in schools and other institutions where children receive care.
18. Create a task force to review other state laws and issue recommendations for improving Ohio's domestic violence law. This group should consider the following:
 - Include dating partners, male and female, who have never married or cohabited in Ohio domestic violence law.
 - Increase penalties for a violation of sections A and B of ORC 2919.25.
 - Require training of health care professionals as outlined in ORC 4723.25; ORC 4731.282; ORC 4732.141 to be mandatory.
19. Create a task force to review elder abuse laws and recommend improvements. This group should consider:
 - Requiring standard terminology and objectivity in defining elder abuse.
 - Developing an objective, medical definition of abuse for health care professionals.
20. Enact state legislation addressing the following firearm-related issues: Juvenile Possession Law, Child Access Prevention Law, and 'Safe Gun' standards.
21. Enact statewide primary restraint legislation for all motor vehicle occupants and support enforcement.
22. Improve the child restraint law to include:
 - Required booster seat use for children in the 4 to 8-year-old range.
 - Restriction of children 11 years of age and younger from being front seat passengers, unless there is no alternative seating.
23. Enact ATV (all-terrain vehicle) safety legislation to include the following:
 - Required helmet use for operators and riders.
 - Restricted sale to and use of ATVs by children aged 15 years and younger.
 - Required safety training and state certification for operators.



Appendix

ANATOMIC AND PHYSIOLOGIC FEATURES THAT INCREASE THE OCCURRENCE AND/OR SEVERITY OF INJURY IN CHILDREN

<u>General</u>	The surface-to-volume ratio of children is high. Dehydration can easily occur from overheating or sunburn. Also, rapid growth rates mean children's coordination and motor skills may be poorly developed in relation to their physical size.
<u>Airway</u>	Airway is smaller and more flexible. Airway is easier to obstruct with both food and nonfood objects. Tongue is larger.
<u>Breathing</u>	Normal ventilation requires minimal work. Respiratory rate decreases with age and varies with excitement, fear, anger, fever or pain. Stress may double respiratory rate. Most infants less than 6 months do not breathe through their mouth; they are nose breathers. Higher respiratory rates mean increased exposure to airborne toxins, for example smoke from house fires.
<u>Head</u>	Head is large relative to the child's body. The child's higher center of gravity makes falls more likely. Strangulation can occur in crib or high chair. Head is likely to impact in falls and car crashes.
<u>Neck</u>	Infant's short neck makes it difficult to palpate a carotid pulse and to intubate. Discrete movement of the infant's neck can block the airway. Fulcrum of neck movement is higher than in adult.
<u>Chest and Lungs</u>	Pediatric bony cage is less rigid, more compressible than the adult. Children have a decreased risk of rib fractures but an increased risk of pulmonary contusion.
<u>Abdomen And Pelvis</u>	Abdominal wall poorly developed. Abdominal organs less protected by rib cage organs are large in relation to the abdominal cavity.
<u>G.I.</u>	Increased intestinal absorption increases likelihood of poisoning from nitrates, lead, or medications.
<u>Mouth</u>	Chewing mechanism not fully developed. Risk of choking and aspiration from foods, for example popcorn, nuts or chips.
<u>Back, Spine And Bones</u>	Children grow at rapid rate; coordination not consistent with growth. Bones are porous, flexible and can splinter and bend with stress causing spiral fractures and splintering.
<u>Skin</u>	Skin is thin relative to adults. Full thickness burns occur at lower temperatures.

ANATOMIC AND PHYSIOLOGIC FEATURES THAT INCREASE THE OCCURRENCE AND/OR SEVERITY OF INJURY IN OLDER PERSONS

<u>General</u>	Decrease in physiologic reserves, slowing of central nervous system response, drug metabolism changes, decreases in body mass, muscular atrophy and high frequency of pre-existing medical conditions.
<u>Airway</u>	Loss of protective reflexes in swallowing increases likelihood of choking on food.
<u>Breathing</u>	Decreased protective mucous and deconditioning (lack of fitness) opens the lungs to toxic exposure.
<u>Head</u>	Changes in cognitive ability, concentration and memory can mask symptoms of traumatic brain injury.
<u>Neck</u>	Thinning of intervertebral discs and shortening of vertebral bodies increase the difficulty of intubation.
<u>Back, Spine and Bones</u>	Osteoporosis increases risk of fractures.
<u>Skin</u>	Loss of subcutaneous tissue and thinning skin increase likelihood of injury after a bump and chances of thermal burns.
<u>Mouth</u>	Poor dentition and false teeth may increase risk of choking.
<u>Visual and Auditory Acuity</u>	Loss of vision and hearing increase risk of motor vehicle crashes and falls.
<u>Balance, Strength, Coordination</u>	Decreases in balance strength and coordination increase risk of falling and damage from a fall.

BEHAVIORAL AND DEVELOPMENTAL FEATURES THAT INCREASE THE OCCURRENCE OF INJURY

Infants

- Completely dependent on care giver
- Require constant supervision
- Unable to verbally communicate and report events
- Explores by mouthing objects; spends a lot of time sucking
- Rapid changes in motor abilities and mobility
- Begins to turn over and grasp objects

Resulting injury risks:

- Falls when left unattended or from infant walkers
- Suffocation and aspiration of small items
- Child maltreatment
- Electrical cord mouth burns
- Burn deaths in house fires

Toddlers or Preschoolers

- Curious, exploratory and impulsive
- Requires constant supervision
- Imitative of adult behavior with lack of awareness regarding potential danger
- Increased motor abilities
- Higher center of gravity
- Oral exploration puts objects in mouth

Resulting injury risks:

- Falls from stairs and windows
- Scald burns
- Drowning
- Child maltreatment
- Poisonings

Elementary School Age

- More mature motor skills
- May recognize dangerous situations but lack experience or judgment to make appropriate and safe decisions
- Increased mobility
- Increased independence
- Unable to assess speed and time of oncoming traffic

Resulting injury risks:

- Pedestrian injuries
- Bicycle, skateboard, scooters, in-line roller blading injuries
- Playground injuries

Young Adolescent

- Dynamic period of change and transition
- Need for peer approval and influenced by peer pressure
- Curious, experimental, risk-taking behavior and feelings of immortality
- More agile, increased strength and abilities, however may lack experience in appropriate decision-making skills
- Increased involvement in sports and recreational activities
- Increased independence
- Imitate behavior of older adolescents and adults
- Increased incidence of depression, experimentation with drug/alcohol use
- Impulsive

Resulting injury risks:

- Car occupant and motorcycle injuries
- Sports injuries
- Bicycle, skateboard, scooters, in-line roller blading injuries
- Drug and alcohol abuse
- Violence related injuries
- Sexual assault and dating violence
- Suicide and suicide gestures

Older persons

- Social isolation
- Depression
- Cognitive impairment (memory/judgement)
- Increased leisure time
- Prescription drug effects/interactions
- Lack of public transportation

Resulting injury risks

- Slips, trips and falls
- Motor vehicle crashes
- Poisonings
- Elder abuse
- Suicide

Ohio Data Sources for Injury Surveillance										
Data Source	Mandatory Submission	Each Record Indicates an Individual	U.S. Standard Classification Code Used*	Electronic Records	Records Span What Years	Restrictions on Access to Records	Fee for Data	State Data Available	Linked to any other Data Set	Sponsoring Organization/ Contact
Fatality Data										
Bureau of Vital Statistics Death Certifs.	Y	Y	Y	Y	1959 - present	N	Y	Y	Y	State Registrar 614-466-9229 dwhouse.odh.ohio.gov/
Census of Fatal Occupational Injuries (CFOI)	Y	Y	Y	Y	1992- present	Y	N	Y	N	Ohio Department of Health (614) 466-4183 www.bls.gov/home.htm
Child Fatality Review (CFR)	Y	Y	Y	Y	2001- present	Y	N	Y	N	Ohio Department of Health/Division of Family & Children Services www.odh.state.oh.us/ODHPrograms/cfr/cfr1.htm
Coroner's Reports	No statewide system exists at this time. Contact local coroner									
Nonfatal Injury Data										
Integrated Traffic Record System (ITRS) - Traffic Crash Records	Y	N Incident based	Y	Y	1982- present	Y	N	Y	N	Ohio Department of Public Safety www.state.oh.us/odps/crash_reports.htm
EMS Incident Reporting System	Y	Y	Y	Y	2002- present	Y	N	Y	N	Ohio Department of Public Safety, Division of EMS 1-800-233-0785 www.ohiopublicsafety.com
Ohio Trauma Registry	Y	Y	Y	Y	2000- present	Y	N	Y	N	Ohio Department of Public Safety, Division of EMS 1-800-233-0785 www.ohiopublicsafety.com
Farm Fatality and Injury Database of Ohio (FFIDO)	N	Y	N	Y	1955- present	Y	N	Y	N	The Ohio State University

*Based on national standard coding formats for that type of data.

Ohio Data Sources for Injury Surveillance										
Data Source	Mandatory Submission	Each Record Indicates an Individual	U.S. Standard Classification Code Used*	Electronic Records	Records Span What Years	Restrictions on Access to Records	Fee for Data	State Data Available	Linked to any other Data Set	Sponsoring Organization/ Contact
Child Care Incident/Injury Report Database	Y	Y	N	Y	July 2003-present	Y	N	Y	N	Ohio Department of Job & Family Services – Child Care Licensing Section
Poison Center Data	No statewide system exists at this time – Contact the Central Ohio Poison Center at Columbus Children's Hospital (614.722.2643), the Cincinnati Drug and Poison Information Center at the Children's Hospital Medical Center of Cincinnati (http://www.cincinnatichildrens.org/svc/prog/dpic/statistics.htm) and the Greater Cleveland Poison Control Center for Ohio data.									
Emergency Department Data	No statewide system exists at this time									
School Injury Data	No statewide system exists at this time									
Cost Data										
Hospital Discharge Data	N	Y	Y	Y	1990-present	Y	Y	Y	N	Ohio Hospital Association www.ohanet.org/
Medicaid Data	Y	Y	Y	Y	1997–present	Y	Y	Y	N	Ohio Department of Job and Family Services
Bureau of Workers Compensation Injury Claims Data	Y	Y	Y	Y	1993-present	Y	N	Y	N	Ohio Bureau of Worker's Compensation www.ohiobwc.com/
Investigation/Criminal Records										
Adult Protective Services	No statewide system exists at this time. Records are maintained at the county Job and Family Services agencies for a minimum of 3 years.									
Child Protective Services Central Registry	Y	Y	N	Y	1966-present	Y	N	Y	N	Ohio Department of Job and Family Services

*Based on national standard coding formats for that type of data.

Ohio Data Sources for Injury Surveillance										
Data Source	Mandatory Submission	Each Record Indicates an Individual	U.S. Standard Classification Code Used*	Electronic Records	Records Span What Years	Restrictions on Access to Records	Fee for Data	State Data Available	Linked to any other Data Set	Sponsoring Organization/ Contact
Ohio Incident Based Reporting System (Crime Statistics)	N	N Incident Based	Y	Y	1999 - present	Y	Not known at this time	Not statewide	N	Ohio Department of Criminal Justice Services www.oibrs.ohio.gov/
Ohio Fire Incident Reporting System (OFIRS)	Y	N Incident-based	Y	Y	1987-present	N	N	Y	N	Ohio Department of Commerce Divisio of the State Fire Marshal www.com.state.oh.us/sfm/default.htm
Injury Risk Factor Surveillance										
Behavioral Risk Factor Surveillance System (BRFSS)	N/A	Y	Y	Y	Biennial	Y	N	Y	N	Ohio Department of Health/Center for Public Health Data & Statistics (614) 728-9180
Youth Risk Behavioral Surveillance System (YRBSS)	N/A	Y	Y	Y	1993 Biennial	Y	N	Y	N	Ohio Department of Health, Division of Family and Community Health Services; (614) 466-4718
Ohio Annual Observational Seat Belt Survey	N/A	Y	Y	Y	1991-present	Y	N	Y	N	Ohio Department of Public Safety Governor's Highway Safety Office www.state.oh.us/odps/ghso/ghsohome.html

*Based on national standard coding format for that type of data.

Appendix C

National Data Sources for Injury Surveillance					
Data Source	Years Data Collected	Restrictions on Access to Aggregate Data	Fee for Data	State Data Available	Sponsoring Organization/ Contact
WISQARS (Web-based Injury Statistics Query and Reporting System)	1981 – present	N	N	Y	Centers for Disease Control and Prevention www.cdc.gov/ncipc/wisqars/
Fatality Analysis Reporting System (FARS) Traffic-related fatalities	1999-present	Not for law Others by request	N	Y	National Highway Traffic Safety Administration www.nhtsa.dot.gov/people/nscsa/fars.html
National Occupant Protection Use Survey (NOPUS)	1994-present	N	N	N	National Highway Traffic Safety Administration www-nrd.nhtsa.dot.gov/departments/nrd-30/nscsa/
National Electronic Injury Surveillance System (NEISS)	1979-present	N	N	N	Consumer Product Safety Commission www.cpsc.gov/library/neiss.html
National Hospital Discharge Survey	1990, 1994-1998	N	N	N	Centers for Disease Control and Prevention – National Center for Health Statistics www.cdc.gov/nchs/about/major/hdasd/nhds.htm
National Ambulatory Medical Care Survey	1990-2000	N	N	N	Centers for Disease Control and Prevention – National Center for Health Statistics www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm
National Hospital Ambulatory Medical Care Survey	1992-2000	N	N	N	Centers for Disease Control and Prevention – National Center for Health Statistics www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm
Healthcare Cost and Utilization Project (HCUP)	1988-2001	N	N	N	Agency for Healthcare Research and Quality www.ahrq.gov/data/hcup/
National Incident Based Reporting System (NIBRS) (Crime data)	1997-present	N	N	N	U.S. Department of Justice Bureau of Justice Statistics www.ojp.usdoj.gov/bjs/nibrs.htm
National Child Abuse and Neglect Data System (NCANDS)	1995-present	N	N	Y	U.S. Department of Health and Human Services Administration for Children and Families www.calib.com/nccanch/pubs/factsheets/ncands.cfm
National Data Archive on Child Abuse and Neglect	Varies by dataset	Y	Y	Y	Family Life Development Center, Cornell University www.ndacan.cornell.edu/index.html

National Data Sources for Injury Surveillance					
Data Source	Years Data Collected	Restrictions on Access to Aggregate Data	Fee for Data	State Data Available	Sponsoring Organization/ Contact
National Crime Victimization Survey	1973-present	N	N	N	Bureau of Justice Statistics www.ojp.usdoj.gov/bjs/welcome.html
National Archive of Criminal Justice Data	Varies by database	N	N	Y	www.icpsr.umich.edu/NACJD/index.html
National Fire Incident Reporting System	1974 - present	N	N	Y	U.S. Fire Administration www.nfirs.fema.gov/
Toxic Exposure Surveillance System (TESS)	1983-present	N	N	N	American Association of Poison Control Centers www.aapcc.org/poison1.htm
The National EMS Information System	Not presently collecting data	N/A	N/A	N/A	www.nemsis.org/
The National Pediatric Trauma Registry	No longer collecting data	N	N	N	www.nptr.org/

Appendix D

Section 5 of Amended Substitute House Bill 138 as enacted by the 123rd General Assembly, November 2000

The Director of Health shall organize and coordinate a temporary commission to determine how to better prevent traumatic injuries in this state. The commission's study shall include, without limitation, consideration of how to improve public safety education and how to prevent pediatric and geriatric injuries.

The Department of Public Safety, Department of Natural Resources, Department of Agriculture, Department of Education, Commission on Minority Health and Bureau of Workers' Compensation shall participate in and assist with the commission's study.

Within 120 days after the effective date of this act, the director shall appoint to the commission appropriate public health authorities, entities that conduct safety research and education, and advocates for injured persons. Commission members shall have expertise in injury prevention, broadly represent relevant disciplines, and represent all regions of the state.

Within 120 days after the effective date of this act, the Speaker of the House of Representatives shall appoint to the commission one member of the majority party and one member of the minority party in the House of Representatives and the President of the Senate shall appoint to the commission one member of the majority party and one member of the minority party in the Senate.

In conducting its study and developing its recommendations, the commission shall consult and cooperate with the Trauma Committee of the State Board of Emergency Medical Services. The commission shall conclude its study and disband not later than three years after the effective date of this section, whereupon the director shall transmit the commission's findings and recommendations to the Governor, General Assembly, chief executive of each state agency specified in this section, and other appropriate persons.

Appendix E: From Healthy People 2010, United States

Total Population, 1997	Injury-Related Hospital Emergency Department Visits
	Rate per 1,000
TOTAL	131
Race and ethnicity	
American Indian or Alaska Native	DSU
Asian or Pacific Islander	DSU
Asian	DSU
Native Hawaiian and other Pacific Islander	DSU
Black or African American	182
White	127
Hispanic or Latino	DSU
Not Hispanic or Latino	DSU
Black or African American	DSU
White	DSU
Gender	
Female	116
Male	146
Education level	
Less than high school	DNC
High school graduate	DNC
At least some college	DNC

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.
Note: Age adjusted to the year 2000 standard population.

Total Population, 1998	Unintentional Injury Deaths
	Rate per 100,000
TOTAL	35.0
Race and ethnicity	
American Indian or Alaska Native	59.9
Asian or Pacific Islander	17.6
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	39.5
White	34.8
Hispanic or Latino	30.2
Cuban	22.5
Mexican	32.1
Puerto Rican	28.8
Not Hispanic or Latino	35.1
Black or African American	40.7
White	34.6
Gender	
Female	22.1
Male	49.4
Education level (aged 25 to 64 years)	
Less than high school	54.5
High school graduate	41.5
At least some college	17.4
Select populations	
American Indian or Alaska Native males	83.6
Black or African American males	60.8
Hispanic males	46.2
White males	48.7

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.
Note: Age adjusted to the year 2000 standard population.

References:

- American Fact Finder, U.S. Census Bureau, Census 2000.
- An Assessment of the Ohio Injury Prevention Program*, March 2001, State and Territorial Injury Prevention Directors Association.
- Children's Safety Network National Injury Data Technical Assistance Center & Children's Safety Network Economics and Insurance Resource Center, *1993-97 Multiple Causes of Death File CD-Rom Series*, prepared by NCHS, Division of Vital Statistics and Division of Data Services.
- Colorado Injury Prevention Strategic Plan: 2003-2008*. Denver, CO: Colorado State Emergency Medical and Trauma Services Advisory Council: 2003.
- Fatal Analysis Reporting System (FARS) Web-Based Encyclopedia, National Center for Statistics and Analysis, National Highway Traffic Safety Administration, 2002.
- Guide to Community Preventive Services: Systematic Reviews and Evidence Based Recommendations*, Centers for Disease Control.
- Healthy People 2010, Centers for Disease Control and Prevention.
- Injury Fact Book 2001-2002*, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2001.
- National SAFE KIDS Campaign (NSKC). *Childhood Injury Fact Sheet*. Washington (DC): NSKC, 2003.
- Report of the Ohio Post-Critical Trauma Care Commission*, October 2003.
- Results from the *Ohio Youth Risk Behavior Survey*, 1999.
- Ohio Department of Health, Information Warehouse, 2003.
- Ohio Medicaid Spending, Ohio Department of Job and Family Services
- Safe States: Five Components of a Model State Injury Prevention Program and Three Phases of Program Development*. Atlanta, GA., State and Territorial Injury Prevention Directors Association, 1997.
- Systematic Reviews of Childhood Injury Prevention Interventions*, Harborview Injury Prevention and Research Center, University of Washington (<http://depts.washington.edu/hiprc/childinjury/index.htm>)
- Vermont Injury Prevention Plan 2001.
- Web-Based Injury Statistics Query and Reporting System (WISQARS), *Fatal and Non-fatal Injury Reports*, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

November 2003



Report of the

Post-critical trauma care commission



TABLE OF CONTENTS

Executive summary	5
Introduction and background	9
A Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio	19
Rehabilitation Service Locator	29
A statewide system of resource facilitation	33
Meeting the educational needs of children who have had traumatic injuries	41
Substance abuse and traumatic injury	49
The Ohio Trauma Follow-up Registry	55
Appendices	60

*“Trauma care
is a continuum
that stretches from
injury prevention
to work force –
school re-entry.”*

Joseph W. Luria, M.D.,
*Chair, State Trauma
Committee
Cincinnati Children’s
Department of Pediatrics*



EXECUTIVE SUMMARY

The Centers for Disease Control and Prevention (CDC) reported that, in 1999, 150,000 Americans died from injuries, and one in 10 survived an injury serious enough to require at least an emergency room visit (CDC Injury Research Agenda, 2002). Injuries are the leading cause of death for people ages 1 to 44. Of all hospital stays, 8 percent are due to injuries. Traumatic brain injury, spinal cord injury and burns tend to result in more serious and long-term consequences. It is estimated 5.3 million Americans have long-term disabilities from traumatic brain injury, with 80,000 new cases added each year. Another 200,000 Americans have disabilities due to traumatic spinal cord injury, with 11,000 new cases annually. Beyond limitations on movement and thinking, persons who survive traumatic injuries often experience post-traumatic stress disorder, depression, substance abuse, and problems at school, work or family.

According to data reported to the Ohio Trauma Registry, in the four-year period between Jan. 1, 1999, and Dec. 31, 2002, 78,200 Ohio citizens survived traumatic injuries severe enough to require at least two days of hospitalization or transfer to a trauma center. Falls and motor vehicle crashes accounted for two-thirds of these injuries. Traumatic brain injury and spinal cord injury resulted in the most severe injuries. Of these two types of injuries, 78 percent were due to falls and vehicular crashes.

Legislative authority and commission membership

Recognizing the importance of addressing this public health concern for the well-being of Ohio citizens, the Ohio General Assembly enacted House Bill (H.B.) 138 November 2000, creating the Post-critical Trauma Care Commission. H.B. 138 required the director of health organize and coordinate a temporary commission “to determine how to improve the accessibility, affordability, quality, and cost effectiveness of post-critical adult and pediatric trauma care.” The commission was required to complete its work by Nov. 3, 2003.

H.B. 138 also delineated a variety of participants for the commission and required the director of health appoint representation from those organizations and entities identified in the legislation. The enabling legislation established that “[C]ommission members shall have expertise in rehabilitation and retraining of injury victims, broadly represent relevant disciplines, and represent all regions of the state.” H.B. 138 required mandatory members, including representatives from the majority and minority parties of both houses of the Ohio General Assembly and certain specified state agencies as follows:

Ohio Bureau of Workers’ Compensation



Ohio Department of Aging



Ohio Department of Health



Ohio Department of Job and Family Services



Ohio Rehabilitation Services Commission



All five of these agencies have indicated their support for this final report. In fulfilling the charge for broad representation among many potential stakeholders, 28 organizations and associations were invited to nominate a primary and alternate representative to the commission. Agencies and organizations subsequently represented and supporting this report were:

Ohio Association of Health Plans	Ohio Farm Bureau Federation
Ohio Business Coalition on Health	Ohio Public Health Association
Ohio Department of Public Safety	Ohio Rehabilitation Association
Ohio Department of Alcohol and Drug Addiction Services	The Salvation Army
Ohio Department of Education	Ohio Legal Rights Service
Ohio Fire Chiefs’ Association	American Physical Therapy Association
Ohio Hospital Association	Association of Ohio Philanthropic Homes, Housing and Services for the Aging
Ohio Nurses Association	Ohio State Chiropractic Association
Ohio Psychological Association	Ohio Association of Professional Fire Fighters
Ohio State Medical Association	Ohio Society of Trauma Nurse Coordinators
Brain Injury Association of Ohio	Ohio Osteopathic Association
Ohio Association of Rehabilitation Facilities	State Trauma Committee
Ohio Children’s Hospitals Association	Central Ohio Trauma System

Findings

The state’s system of delivering trauma services, and its enabling legislation, adequately address first response, transport to a trauma center, and reporting to the Ohio Trauma Registry. The system does not address post-critical trauma care adequately, with little or no attention given to reverse transport, follow-up services, and the roles of non-trauma center hospitals and other post-acute care providers in an overall state system of trauma services. The lack of systematic resources for persons with traumatic injuries increases the occurrence of unmet needs resulting in additional medical complications, loss of productivity, recurring injury, and reduced life satisfaction.

Post-critical trauma care of individuals coping with the consequences of an injury for which they have no preparation presents its own unique and complex set of challenges to patients, caregivers, health-care professionals, educators, and society at large. While the aftermath of a traumatic injury is challenging for many reasons, difficulties this patient population has accessing appropriate services via the existing health and human service systems are paramount.

Transitioning from the hospital or other acute-care setting into work, home, school, and community should be as seamless as possible to meet adequately the individual needs of persons requiring post-critical trauma care. Patient, family and provider access to up-to-date and comprehensive information concerning the array of resources that may be available in a community is key to successful community reintegration. However, in the end, the foundation for successful reintegration of the post-critical trauma care patient consists of access to services of the patient’s choice, mutual respect for the strengths that patients and professionals bring to the reintegration process, early and ongoing consumer and family involvement, and promotion of self-direction and decision making.

Through deliberation, a series of recommendations evolved intended to address selected aspects of identified shortcomings in the current service delivery systems. The following recommendations are detailed in subsequent chapters of this report. Crucial to identifying topics and developing recommendation was the overarching goal of improving the accessibility, affordability, quality, and cost effectiveness of post-critical trauma care.

Recommendation 1: Providers and health-care facilities delivering post-critical care to trauma patients should adopt and comply with a patient bill of rights and responsibilities that recognizes the unique needs of those undergoing rehabilitation and recovery, and contributes to an effective and responsive patient-care program.

Recommendation 2: A rehabilitation service locator should be created and maintained to allow patients, their families, and acute-care providers to identify sources of needed follow-up rehabilitation services and compare salient characteristics of available providers.

Recommendation 3: To address the lifetime needs of Ohio citizens with disability due to injury, a system of resource facilitation should be established that provides access to information and services, increases the capacity for community support, and, as needed, coordinates services for individuals and their families.

Recommendation 4: To ensure the most appropriate educational experience for children who have had traumatic injuries, hospital and school personnel need additional training on issues for educational re-entry; classroom teachers need access to resources about reintegrating these students; and mechanisms are needed to ensure providers, internal and external to the school system, take a coordinated approach. More research is needed on educating students who have incurred traumatic injuries.

Recommendation 5: Organizations and agencies with an interest in minimizing the effects of substance use disorders on injury outcomes should be convened to identify opportunities for improving secondary substance abuse prevention and treatment for persons during and following trauma care.

Recommendation 6: A follow-up registry should be established to provide information about the long-term complications and outcomes for trauma-care patients. Data collection methodology should be an extension of the existing Ohio Trauma Registry and should provide information for local, regional and statewide prevention programming and health-care service planning.

Recommendation 7: Within the broader framework of responsibility for injury and trauma, leadership concerning longer-term issues and needs following traumatic injury should have a single, identifiable, and permanent location within Ohio’s state government.



“The findings and recommendations presented in the Commission’s comprehensive and thoroughly researched report are sobering, yet hopeful.”

Tom Hayes
Director,
Ohio Department of Job
& Family Services

INTRODUCTION AND BACKGROUND

The Centers for Disease Control and Prevention (CDC) reported that, in 1999, 150,000 Americans died from injuries, and one in 10 survived an injury serious enough to require at least an emergency room visit (CDC Injury Research Agenda, 2002. See Injury Fact Sheet in appendix A). Injuries are the leading cause of death from in people ages 1 to 44. Of all hospital stays, 8 percent are due to injuries. It is estimated that 5.3 million Americans have long-term disabilities from traumatic brain injury, with 80,000 new cases added each year. Another 200,000 Americans have disabilities due to traumatic spinal cord injury, with 11,000 new cases annually. Injuries to limbs, the back, and eyes, as well as burn injuries, also are causes of disability. Beyond limitations on movement and thinking, persons who survive traumatic injuries often experience post-traumatic stress disorder, depression, substance abuse, and problems in school, work or family.

Trauma or traumatic injury means severe damage to or destruction of tissue that creates a significant risk of loss of life; loss of a limb; significant, permanent disfigurement; significant, permanent disability; and is caused by blunt or penetrating injury; exposure to electromagnetic, chemical, or radioactive energy; drowning, suffocation, or strangulation; a deficit or excess of heat. (O.R.C. 4765.01(N))

Trauma care means the assessment, diagnosis, transportation, treatment, or rehabilitation of a trauma patient by emergency medical personnel or by appropriately credentialed health-care professionals within the prescribed scope of practice.

Trauma center is any hospital verified by the American College of Surgeons.

Pediatric patient is a patient younger than 16 years of age.

Adult or geriatric patient is a patient who is not a pediatric patient.

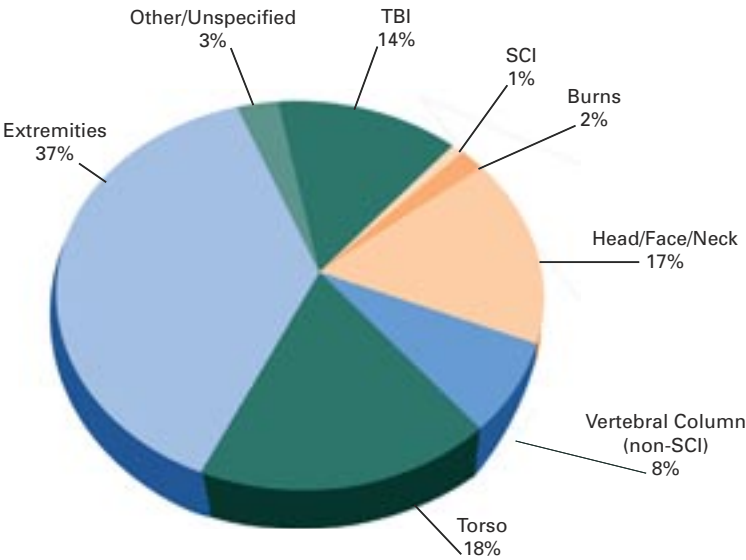
Post-critical trauma care refers to recognizing the needs of trauma patients requiring or undergoing rehabilitation and recovery care or services following release or transfer from a trauma center.

Over the past four years Ohio hospitals participating in the Ohio Trauma Registry reported that 78,205 patients survived traumatic injuries and were discharged from the hospital (see Figure 1). One in five patients had traumatic brain injury, spinal cord injury, or burns as their primary injury.

Injury patterns

N=78,205 (survivors)
January 1999 – December 2002

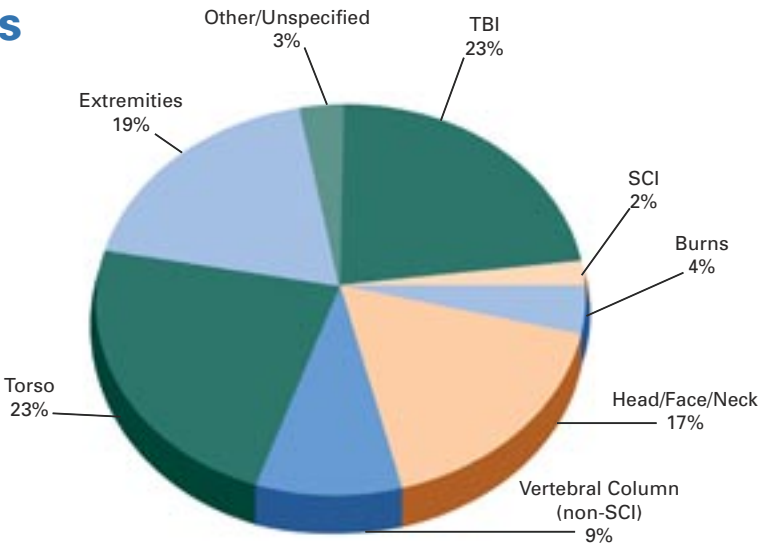
Injury Patterns based upon ICD-9-CM Diagnosis Code groups utilized in the Barell Matrix. Inj Prev 2002;8:91-6



This graph depicts trauma patients whose length of stay in the intensive care unit was three or more days. Although there are many factors that affect a patient’s length of stay in the intensive care unit, a higher severity of injury is one main reason. Thirty percent of these patients suffered traumatic brain injury, spinal cord injury or burns.

Injury patterns
Length of stay in the ICU ≥ 3 days

Injury patterns based upon ICD-9-CM Diagnosis Code groups utilized in the Barell Matrix. Inj Prev 2002;8:91-6

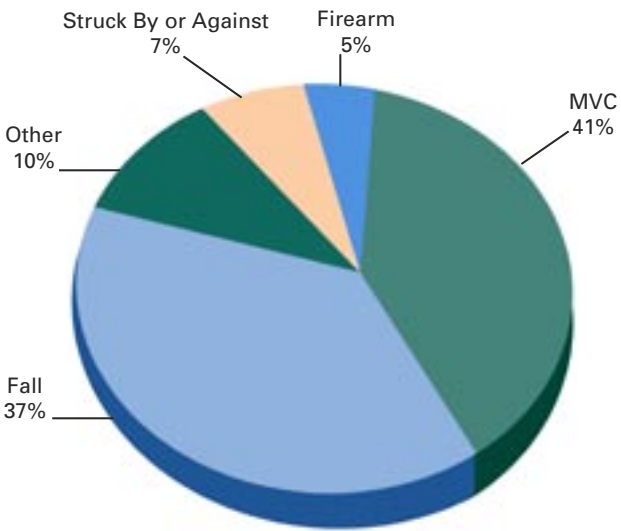


This graph shows the top five causes or mechanisms of injury that produced a primary injury to the spinal cord, severe enough to be reported to the Ohio Trauma Registry. Motor vehicle crashes, (including pedestrians and pedal cyclists) and falls account for more than 75 percent of all spinal cord injuries.

Top five causes of Spinal Cord Injury (SCI)

N=1,250 (survivors)
01/01/99 - 12/31/02

Cause of injury based upon ICD-9-CM External Cause of Injury Codes
MMWR 1997;46(RR-14)

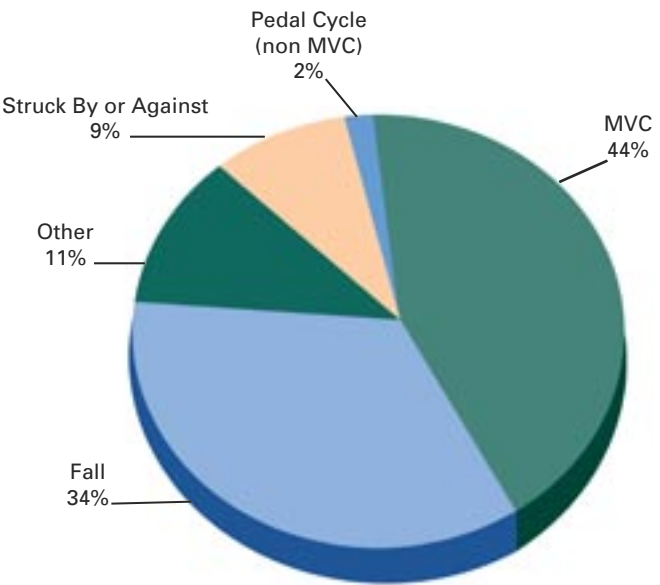


This graph describes the top five causes or mechanisms of injury that produced a primary traumatic brain injury, severe enough to be reported to the Ohio Trauma Registry. Motor vehicle crashes, (including pedestrians and pedal cyclists) are the leading cause, followed closely by falls. Together they account for 78% of all traumatic brain injuries.

Top five causes of Traumatic Brain Injury (TBI)

N=18,731 (survivors)
01/01/99 - 12/31/02

Cause of injury based upon ICD-9-CM External Cause of Injury Codes
MMWR 1997;46(RR-14)



Commission authority

Recognizing the importance of addressing this public health concern for the well-being of Ohio citizens, in November 2000 the Ohio General Assembly enacted H.B. 138, creating the Post-critical Trauma Care Commission. (The full text of section 6 of Amended Substitute H.B. 138 as enacted by the 123rd General Assembly is included in appendix B.) H.B. 138 required the director of health organize and coordinate a temporary commission “to determine how to improve the accessibility, affordability, quality, and cost effectiveness of post-critical adult and pediatric trauma care.” The commission was required to complete its work by Nov. 3, 2003.

Appointments to the commission began March 2001, and the inaugural meeting was held July 2001, at the Ohio Department of Health. John D. Corrigan, Ph.D., from the department of physical medicine and rehabilitation at The Ohio State University, was appointed as commission chair and Cynthia Iske, M.S. O.T.R./L., from Children’s Hospital of Columbus was appointed as commission vice chair.

Guiding principles

Although in some contexts, post-critical trauma care is considered one component of the broader concept of trauma care, this report distinguishes it as a discipline with standards of care, treatment, and follow-up tailored to specific medical, social, psychological, and educational needs resulting from a traumatic incident that occurs post-injury and has potential lifetime consequences.

Post-critical trauma care of individuals coping with the aftermath of an injury for which they have no preparation presents its own unique and complex set of challenges to patients, caregivers, health-care professionals, educators, and society at large.

Post-critical trauma care is challenging for many reasons, chief among them is that it is often difficult for this patient population with diverse needs to fit easily into existing service systems.

The foundation for successful reintegration of the post-critical trauma-care patient into the home and community consists of access to services of the patient’s choice, mutual respect for the strengths patients and professionals bring to the reintegration process, early and ongoing consumer and family involvement, and promotion of self-direction and decision making.

Patient and provider access to up-to-date and comprehensive information concerning the broad array of post-critical trauma care resources available in a community is key to successful rehabilitation.

Transitioning from the hospital or other acute care setting into work, home, school, and community living should be as seamless as possible to meet adequately the specialized needs of the post-critical trauma-care individual.

Commission recommendations

The state’s system of delivering trauma services, and its enabling legislation, adequately addresses traumatic injury from first response, transport to a trauma center, and reporting to the Ohio Trauma Registry. The system does not address post-critical trauma care adequately, with little or no attention given to reverse transport, follow-up services, and the roles of non-trauma center hospitals and other post-acute care providers in an overall state system of trauma services. The lack of systematic resources for persons with traumatic injuries increases the occurrence of unmet needs. This results in additional medical complications, loss of productivity, recurring injuries, and reduced life satisfaction. Addressing these recognized shortfalls guided the commission in its work.

Through deliberation, a series of recommendations evolved intended to address identified shortcomings. These recommendations are detailed in subsequent chapters of this report. Crucial to identifying topics and developing recommendations was the overarching goal of improving the accessibility, affordability, quality, and cost-effectiveness of post-critical trauma care. Chapters in this report describe the following recommendations:

Patient bill of rights and responsibilities

Providers and health-care facilities delivering post-critical care to trauma patients should adopt and comply with a Patient Bill of Rights and Responsibilities that recognizes the unique needs of those undergoing rehabilitation and recovery, and contributes to an effective and responsive patient care program.

Rehabilitation service locator

A rehabilitation service locator should be created and maintained to allow patients, their families, and acute care providers to identify sources of needed follow-up rehabilitation services and compare salient characteristics of available providers.

Statewide system of resource facilitation

To address the lifetime needs of Ohio citizens with disability due to injury, a system of resource facilitation should be established that provides access to information and services, increases the capacity for community support, and, as needed, coordinates services for individuals and their families.

Meeting educational needs of children who have had traumatic injuries

To ensure the most appropriate educational experience for children who have had traumatic injuries, hospital and school personnel need additional training on issues for educational re-entry; classroom teachers need access to resources about reintegrating these students; and mechanisms are needed to ensure all providers, internal and external to the school system, take a coordinated approach. More research is needed on educating students who have incurred traumatic injuries.

Substance use and traumatic injury

Organizations and agencies with an interest in minimizing the effects of substance use disorders on injury outcomes should be convened to identify opportunities for improving secondary prevention of substance abuse and treatment for persons during and following trauma care.

Ohio trauma follow-up registry

A follow-up registry should be established to provide information about the long-term complications and outcomes for trauma care patients. Data collection methodology should be an extension of the existing Ohio Trauma Registry and should provide information for local, regional and statewide prevention programming and health-care service planning.

On-going responsibility for post-critical trauma care issues

The commission made a final recommendation pertaining to the continued attention that will be required to pursue these recommendations. While many agencies and organizations should be involved in implementation of the above recommendations, there is a need for a single focus of oversight and leadership related to the issues the commission raised, as well as other challenges affecting individuals after their initial care. Specifically, the commission recommends that, in the process of identifying the locus of leadership and responsibilities in Ohio government for issues of injury and trauma, leadership for concerns about the needs and services following critical care should have a single, identifiable location within the resulting structure.

Commission process

Recommendations toward improvement of post-critical trauma care would have to first determine where post-critical care begins. It would require identification of appropriate stakeholders, the needs of the patient and the systems of care, as well as the processes by which accessibility, affordability, cost-effectiveness and quality of care and services can be ensured.

Five areas of study or concentration were set forth for the commission in the legislation:

- Transfer of trauma patients from regional trauma centers to other facilities;
- Physical, psychological, and vocational rehabilitation of trauma patients;
- Reemployment of trauma patients;
- Social support mechanisms for families of trauma patients;
- Mitigation of the effects of pediatric and geriatric trauma.

In its inaugural meeting, the commission determined that, before a comprehensive work plan could be developed, certain questions would need to be addressed and answered to the extent possible. These were initially identified as:

- Determining what quantitative data was available and accessible to the commission;
- Assessing where the current system in Ohio is in the delivery of post-critical trauma care;
- Identifying where the needs for improvement exist;
- Identifying where the current system is succeeding and in turn failing;
- Determining to the extent possible what direction the trauma system needs to take in the future to ensure improvement in the accessibility, affordability, cost-effectiveness, and quality of post-critical trauma care.

Data needs initially identified to address these questions included:

- The number of patients entering rehabilitation and other post-acute care as a result of traumatic injury. The existing state trauma registry was suggested as a source for some of this data;
- Review models from other states that have undertaken to quantify post-critical trauma care needs;
- Accounting of rehabilitation and post-acute care options currently available statewide;
- Data on traumatic injury recovery, rehabilitation, and costs to Medicaid and workers’ compensation.

While considerable effort was made to identify sources of this information, one of the commision’s first conclusions was objective data about the eventual consequences of trauma were not available in Ohio or nationally.

In January 2002, it was decided the most advantageous use of the level of expertise and experience on the commission, plus the means to ensure concentrated efforts would be to divide the commission into three committees:

- Medical rehabilitation – Priorities categorized into four basic issues: geographic availability; insurance and coverage; service matching; and patient tracking. By looking at these issues, this committee hoped to be able to recommend a methodology wherein referring hospitals and other initial treating facilities had a better means of matching patient acuity and service needs with service provision.
- Disability – Directed attention to the issues of re-entry into the workforce or education system; examined resources for social support; and inquiry into the impact of age and family on long-term rehabilitation.

- Data and follow-up registry – Provided objective information on which to base public and private policy decisions about post-critical trauma care. The committee recommended a system that allows research on the nature and scope of consequences of trauma, and provides an informed basis for meeting the needs of those injured.

After meeting in committees for 15 months, the commission systematically reviewed, evaluated and revised specific recommendations brought forth by the three committees. Five areas of recommendations emerged, and in the course of deliberations two additional focus areas were identified: substance abuse and on-going responsibility for post-critical trauma care issues. Committees and the commission as a whole engaged in monthly, iterative discussions of the recommendations, their rationale, and suggestions for implementation. This work concluded at the end of June 2003, when the commission reached consensus on the content of its final report.

From July 2003, through the conclusion of the commission’s work, efforts focused on disseminating the report and recommendations. Special emphasis was given to gaining support for the final report from sponsoring agencies and organizations, as well as the means by which the commission’s findings would be shared with the Governor and the Ohio General Assembly.

Benchmarks

November 2000	Substitute H.B. 138 effective date.
February 2001	Ohio Department of Health (ODH) staff directed to organize and provide administrative support to the Post-critical Trauma Care Commission.
March 2001	State agencies, organizations, and professional associations invited to nominate representatives to the commission.
April 2001	Letters of appointment sent to selected representatives.
July 2001	Ohio Commission on Dispute Resolution and Conflict Management Inaugural meeting held at ODH.
August 2001, to May 2002	Monthly commission meetings.
May 2002	Committees’ preliminary recommendations presented to full commission.
January 2003	First draft of final report presented to full commission.
February to June 2003	Bi-monthly commission meetings to review, evaluate and revise committee recommendations, rationale and suggestions for implementation.
June 2003	Commission approved revised final report for distribution to sponsoring organization and agencies.
September 2003	Letters supporting the final report were received from numerous agencies and organizations.
November 2003	Final report was presented to the Governor and the Ohio General Assembly.

Membership and collaboration

H.B. 138 delineated a variety of participants for the commission and required the director of health appoint representation from organizations and entities identified in the legislation. H.B. 138 established that “[C]ommission members shall have expertise in rehabilitation and retraining of injury victims, broadly represent relevant disciplines, and represent all regions of the state.” Throughout its deliberations and study, the commission relied on the expertise, experience, and affiliations of its membership not only for first-hand contributions to the process, but to provide external contributory sources as well. Therefore, the commission’s final work product, which follows in subsequent parts of this report, reflects a compilation of data and information from multiple sources provided through the good offices of commission representatives and their supporting organizations.

Mandatory members required by the legislation included representatives from the majority and minority parties of both houses of the General Assembly and certain specified state agencies as follows:

- Ohio Bureau of Workers’ Compensation
- Ohio Department of Aging
- Ohio Department of Health
- Ohio Department of Job & Family Services
- Ohio Rehabilitation Services Commission

In fulfilling the charge for non-state agency representation, department of health staff developed a listing of 54 possible sources for commission membership. From this original listing, 28 organizations and associations were invited to nominate a primary and alternate representative to the commission. Agencies and organizations represented by members and endorsing this report are:

- | | |
|--|---|
| Brain Injury Association of Ohio | Ohio Farm Bureau Federation |
| Ohio Association of Health Plans | Ohio Public Health Association |
| Ohio Business Coalition on Health | Ohio Rehabilitation Association |
| Ohio Children’s Hospitals Association | The Salvation Army |
| Ohio Department of Public Safety | Ohio Legal Rights Service |
| Ohio Department of Alcohol and Drug Addiction Services | American Physical Therapy Association |
| Ohio Department of Education | Association of Ohio Philanthropic Homes, Housing and Services for the Aging |
| Ohio Fire Chiefs Association | Ohio State Chiropractic Association |
| Ohio Hospital Association | Ohio Association of Professional Fire Fighters |
| Ohio Nurses Association | Ohio Society of Trauma Nurse Coordinators |
| Ohio Psychological Association | Ohio Osteopathic Association |
| Ohio State Medical Association | State Trauma Committee |
| Ohio Association of Rehabilitation Facilities | Central Ohio Trauma System |

Over the course of the commission’s work the original membership altered somewhat due to personal and agency/organizational commitments. The final membership roster by name is included in appendix C of this report.

Acknowledgements

The chair, vice chair and members of the Post-critical Trauma Care Commission wish to also acknowledge the support received from the following sources over the course of its deliberations:

- Roy Croy, Ohio Department of Health, Bureau of Community Health Care Facilities and Services for his steady hand and sage advice.
- Linda Vojtush, executive secretary, Ohio Department of Health, Bureau of Community Health Care Facilities and Services for her tireless administrative support in scheduling and setting up meetings, and in recording, preparing, and distributing commission meeting minutes in an always reliable and timely manner.
- Virginia Haller, M.D., Ohio Department of Health, for her keen interest in the commission’s work and valuable insights into injury prevention and Ohio’s activities in that field.
- Margaret Lewis, Fred Bartenstein, and Ed Krauss of the Ohio Commission on Dispute Resolution and Conflict Management for their facilitation in the early stages of commission meetings. The advice, assistance, and expertise provided by these professional facilitators contributed immeasurably to start up, organization, and work planning for the commission’s later endeavors.
- Judy Roush, commission member and her parent organization, the Ohio Farm Bureau, for providing excellent accommodations for the commission’s meetings.
- The Ohio Bureau of Workers’ Compensation for their invaluable assistance in preparing this final report.



"Many of the issues of the Commission studied are relevant to workplace traumas and the injured worker population served by the Ohio Bureau of Workers' Compensation."

James Conrad
Administrator/CEO,
Ohio Bureau of
Workers' Compensation

A MODEL PATIENT BILL OF RIGHTS AND RESPONSIBILITIES FOR TRAUMA PATIENTS RECEIVING POST-CRITICAL TRAUMA CARE IN OHIO

Recommendation: Providers and health-care facilities delivering post-critical care to trauma patients should adopt and comply with a patient bill of rights and responsibilities that recognizes the unique needs of those undergoing rehabilitation and recovery, and contributes to an effective and responsive patient care program.

Vision

Philosophies and guiding principles for treating trauma patients, and the treatments themselves, should reflect not only medically and technologically advanced practices, but also will reflect the highest regard for the uniqueness of the patient, the sanctity of the caregiver-patient relationship, and an awareness that the likelihood of successful rehabilitation increases when patients, families, and caregivers demonstrate respect, cooperation, dignity, and responsibility.

Description of the problem

Richard J. Mullins wrote in an article published in 1999, "Many authors have identified the publication of *Accidental Death and Disability: The Neglected Disease of Modern Society* in 1966...as the inaugural event in what was to become a sustained effort sponsored by government to control 'accidental injury' as a health problem...In this publication, strong government leadership was proposed as essential in the effort to solve the 'neglected epidemic' of death and disability from injury. The authors detailed the problem's enormous magnitude: the tragedy of early death among the young, the burden of disability, and costs of billions of dollars. The authors emphasized that the scope of the problem was all the more alarming when contrasted with the public's apathetic attitude toward trauma care." (1)

Recognizing the still significant relevance of that milestone white paper, as well as the evolution of medicine and public health in this arena, this chapter puts forth recommendations meant to inform public policy and public awareness, and most importantly, empower trauma patients as they move through the process of healing and regaining their independence.

The continuum of care required by trauma patients is a broad spectrum that will, in most cases, expose these individuals to medical care and social support systems that are, to varying degrees, coordinated, provided by qualified health professionals, and responsive to each patient's specialized needs. Across this continuum of care, from triage to rehabilitation, trauma patients encounter a host of often challenging and stressful experiences, as well as the need to make decisions for which they usually have no preparation or prior experience. As a result, the importance of the caregiver-patient relationship becomes a touchstone for trauma patients' successful rehabilitation.



In his article, “Gift From Within,” Frank M. Ochberg, M.D., refers to a principle of individuality that states, “Every individual has a unique pathway to recovery after traumatic stress.” (2) Although Dr. Ochberg refers to the emotional impact of traumatic stress (emotional disorder vs. physical injury) resulting from events such as violence, abuse, crime, or other environmental stress, his principle translates in its entirety to individuals coping with the aftermath of traumatic injury. While it is difficult to experience medical diagnosis and treatment in the acute care setting, the needs of trauma patients become even more unique as they attempt to rehabilitate and integrate themselves back into a society more equipped and comfortable in accommodating its most healthy and productive members. Learning to drive, coping with disfigurement, re-entering the work force, dealing with depression, and a host of other challenges that face the trauma patient require special attention and a commitment on the part of professionals and support persons to recognize that

their patient, family member, or friend has unique needs, personal preferences, and a pathway to recovery not exactly like any other. It is within this context that concern for patients’ rights needs to be considered and that caregivers assume responsibility for informing and explaining these rights to patients and their families.

In *American Independence and the Right to Emergency Care*, Robert Baker, Ph.D., observes that, “Asserting a right is a powerful statement in the American political rhetoric. In this country, medicine has recognized patients’ rights for over 150 years. As early as 1886 there was a proposal to ‘draw up...a Bill of Rights which shall secure patients from any injustice from the votaries of science.’” (3)

The American Hospital Association (AHA) first adopted a patient bill of rights in 1973. Subsequently, on Oct. 21, 1992, the AHA Board of Trustees approved a revised version of its original bill of rights. The AHA developed these rights with the expectations that hospitals and health-care institutions would support these rights in the interest of delivering effective patient care. A random review across an array of health-care providers and advocacy organizations reveals many such institutions and providers have developed patient bills of rights that incorporate the principles reflected in the AHA model, which is a practice the AHA promotes and supports. In its introduction, the AHA Patient’s Bill of Rights states that, “The American Hospital Association encourages health care institutions to tailor this bill of rights to their patient community by translating and/or simplifying the language of this bill of rights as may be necessary to ensure that patients and their families understand their rights and responsibilities.” (4)

Proposed strategies

Goal

Caregivers and the facilities within which they treat and minister to trauma patients undergoing rehabilitation and recovery will adopt, formally through written and visible public displays, as well as informally, through their personal norms and approaches to care, a code of rights and responsibilities that contributes to and creates a nurturing, respectful, and outcome-based environment.

Principles

- The Model Patient Bill of Rights and Responsibilities will augment, and not supplant, existing and similar bills of rights already in use in facilities that provide post-critical trauma care;
- The Model Patient Bill of Rights and Responsibilities incorporates rights and responsibilities specific to patients who are experiencing challenges unique to post-critical trauma care and are undergoing rehabilitation and recovery related to their trauma;
- The Model Patient Bill of Rights and Responsibilities recognizes that adults and children have unique sets of challenges and may require standards of care, treatments, and follow-up tailored not only to their specific medical and trauma-related circumstances, but also to their unique age and stage-of-life-based needs;
- The Model Patient Bill of Rights and Responsibilities is only one of many tools contributing to the creation and maintenance of a culture that reflects an ingrained and inherent respect for the uniqueness of the individual and an environment where caregivers and families feel safe interacting collegially to enhance the physical, emotional, and spiritual healing of the trauma patient.

Keeping in mind Dr. Ochberg’s “unique pathway to recovery,” the Post-critical Trauma Care Commission’s Medical Rehabilitation Committee reviewed a number of existing patient bills of rights used by a variety of health-care institutions and facilities. The committee particularly searched for patient bills of rights drafted for post-acute patients with complex and varied needs and more specifically, for those addressing post-critical trauma patient needs. Although the review did not employ formal research methodologies, it did reveal that the use of general patient bills of rights is widespread in the health-care profession, particularly in hospitals. Patient bills of rights specific to the needs of trauma patients were not found readily.

The commission decided developing a Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio would be a valuable contribution to ensuring this vulnerable population receives the highest quality care in settings that respect the rights and roles of patients, families, and caregivers. To that end, the commission recommends that the Model Bill of Rights and Responsibilities contained herein be adopted as a model for use by institutions and facilities that provide post acute and/or rehabilitative treatment or care, as well as those that provide social services that support such care, to trauma patients in Ohio.

The following is the *Post-critical Trauma Care Commission’s Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio*. The end of the chapter includes a list of patient bills of rights that were reviewed as part of the research and drafting process.



Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio

The Post-critical Trauma Care Commission, as authorized by H. B. 138 of the 123rd General Assembly, recommends providers and health-care facilities administering post-critical care to trauma patients in Ohio adopt and comply with a patient bill of rights and responsibilities that recognizes the unique needs of individuals undergoing rehabilitation and recovery, and contributes to an effective and responsive patient-care program. Further, the commission recommends facilities adopt the following model patient bill of rights and responsibilities or one that reflects its precepts and principles.

Patient rights

This facility's post-critical trauma care patients, including adults, children, and parents or guardians of children who are patients, have the following rights:

1. Patients have the right to receive appropriate, individualized care and treatment, and to:

- Up-to-date, comprehensive information about their condition, including appropriate care and treatment options, and to have that information explained in terms they are able to understand;
- Participate as an equal partner of the health team in all decisions concerning their care, including the right to accept, refuse, modify, or discontinue treatment;
- Be advised of the risks of any treatment, procedure, or therapy and the right to be informed of the possible medical consequences of accepting or refusing a course of action;
- Be informed of clinical trials, experimental treatments, or unproven research protocols that may be available for their treatment or rehabilitation, as well as the right to accept or refuse participation in such research;
- Expect the best possible care, including specialty care, from providers trained, credentialed, and experienced in managing their condition. Should a facility or provider not be able to provide appropriate care at any time during the course of treatment, patients have the right to expect timely referrals to providers able to provide such care;
- Receive appropriate care free from unlawful discrimination of any type.

Pediatric patients have the right to:

- Be treated in American College of Surgeons (ACS)-verified pediatric trauma centers. Adult centers that have not undertaken a pediatric review process parallel to the adult verification process are not interchangeable with pediatric trauma centers;
- Be treated in pediatric rehabilitation centers that focus on school re-entry, family-centered care, and community reintegration. Adult rehabilitation facilities with pediatric resources are not interchangeable with Commission for Accreditation of Rehabilitation Facilities (CARF)-accredited pediatric rehabilitation facilities.

2. Patients have the right to receive care that is coordinated and ongoing, as needed, across a broad spectrum of settings, including home, hospital, nursing home, school, workplace, therapeutic, and rehabilitative care settings. These include the right to:

- Expect continuity of care, as well as appropriate follow-up care, that focuses on helping them achieve the highest possible degree of functionality, greater independence, and a rapid return to productivity;
- Expect prompt and effective communication among the health-care professionals attending to their treatment, recovery, and rehabilitative needs, including timely sharing of information related to medical history, individualized plans of care, prognosis, treatment, and follow-up regimens when multidisciplinary provider teams are involved;
- Seek multiple opinions from professionals on their care team in any setting, or from sources of their own choosing, without fear of experiencing negative consequences as the result of seeking additional or alternate information;
- Know the names, credentials, experience, and professional status of their caregivers, as well as which caregiver has primary responsibility for coordinating and managing their care;
- Expect their family members are encouraged to participate as members of the care team so they can provide care continuity as the patient navigates the health-care system.

3. Patients have the right to be treated at all times with respect, dignity, and consideration and to expect health-care professionals to place high priority on safeguarding their privacy. These include the right to:

- Participate in decisions concerning their health care based on their religious beliefs, spiritual values, or cultural identity;
- Expect consideration of their personal privacy and comfort during physical examinations, therapeutic interventions, or rehabilitative interventions;
- Access their medical records and to expect that no other persons, other than those involved with their care or allowed by law, have access to their records without the patient's written permission;
- Expect confidentiality in communications with their caregivers and to have their health-care providers maintain their records and communications maintained confidentially, unless patients waive their confidentiality rights;
- Prepare advance directives to express end-of-life preferences.

4. Patients have the right to receive assistance and support to maintain, and whenever possible, enhance, the quality of their lives. These include the right to:

- Be informed of available resources throughout the course of their treatment (and especially as part of the discharge process), including appropriate support groups; pastoral/spiritual care; psychological counseling; employment counseling; local community social services; national referral sources, including associations and organizations; government sources for information and assistance; protective or advocacy services; translator services; patient education programs; and other services as appropriate and available;
- Expect that their health-care professionals will take the necessary measures to ensure that patients will, to the extent possible, be relieved of pain throughout the course of their treatment and as part of long-term follow-up;
- Be approached and treated at all times as a "whole" person and to expect that all aspects of treatment, follow-up, and support reflect their emotional, physical, spiritual, and psychological needs. Families of pediatric patients have the right to be viewed as extensions of the patient and provided with information and services that enable them to create an environment in which the pediatric patient can thrive.

5. Patients have the right to understand the policies and procedures of a facility or provider, including those concerning patient conduct, payment and billing, and complaint and appeal processes. These include the right to:

- Be advised of and understand any policies or rules that apply to their conduct in their role as a patient, including expectations regarding compliance with instructions from their health-care team, provision of accurate personal medical information to caregivers, notification of appointment cancellations, and other patient responsibilities, as specified by the provider;
- Obtain complete and detailed information concerning the costs of their care. Patients have the right to itemized listings, as well as total charges, for the services they have received. Patients have the right to an explanation of the charges for any and all items they do not understand;
- Understand what, if any, third-party payors have responsibility for any portion of their bills, as well as any co-payments, deductibles, or non-covered services for which the patient may be responsible;
- Obtain information on how to receive assistance in paying their bills, including referrals to programs for which the patient may be eligible;
- Be advised of any complaint, grievance, or appeal processes available to them related to their care or payment for services.

Patient responsibilities

Post-critical trauma care patients of this facility, including adults, children, and the parents or guardians of children who are patients, have the following responsibilities:

1. Patients have the responsibility to provide, to the best of their ability, full and complete information concerning matters related to their health, including the responsibility to:
- Inform providers and/or caregivers of their past medical history, current diagnoses and/or symptoms, treatment plans developed by other providers, current and past medications, past hospitalizations, and other information related to their care and treatment;

• Tell their providers of any changes to their medical condition, adverse reactions to treatment or medications, and changes to contact information, including phone numbers and addresses.
2. Patients have the responsibility to follow through with agreed upon plans of treatment, including scheduled appointments and self-care, including the responsibility to:
- Follow the instructions and read or have read and explained to them educational materials, special instructions, or self-care plans provided by the health-care team to ensure the best possible treatment outcomes;

• Inform their providers, and ask questions if they are uncertain or not clear, regarding any aspect of their health care, including planned treatment and/or follow-up regimens, medication dosages and schedules, or instructions from physicians, nurses, or other caregivers;

• Attend follow-up medical appointments, inform provider offices in a timely manner if there is a need to cancel an appointment, and reschedule appointments promptly;

• Understand that, if they refuse treatment or do not follow the agreed upon treatment plan, they assume responsibility for outcomes resulting from their choices;

• Inform their caregivers or health-care team of non-medical concerns related to their diagnosis and treatment, including those of an emotional, psychological, spiritual, or family-related nature, so appropriate referrals can be made to address concerns promptly.
3. Patients have the responsibility to meet the financial obligations of their health-care treatment, including the responsibility to:
- Understand and/or ask questions concerning the costs of their care and to ask specific and detailed questions regarding their provider bills and any third party coverage;

• Pay their providers promptly and to provide information to the provider or insurer/third party as required or requested to facilitate coordination and payment of benefits;

• Advise providers and insurers/third parties of changes to employment, addresses, phone numbers, and other information used to identify or contact patients.
4. Patients have the responsibility to demonstrate respect and dignity to other patients and health-care staff in the environment where care is provided, including the responsibility to:
- Be considerate of others in the health-care setting, including being polite and respectful, ensuring appropriate behavior by their guests, assisting to control unnecessary noise, distractions, and prohibited activities, such as smoking, and honoring the rights of others in the health care setting;

• Be respectful of the facility's property and the property of other patients.
5. Patients have the responsibility to follow the rules, regulations, and policies of their health-care setting, as well as for knowing their rights in the setting, including the responsibility to:
- Follow facility rules concerning patient conduct and to ask questions regarding policies that they do not understand. Additionally, patients have the responsibility to limit the number of their visitors, per the facility's policy, and, to the best of their ability, ensure their visitors adhere to facility rules and regulations;

• Know and understand their rights concerning care and conduct in the facility and to follow the facility's administrative process for addressing concerns about their rights.

Implementation

Implementation of a strategy to adopt, endorse, and promote a Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio should take the following steps:

1. The Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio should be endorsed and promoted through legislative action (e.g., joint House and Senate resolution).
2. The Ohio Association of Rehabilitation Facilities (OARF), the Ohio Hospital Association, the Ohio Department of Health, the Ohio Department of Public Safety, Emergency Medical Services, the Ohio Department of Job & Family Services, the Ohio Department of Aging, the Ohio Bureau of Workers' Compensation, the Ohio Chapter Committee on Trauma of the American College of Surgeons, and others as appropriate, should collaborate to promote and implement the following initiatives:
- Encourage facilities that provide post-critical trauma care to review their existing patient bills of rights with an eye toward including rights that specifically reflect trauma care principles as expressed in the commission's report. The commission recommends its bill of rights be promoted as a model rather than a mandate, with a preference that existing structures be used to ensure patient-focused environments that foster quality outcomes. Further, the commission recommends the stakeholders identified above communicate to regulatory bodies, such as the Commission for Accreditation of Rehabilitation Facilities (CARF), that inclusion of trauma-related rights in a facility's patient bill of rights become part of the accreditation review process.

• Develop and lead an awareness campaign that publicizes and promotes the Model Patient Bill of Rights and Responsibilities to educate facilities and their caregivers on the expectations, standards, and benefits associated with establishing an environment that encourages openness, teamwork, and mutual respect.

• Develop and implement a best practices program to publicly recognize and reward facilities and caregivers who demonstrate exemplary effort in providing post-critical trauma care to trauma patients in Ohio, with particular emphasis on innovative initiatives that reflect productive and successful caregiver-family partnerships.

Legislative support

Representatives of the Post-critical Trauma Care Commission, including the chief executives of the state agencies named in H.B. 138, will impress upon the Ohio General Assembly members the importance of formalizing a Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio. The commission will stress its proposed model be promoted and supported through a joint resolution of the House and Senate or some other legislative vehicle that underscores the importance of the principles contained within the model. Should the leadership of the General Assembly be so inclined, they may also sponsor legislation that would require any facility providing care specific to this population include as part of their operating procedures the proposed model bill of rights and responsibilities or a similar credo that incorporates the same principles. Although the commission does not at this time recommend this specific model be mandated for use by facilities, an eventual developmental step may be introducing legislation that would require facilities providing care to this population to

adopt and incorporate into their operating procedures and existing bills of rights language that clearly delineates and specifically protects the rights of post-critical trauma care patients. The commission does not anticipate that this would require a significant amount of funding. However, establishing a specific source of funds for this purpose in the Ohio Department of Health would elevate its profile and signal to the public and their elected representatives the importance attached to it.

Accrediting body support

The commission recommends discussions ensue with representatives of the major accrediting bodies for facilities that serve trauma patients receiving post-critical trauma care regarding patient rights-related accreditation requirements. Information sharing with CARF, the Ohio chapter of the American College of Surgeons, the Ohio Hospital Association, the Ohio Health Care Association, and others as appropriate, could focus on incorporating these principles in the oversight and accrediting activities and standards maintained and enforced by these organizations. Additionally, specific strategies for regular review and feedback for facility practices related to patient and family involvement could be an ongoing topic of discussion. The commission believes open and visible discussion of these issues, as well as their elevation to a place of importance at least equal to those of a clinical or operational nature, would contribute to the potential for improved patient outcomes, as well as an enhanced quality of life for patients and providers.

Awareness campaign

Patients receive post-critical trauma care in a variety of settings throughout Ohio. Once a patient has received initial treatment at a designated trauma center, there are numerous options for the next phases of care. Patients may receive acute rehabilitation services through an inpatient facility (hospital, nursing or long-term care facility, stand-alone rehabilitation facility, etc.) or may be referred to an outpatient rehabilitation setting (vocational rehabilitation, sports medicine, etc.). It is the commission’s contention the concepts and principles of the Model Patient Bill of Rights and Responsibilities are equally applicable to any facility that provides care for this vulnerable population. Therefore, the commission recommends the previously identified stakeholders collaborate to undertake a public awareness campaign targeted toward the promotion of the model bill of rights and best practices related to the demonstration of patient and family-centered principles. Promotional activities could include direct mailings to providers that would include the commission’s vision and goals, as well as a copy of the model bill of rights; references to established Web sites, including the resource locator, the long-term care consumer guide, and others; and examples of best practices of facilities in Ohio that emphasize collaborative, team-oriented, and respectful treatment of individuals coping with the ongoing challenges of trauma rehabilitation.

Best practices

The commission recommends the previously identified stakeholders, in collaboration with interested organizations, agencies, and individuals, establish a formal mechanism to recognize and publicize best practices demonstrated by post-critical trauma care providers throughout Ohio. Incentives and possibilities for reward are as broad as the imagination. Public acknowledgment and praise for creative use of the model bill of rights, for example, is just one jumping-off point for a variety of strategies and initiatives that could be advertised and promoted throughout the industry and to the public. The commission believes bringing to the forefront of the public agenda positive and ongoing attention concerning challenges and opportunities facing trauma patients will contribute to meaningful forces of change and empowerment.

Footnotes

1. **Mullins, Richard J., M.D.**, *The Journal of Trauma: Injury, Infection, and Critical Care*, 1999, 47: S8-S14.
2. **Ochberg, Frank M., M.D.**, Department of Psychiatry, Michigan State University, East Lansing, MI, *Posttraumatic Therapy*, “Gift From Within,” An International Organization for Survivors of Trauma & Victimization, www.giftfromwithin.org.
3. **Baker, Robert, Ph.D.**, Department of Philosophy, Union College and Center for Bioethics, University of Pennsylvania, *American Independence and the Right to Emergency Care*, MSJAMA Online, March 3, 1999, Volume 281, pp. 859-860.
4. **AHA Board of Trustees**, *A Patient’s Bill of Rights*, American Hospital Association, Oct. 21, 1992.

Patient bills of rights reviewed

A Patient’s Bill of Rights, AHA Board of Trustees, **American Hospital Association**, Oct. 21, 1992.

A Recovery Bill of Rights for Trauma Survivors, **Maguire, Thomas V., Ph.D.**, July, 1997, home page for Joanna Poppink, MFT, licensed psychotherapist, specializing in eating disorders.

Centura Health Patient Bill of Rights, **Littleton Adventist Hospital**, Littleton, CO.

Child’s Bill of Rights, **Children’s Hospital, Inc.**, Columbus, OH, AD-15 General Consent Form, August 1997.

Code of Ethics, **International Chiropractors Association of California**, Board of Directors, as amended Sept. 21, 1996.

Injured Worker Pledge of Service, **Ohio Bureau of Workers’ Compensation**, Columbus, OH.

Patient’s Bill of Rights, **American Academy of Pain Management**, Sonora, CA, July 16, 2001.

Patient’s Rights and Responsibilities, Jackson Health System, **Jackson Memorial Hospital**, Jackson, FL, copyright 2001-2002.

Resident Bill of Rights Summary and Residents’ Responsibilities/Rules, **St. Augustine Health Campus**, Cleveland, OH.

The Johns Hopkins Breast Center’s Breast Cancer Patient’s Bill of Rights, **Johns Hopkins Hospital Breast Center**, Baltimore, MD.



"...the recommendation to develop a service locator fits well with our No Wrong Door project..."

Joan W. Lawrence
Director, Ohio Department of Aging

REHABILITATION SERVICE LOCATOR

Recommendation: A rehabilitation service locator should be created and maintained to allow patients, their families, and acute-care providers to identify sources of needed follow-up rehabilitation services and compare salient characteristics of available providers.

Vision

The intent of the locator service is to assist trauma patients and their families to identify and select prescribed discharge services that meet their needs.

Description of the problem

Trauma patients, family members, and health-care professionals lack comprehensive information about health-care services (medical and therapeutic) available in Ohio to treat trauma patients after discharge from the critical/acute care hospital setting. Trauma patients' medical and therapy needs post discharge can be varied and complex depending on the severity of the injury. Often hospital discharge planning falls short of appropriately matching the trauma patient's needs with the most appropriate and best quality health-care provider. Health-care services frequently change, which poses a challenge to health-care professionals to know all the service options available (based on quality and location). There is no comprehensive listing of resources for professionals or consumers regarding service availability. A rehabilitation service locator provides a comprehensive service listing. The locator allows the user to conduct a self-directed search of the most appropriate service based on their post-acute needs. Services identified in the locator are intended to assist patients throughout the continuum from pediatrics through adulthood to geriatrics.

The service locator concept was developed to address the Post-critical Trauma Care Commission's mission. The service locator will help families and professionals identify services in a specific geographic location and match this to their service needs. Each facility listed in the service locator will identify the funding they accept. There is also the possibility to link to sites/contacts similar to MedAssist Inc., which is a free service for patients to qualify for various funding sources. Companies such as this will assist patients in obtaining Medicaid, Bureau of Children with Medical Handicaps (BCMH), charitable services or other types of services. They have a mission to assist uninsured patients through the often difficult and confusing process of applying for public assistance to satisfy their obligation to the medical provider. The locator database will gather various data points that address quality, such as accreditation, outcomes, and patient satisfaction. If each patient is matched appropriately with the right facility, we would anticipate the cost effectiveness and quality aspects of the mission are met.

The overriding principle of the service locator is to provide information regarding quality health-care service availability and enhancing consumer choice. The service locator will enhance and, in some cases, facilitate the transfer decision-making process from acute care to the next appropriate level of care. The locator can be Web-based and have a user-friendly look-up function or search capability. The user could input specific information about the patient together with the patient's needs and, through the

search function, could find compatible service providers that meet the patient’s specifications. Although the specific services categories maintained on the locator may change as the system matures, it is recommended the following services be included initially: location, demographics, years of operation, types of services offered, types of professionals available, funding accepted, patient characteristics, accreditations, admission/discharge criteria, outcomes, linkages to consumer guides (e.g., a guide to finding the right rehabilitation facility).

The purpose of the rehabilitation service locator is to provide a comprehensive tool of service availability. To bridge the gap between the trauma patient, family and caregivers with health-care professionals it is proposed that a Web-based rehabilitation service locator be created. Trauma patients and their families, as well as health-care providers, can use this locator service (e.g., discharge planners, social workers, physicians, case managers and insurers). Similar in principle to the Ohio Long-Term Care Consumer Guide at www.ltcoho.org, which assists consumers and professionals in identifying long-term nursing services, the rehabilitation service locator would be designed to meet the trauma patient’s specific needs.

Benefits of the rehabilitation service locator are:

- Trauma patients and their families will be able to access up-to-date information regarding the availability of post-acute health-care services that might otherwise be unknown;
- Health-care providers (discharge planners, social workers, physicians, case managers and insurers) will be able to access up-to-date information regarding the availability of post-critical/acute health-care services that might otherwise be unknown;
- The Web-based locator can be populated and updated easily as facility information changes.
- The Web-based locator can be accessed easily from the home or office;
- Standardization of facility services and detail will provide comparison opportunity;
- Trauma patients will be more likely to receive quality post-critical/acute services in their communities;
- Smaller facilities will be able to market their services appropriately to a larger audience;
- Funding for development and maintenance will be absorbed by contributing facilities;
- Facilities will be more likely to update their individual information;
- The opportunity for consumer and insurer funding comparisons will be improved.

Proposed strategies

Goal

The goal of the Rehabilitation Service Locator is to promote patient and caregiver choice for post-acute discharge services.

Principles

1. The Rehabilitation Service Locator Web site should be developed to house comprehensive information about Ohio’s inpatient and outpatient rehabilitation services.
2. The Rehabilitation Service Locator Web site should be designed to provide users with information regarding facilities and the services they offer (e.g., location, demographics, services offered, professionals available, funding accepted, patient characteristics, accreditation, admission criteria and outcomes).

3. The locator’s target population should be Ohio trauma patients and their families; however it should be available for use by other consumers and health-care professionals in their search for inpatient and outpatient rehabilitation services.
4. Locator information should be updated routinely to maintain its accuracy, and links should be provided to related Web sites (e.g., the Brain Injury Association of Ohio).

Implementation

1. Create Rehabilitation Service Locator Web site: It would be ideal to piggyback with the long-term care Web site locator; however, may need to consider the trauma system’s Web site location, if the cost of conformity to the existing long-term care locator is too significant.
 - a. Develop specific data points for the service locator.
 - b. Develop plan for submission: The locator information is supplied by facilities and providers voluntarily, using standardized definitions and data formats, and funded by a nominal fee paid by submitting facilities.
 - c. Initial mailing of a letter introducing the service locator to various inpatient and outpatient rehabilitation providers in Ohio. Enclosed will be the data collection form with the needed information.
 - d. Developing the plan for ongoing maintenance — possibly through annual subscription fees paid by health-care providers to be listed on the Web site.
 - e. Once created, a major initiative will involve marketing the locator to the potential users. A full-scale awareness campaign will be needed to reach health-care providers, agencies that serve this population, the trauma patients and their families.
2. Create a satisfaction measure: A final step of implementation is to create a measure of the locator’s effectiveness that can be used to justify its existence and secure ongoing funding but mostly to tweak its functionality for the user. A defined set of criteria should be developed that includes utilization (e.g., number of hits) and user satisfaction. Contract with an outside service/company to evaluate customer satisfaction results uniformly. The goal is to display results that can be compared evenly across facilities, similar to the insurance companies and LTC Web site.
3. Create a multidisciplinary group: Although the Rehabilitation Service Locator recommendations list a multitude of service types for inclusion on the locator, it is felt that a multidisciplinary group is needed to further analyze and develop standard definitions for service types using published national references (e.g., the *Brain Injury Association of America Provider Directory*). It will be important that facilities included in the locator abide by the standard definitions when describing their services so the user can make valid comparisons and decisions.





"The report does offer a sound roadmap for Ohio to follow as it constructs a comprehensive system of post-critical care for Ohioans who suffered traumatic injuries."

John M. Connelly
Executive director, State of Ohio
Rehabilitation Services Commission

A STATEWIDE SYSTEM OF RESOURCE FACILITATION

Recommendation: To address the lifetime needs of Ohio citizens with disability due to injury, a resource facilitation system should be established to provide access to information and services, increase the capacity for community support and, as needed, coordinate services for individuals and their families. The resource facilitation system should model the one the Brain Injury Association of Ohio is developing, but be expanded to include all causes of disability due to injury and extended to all regions of the state.

Vision

Ohio citizens with long-term needs due to traumatic injury, as well as professionals who work with them, should have easy access to the best available knowledge and resources about injury and its effects. A statewide system of resource facilitation (1) should be in place to provide a comprehensive yet economic approach to promoting informed choices. Knowledge of the resource facilitation system and its use should be widespread, allowing timely use of its services.

Description of the problem

Children and adults with long-term needs due to trauma require assistance from knowledgeable and trained individuals to help them identify, obtain and maintain the services and supports they require to maximize recovery and reintegration into home and community life. Assistance is particularly critical for those individuals who do not fit within eligibility criteria established for the major human service agencies. In fact, most of the state agencies that comprise today's human service system were established before large numbers of individuals began surviving significant and debilitating traumatic injuries.

Though the make-up of the disability population has changed over the last quarter of a century — with the proportion of individuals with long-term needs due to trauma on the rise — the service system has not responded to these population shifts. A conclusion from the 1995 report by the National Conference of State Legislators titled, What Legislators Need to Know About Traumatic Brain Injury, (2) applies to others with long-term needs due to traumatic injury:

These people have diverse needs that make it difficult for them to fit easily into existing service systems. State delivery systems tend to be based on diagnosis (developmental disabilities, mental illness, special health-care needs) or on financial need, such as Medicaid. These services are not always available or appropriate for people with brain injuries. Federal funding streams have shaped state services, making it difficult to restructure or expand existing services . . ." (2)

Unquestionably the fragmented, bureaucratic nature of the current human service system presents a significant obstacle to accessing needed assistance and supports for individuals with long-term needs due to trauma. For those with cognitive deficits following trauma, the very nature of their disability

compounds their difficulty in working through the bureaucratic maze to acquire assistance that may be available to them. Additionally, their need for information, resource coordination and problem-solving assistance may persist for years following their injury. For example, of those using the Brain Injury Association of Ohio's Helpline and Community Support Network programs during 2002, 16 percent were three months or less post injury, 20 percent were between four and 12 months post injury, 21 percent were between 13 and 36 months post injury, 27 percent were between 37 months and 10 years post injury and 16 percent were more than 11 years post injury. (6)

Without assistance, individuals with long-term needs associated with trauma experience significant barriers and delays in finding and accessing services available to them through the current service system. Failure to obtain needed services and supports in a timely and coordinated fashion, in turn, puts them at greater risks for common secondary complications, such as depression, substance abuse, and long-term unemployment, as well as other negative outcomes.

In the 1989 Interagency Head Injury Task Force Report (3) issued by the U.S. Department of Health and Human Services, "Encouraging the use of 'care manager' systems that operate throughout all stages of care, from acute care through community reentry" was listed as an implementation strategy to achieve a national agenda with six key recommendations. In 1990, Ohio enacted legislation (Amended Substitute H.B. 594) (4) to create the Head Injury Program and its Advisory Council in the Ohio Department of Health. (The program has since been transferred to the Ohio Rehabilitation Services Commission and is known as the Brain Injury Program and Advisory Committee.) Three of the program's eight legislated purposes pertain to facilitating access to information and services:

- Identify existing services in this state to assist survivors of head injury and their families;
- Promote service coordination for survivors of head injury and their families;
- Explore options for delivering case management services to residents of this state who are survivors of head injury.

The on-going need for assistance accessing resources was validated through the National Institutes of Health's Rehabilitation of Persons with Traumatic Brain Injury Consensus Statement (5) synthesized from testimony provided at an Oct. 26 through 28, 1998, Consensus Development Conference. It states, "Community-based, non-medical services should be components of the extended care and rehabilitation available to persons with traumatic brain injury. These include but are not necessarily limited to "...case manager programs to support practical life skill redevelopment and to help navigate through the public assistance and medical-rehabilitative care systems..." (5)

The need to assist individuals with spinal cord injuries is also apparent from statements and recommendations stemming from several meetings sponsored by the Centers for Disease Control and Prevention. The first, convened in November 1999, was titled, "Future Directions for Community-Based Spinal Cord Injury Program Research and Development." Held in Atlanta, approximately 20 spinal cord injury researchers and public health officials reviewed community-based methods for preventing secondary conditions of spinal cord injury. At a March 2001 follow-up meeting to further develop the national research agenda, interagency representatives *"discussed the progression of health needs following spinal cord injury and identified gaps in current service delivery for persons with spinal cord injury, developed an inventory of activities being conducted across federal agencies and explored a coordinated response to better serve this population."* (6) (Italics added.)



A system of resource facilitation

A resource facilitation system should be a comprehensive, coordinated program with three basic functions: 1) provide timely and up-to-date information to individuals, families, providers, and the public; 2) assist individuals who have been injured in obtaining available services and supports to maximize their health, independence, and integration into family, work, and community; and 3) build the local community's capacity to address their needs. Three program components offer graduated levels of assistance matching the degree of help required at a given point in time:

- A toll-free, statewide information and resource (I&R) telephone service;
- Regional offices addressing local needs and resources in all 88 Ohio counties;
- Individual service coordination, as needed, for more complex needs.

The I&R telephone service is designed to be the primary point of entry into the system, and represents the least intensive level of assistance in the program continuum. Those with greater resource facilitation needs are linked to regional offices, or if their needs are intensive and on-going, to programs offering the assistance of individualized service coordination. As the intensity of individuals' needs for resource facilitation services increase or decrease, they move up or down the program continuum to obtain the appropriate level of assistance. Individuals may drop out of the system entirely if their resource facilitation needs are met, and on-going assistance is no longer required, with the assurance they can return for help at a later time, should it become necessary. Core administrative, information management and communication services underpin these three programmatic components, promoting the development of an integrated, efficient and effective system.

The Brain Injury Association of Ohio (BIA-Ohio) has developed and operates two of the three program components of a resource facilitation system. BIA-Ohio operates the toll-free Helpline, and six of 15 proposed Community Support Network offices. BIA-Ohio also provides Infrastructure Support Functions. (See the schematic at the end of this chapter).

BIA-Ohio’s system has been developed incrementally over a period of almost 15 years as advocates have been able to acquire funding. Financial support has come primarily from grants awarded by the Brain Injury Advisory Committee at the Ohio Rehabilitation Services Commission, drawing upon state appropriations and federal match through the U.S. departments of Education, and Health and Human Services. BIA-Ohio has acquired supplemental support to help sustain and/or further develop the system through private foundation awards, as well as contributions from individuals and corporations. Donated office space and miscellaneous support services offered by the agencies that house the Community Support Network programs also contribute to their sustainability and promote cross-agency communication and collaboration. However, funding fluctuations associated with time-limited grant awards have made further development and stabilization of the system difficult.

The third programmatic component of resource facilitation — individual resource coordination — offers the most intensive assistance, but is also the least developed in Ohio. Only a few programs provide specialized individual service coordination for persons with brain injury. Though there is a demand for this type of specialized assistance, funding to sustain programs is lacking and, where it can be cobbled together, is unstable for any significant duration. Compounding the problem is the fact that, though some individuals with long-term needs due to trauma are eligible for case-management services provided through other systems, the personnel within those systems typically are unprepared to recognize or cope with their special needs. While training and certain accommodations could remedy this situation, no systematic approach has been developed to do so.

Proposed strategy

Goal

Extend the resource facilitation system developed for individuals with brain injury so information, services and supports are available to all Ohio citizens who experience disability as a result of traumatic injury.

Principles

The envisioned resource facilitation system should:

- Be integrated and comprehensive, not duplicative;
- Respect individual choice and promote self-direction;
- Encourage consumer and family involvement;
- Value home and community-based supports so individuals may take their places in the most integrated settings;
- Promote inclusiveness and cultural sensitivity in terms of outreach, program design and implementation.

Implementation

This proposal for development of a resource facilitation system for persons with a traumatic injury responds to the director of health’s charge and the Post-critical Trauma Care Commission’s purposes as identified in H.B. 138 by:

- Promoting accessibility to existing services and supports related to individuals’ physical, psychological, vocational rehabilitation, re-employment and social support needs;
- Capitalizing on an established, well-developed and nationally recognized conceptual framework for the system’s design and quality assurance mechanisms;
- Saving costs by building on a partially developed system that has been phased in over a 15-year period;
- Promoting efficiency and program cohesiveness through cross-system communication, collaboration and training;
- Encouraging self-direction and cost-efficiency through a three-tiered system that promotes choice and matches individuals’ level of need to the appropriate level of assistance.

The following steps are suggested for implementation of a resource facilitation system for Ohio citizens who incurred traumatic injury.

- 1) Convene a stakeholder’s workgroup to expand the BIA-Ohio system’s design to accommodate the needs of all populations with long-term needs due to injury, and to promote cross-agency buy-in and consumer involvement.
- 2) Draw on expertise and leadership from the Ohio departments of Health, Aging, Jobs and Family Services, and Public Safety, along with the Centers for Disease Control and Prevention, the Health Resources and Services Administration, and The Ohio State University’s Traumatic Brain Injury Model System, (7) to guide the workgroup’s efforts and synchronize them with national trends and initiatives.
- 3) Establish incremental achievement benchmarks, along with corresponding outcome, quality assurance measures, and reporting protocols, to ensure forward progression leading to the system’s full implementation.
- 4) Develop memorandums of agreement outlining state-agency roles and actions to contribute to the system’s efficiency and effectiveness. Issues addressed in the memorandums may include, but not necessarily be limited to, activating the current system to better serve individuals with long-term needs due to trauma through personnel training, program modifications, outreach, joint initiatives, and resource identification and development.
- 5) Build on and fortify those components and infrastructure of the proposed resource facilitation system thus far developed, so they may serve as a starting point for the system’s full implementation.

- 6) Monitor and take necessary action to integrate the long-term needs of individuals with disability due to trauma into contemporaneous system change initiatives. Such opportunities may include: the New Freedom Initiative/Ohio Access and related systems change grants, Ticket to Work and Work Incentives Improvement Act of 1999, and Ohio’s newly adopted rules for implementation of Individuals with Disabilities Education Act.
- 7) Develop awareness campaigns, targeting the general public and personnel within service providing agencies to promote knowledge and use of the resource facilitation system. Campaigns should address the growing number of individuals who experience disability due to traumatic injury and provide contact information to access the resource facilitation system.
- 8) Ensure individuals who staff Ohio’s resource facilitation system are knowledgeable about challenges associated with disabilities due to trauma and assistance offered through the complex service delivery system.
- 9) Adhere to values promoting development of a culturally sensitive resource facilitation system that is holistic, person and family centered, and encourages choice, self direction, and availability of community-based supports.

References

1 **Connors, Susan H.** (2001) *Resource Facilitation Summit: A Consensus of Principles and Best Practices to Build Program Development and Operation in Brain Injury*. Alexandria, VA: Brain Injury Association of America.

2 **National Conference of State Legislatures.** (1995) *What Legislatures Need to Know About Traumatic Brain Injury*. Denver.

3 **National Institutes of Health, National Institute of Neurological Disorders and Stroke.** (1989). *Interagency Head Injury Task Force Report*. Bethesda, MD.

4 **Amended Substitute H.B. 594** creating the Office on Head Injury and Advisory Council at the Ohio Department of Health, signed into law in 1990.

5 **National Institutes of Health, National Institutes of Child Health and Development.** (1999). *Report of the NIH Consensus Development Conference on the Rehabilitation of Persons With Traumatic Brain Injury*. Bethesda, MD.


6 **National Center for Injury Prevention and Control.** *Injury Fact Book 2001-2002*. Atlanta, GA: Centers for Disease Control and Prevention; 2001.

7 **Ohio Regional Traumatic Brain Injury Model System** (Ohio Valley Center (OVC) for Brain Injury Prevention and Rehabilitation), one of 17 research and demonstration grants funded through the U.S. Department of Education, National Institute on Disability and Rehabilitation Research (NIDRR) to establish the Traumatic Brain Injury Model Systems of Care. The OVC Model Systems grant is administered through the Department of Physical Medicine at The Ohio State University; its principal investigator is John Corrigan, Ph.D. Model systems grants primarily focus on: 1) developing and demonstrating a model system of care for persons with traumatic brain injury, stressing continuity and comprehensiveness of care; and 2) maintaining a standardized national database for innovative analyses of traumatic brain injury treatment and outcomes.

Brain Injury Association of Ohio
Resource Facilitation System

One
↓


Toll-free Statewide Helpline



Operated by BIAOH

Two
↓


Community Support Networks



Operated by BIAOH; dotted areas on map show the 6 CSN locations currently funded

Three
↓

Individual Service Coordination



Only a few programs exist in Ohio offering Individual Resource Facilitation Services (case management); access to programs serving other disability populations is limited due to eligibility criteria that often excludes people w/BI.

Infrastructure Support Functions (ISF)

Administrative: Administrative support for the system’s first two program components (Helpline and Community Support Networks), provided by the Brain Injury Association of Ohio, includes financial and personnel management, and maintenance of the Information Management System.

Information Management System: At the system’s center are relational databases maintained on a server and accessible to Helpline and Community Support Network staff via the Internet. Information stored in the databases includes a statewide inventory of 72 types of programs and services, locations and meeting times for support groups around the state, contact information for distributing educational materials and event notices, and records on individuals seeking assistance through the program – the nature of their needs, how they learned about the service, how helpful they found it to be, etc. The IMS supports management, evaluation, reporting and development aspects of the program.

Communication & Outreach: The system’s primary “point of entry” is through the toll-free Helpline. Its number is included in various resource directories, and is publicized through public service announcements, at trainings and events and through literature distribution.

Education & Training: Is required for: 1) resource facilitation personnel at each of the system’s three levels; 2) professionals and service providers within established systems; and 3) individuals with long-term needs due to trauma, their families and advocates. Content should include: causes, consequences of injuries due to trauma, risks and prevention strategies for secondary complications, person-centered planning, understanding the current service system and how to navigate it, natural supports, basic advocacy skills, and assistance available through the Resource Facilitation System.

Interagency Collaboration: The system relies heavily on cross-system, interdisciplinary collaboration in its design, development and maintenance. Informal networking as well as formalized agreements to collaborate in areas of training, planning, problem solving, resource sharing and development and coordination of services at an individual level are essential to the System’s success.

Development: Identification and acquisition of federal, state and local (formula and fee-for-service) funding, supplemented with private sector support from diverse sources **Resource.**

Report of the Post-critical Trauma Care Commission

39



"...Ohio must exercise leadership in addressing over time the continuing challenges facing post-critical trauma care patients. This is especially true for children, since they face obstacles in achieving educational success and in recovering from devastating injuries so early in life."

Andrew Carter
President,
Ohio Children's Hospitals Association

MEETING THE EDUCATIONAL NEEDS OF CHILDREN WHO HAVE HAD TRAUMATIC INJURIES

Recommendation: To ensure the most appropriate educational experience for children who have had traumatic injuries, hospital and school personnel need additional training on issues for educational re-entry. Classroom teachers need access to resources about reintegrating these students; and mechanisms are needed to ensure providers, internal and external to the school system, take a coordinated approach in providing care. More research is needed on educating students who have incurred traumatic injuries.

Vision

Educational services should be affordable and accessible, and should ensure high educational expectations and achievement for children, including those who have experienced traumatic injuries.

Description of the problem

Educating children with traumatic injury can be a complex task for the educational system when the child is discharged from the hospital or rehabilitation setting. The child brings a medical label of traumatic injury with them to the school system, and the local educational agency (LEA) is responsible for providing appropriate reentry and educational services for the child.

At this point, confusion and/or frustration may occur for the patient, the family, and the educational agency on how to provide appropriate educational services since post-critical trauma or traumatic injury is not a disability category listed under the *Individuals with Disabilities Education Act* (IDEA). Traumatic injury, as defined by H.B. 138, can include such injuries as nerve or spinal cord injury, burns, vascular injury, limb amputation, internal organ injury, bone fractures, or brain injury.

Ensuring a seamless system for children with traumatic injury transitioning from the hospital to home, school, work, and community living is one area of concern. Transition and educational intervention requires a multidimensional approach and the use of a variety of strategies and resource materials. Although educators are providing services to meet the needs of children with traumatic injury, programs have not been developed adequately to meet the educational needs of these children. The solution is to provide training and support for teachers, therapists, and staff in the schools.

Another area of concern is the lack of knowledge and understanding of what is available in the LEAs under IDEA to meet the needs of the child with traumatic injury. IDEA provides the avenue for the educational agencies to evaluate the children to determine the educational and related service needs. In addition, IDEA requires documentation of services to meet the child's needs with a free appropriate public



education (FAPE) in the least restrictive environment (LRE). Under IDEA, there is not a disability category of traumatic injury. However, LEAs can provide services to children with traumatic injury(ies) identified as:

- Other health impaired;
- Orthopedically impaired;
- Multiple disabled;
- Traumatic brain injury;
- Emotional disturbance;
- Cognitive disabled.

The solution for this concern is not only training but ensuring a variety of methods for disseminating information pertaining to FAPE.

Another area of concern is the lack of controlled empirical studies regarding educational reintegration. There are discrepancies between hospital numbers of children treated with post-critical trauma and the lower incidence and prevalence of children receiving FAPE, as identified under IDEA in the educational system.

In addition, few empirical studies have been conducted to validate specific special education intervention to ensure children with traumatic injury are successful in school. The solution would be to conduct the research with controlled studies over a period of time.

The fourth area of concern is to ensure children with traumatic injury who are receiving services from a number of different agencies (i.e., medical, educational, mental health, mental retardation, drug, alcohol, and social) do not slip through the cracks of the system. Many times, it is not clear who will accept management responsibility for the child. The solution will require a system change on the part of a variety of agencies.

Definition of terms

Cognitive disability (mental retardation) - [3301-51-01(F)(3)(b)] Means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child’s educational performance. (i) Significantly subaverage general intellectual functioning refers to an intelligence quotient of 70 or below as determined through a measure of cognitive functioning administered by a school psychologist or a qualified psychologist using a test designed for individual administration. Based on a standard error of measurement and clinical judgment, a child may be determined to have significant subaverage general intellectual functioning with an intelligence quotient not to exceed 75. (ii) Deficits in adaptive behavior means deficits in two or more applicable skill areas occurring within the context of the child’s environments

and typical of the child’s chronological age peers. (iii) A child who was identified by an Ohio school district as having a developmental handicap as of the effective date of this rule shall be considered a child with a disability if the child continues to meet the definition for developmental handicap set forth under *Rules for the Education of Handicapped Children*, effective 1982, and shall be eligible to receive special education and related services in accordance with *Operating Standards for Ohio’s Schools Serving Children with Disabilities*, effective July 1, 2002.

Emotional disturbance - [3301-51-03(F)(3)(e)] Means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance: (i) An inability to learn that cannot be explained by intellectual, sensory, or health factors; (ii) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (iii) Inappropriate types of behavior or feelings under normal circumstances; (iv) A general pervasive mood of unhappiness or depression; (v) A tendency to develop physical symptoms or fears associated with personal or school problems. The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined they have an emotional disturbance.

Individuals with Disabilities Education Act (IDEA) - This is the federal law that supports special education and related service programming for children and youth with disabilities. Formerly know as the Education for the Handicapped Act (EHA), IDEA has its roots in Public Law 94-142 (the Education of All Handicapped Children Act), which originally was enacted in 1975 to establish grants to states for educating children with disabilities.

Amendments structure IDEA into four parts: part A addresses general provisions; part B covers the Assistance for Education of All Children with Disabilities; part C covers Infants and Toddlers with Disabilities; and part D addresses National Activities to Improve the Education of Children with Disabilities.

IDEA requires FAPE, which includes special education and related services, be available to children and youth with disabilities in mandated age ranges.

Orthopedic impairment - [3301-51-01(f)(3)(h)] Means a severe orthopedic impairment that adversely affects a child’s educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures).

Other health impairment - [3301-51-01(F)(3)(i)] Means having limited strength, vitality or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness to the educational environment. This condition is due to chronic or acute health problems, such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, and sickle cell anemia, and adversely affects a child’s educational performance.

Paraprofessional services - [3301-51-01(CC)] According to *Operating Standards for Ohio's Schools Serving Children with Disabilities*, paraprofessional services include services provided by school, county board of mental retardation and developmental disabilities, and other educational agency employees who are trained adequately to assist in the provision of special education and related services to children with disabilities. Paraprofessionals work under the supervision of teachers, intervention specialists, and/or related service providers. Other titles used to identify these service providers include teacher assistants, educational aides, and job coaches.

Traumatic brain injury - [3301-51-01(F)(3)(I)] According to *Operating Standards for Ohio's Schools Serving Children with Disabilities*, traumatic brain injury means an acquired injury to the brain caused by an external physical force or by other medical conditions, including but not limited to stroke, anoxia, infectious disease, aneurysm, brain tumors and neurological insults resulting from medical or surgical treatments. The injury results in total or partial functional disability or psychosocial impairment or both, which adversely affects a child's educational performance. The term applies to open or closed head injuries, as well as to other medical conditions that result in acquired brain injuries. Injuries result in impairments in one or more areas such as cognition, language, memory, attention, reasoning, abstract thinking, judgment, problem-solving, sensory, perceptual and motor abilities, psychosocial behavior, physical functions, information process and speech. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma.

Proposed strategies and implementation

Strategy 1: Training and support is needed for teachers, therapists, and staff in the LEAs

Hospital and school personnel should receive training to plan for school reintegration and transitions. Presently, there are not enough personnel who have an understanding of the unique behaviors and educational challenges of these children or who know what teaching strategies can be applied to assist learning.

Implementation:

- Mandate professional development
 - Pre-service: When working with universities, include information about post-critical trauma education (special education and regular education) courses and in allied health careers.
 - In-service: Require educational agency staff to receive quality training in the special needs of this population.
- Provide technical assistance programs for ongoing instructional assistance.
- Develop teacher-based competencies at the national and state levels.
- Ensure teachers have access to personnel with a specialization in post-critical trauma; investigate through cost-benefit analysis the potential benefit of such teacher support.
- Investigate the effectiveness of having trained teams available to consult in a particular area versus traditional teacher trainings.
- Ensure paraprofessionals are included in school-based training. Investigate the effectiveness of para-educator training on child outcomes.

- Parents should be informed of present and future consequences for learning and life-long living of such an injury.
- If a medical-care facility is involved, a correct diagnosis of a post-critical trauma must be noted. This information should be provided to educational agencies prior to discharging the child. One suggestion would be for hospitals to note this diagnosis in their discharge instructions.
- Agencies providing services must have a coordinated professional development effort.

Strategy 2: An organized and easily accessible system of disseminating information must be developed.

A variety of books, manuals, educational brochures, and magazine and journal articles contain information about reintegrating children with post-critical trauma into the community or students with post-critical trauma into schools, and what teaching strategies work. While these materials exist, they do not seem to be in the hands of educators who can best use them.

Implementation:

- Web sites that will assist individuals in accessing a variety of information and materials must be organized.
- Place credit-bearing courses from universities on the Internet for a broader access to training and information.
- Contact existing sources for materials/resources before placing additional research or development funds into creating training materials that presently exist and can be adapted.

Strategy 3: Conduct scientifically based research

While there are many anecdotal and well-devised application articles regarding educating this population, there are very few well-controlled empirical studies over time.

Implementation:

There are many areas of pediatric research that are pressing equally for funding. Regarding educational reintegration, two areas were determined to be critical for research:



- Incidence and prevalence: Discrepancies between hospital numbers of youth treated with post-critical trauma and special education numbers need to be clarified. Recommendations include:
 - Fund a comprehensive longitudinal study in which children with all degrees of traumatic injury are followed for many years using valid formal and informal assessment procedures to determine progress for educational need and qualitative methods to document post-injury educational experiences and quality of life.
 - Identify early predictors of long-term educational need through studies of outcome, especially in the case of children with mild to moderate injuries.
 - Include a question about head injuries and brain diseases in special education and kindergarten screenings with positive responses triggering attention to issues common in this population. In addition, follow-up research on how early identification impacts the students educational success.
- Teacher techniques: While a number of recommendations exist for strategies employed to educate children with post-critical trauma, few empirical investigations have been undertaken to validate specific special educational interventions or management practices. Research recommendations include:
 - Investigate effectiveness of educational interventions that draw from the existing body of relevant educational research.
 - Emphasize in teacher trainings and educational materials development the existing research-based teaching methodologies while highlighting the flexibility and experimental orientation often required when applying existing strategies to meet these children’s needs.
 - Educational research must meet the scientific research requirements of the no child left behind philosophy.

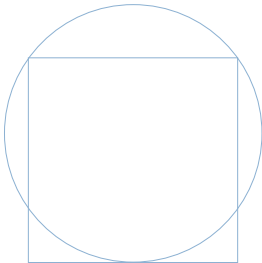
Strategy 4: To effectively meet the needs of children with traumatic injury, a systems change in health-care facilities and educational agencies need to occur



Transitions for children or students may require a number of agencies’ involvement (medical, educational, mental health, mental retardation, drug, alcohol, and social). Many slip through the cracks of these systems, and often it is not clear who will accept management responsibility for the case.

Implementation:

- Fund projects that will reward collaborative efforts for children or students with post-critical trauma or traumatic injury.
- Convene task force meetings of individuals who represent agencies who can make a change in policy and procedures.
- Educate policy makers about the special needs of this population and encourage them to require collaboration in agencies when providing funding for ongoing operation and special projects.



References

The following materials were referenced to determine areas of concern, strategies, and suggested action plans:

Ficker-Terrill, C. and Marino, M. (February 2001). Health Resources and Services Administration (HRSA) and BIA hold a meeting of the special workgroup of children and adolescents with traumatic brain injury. *TBI Challenge*. Washington, D.C.: Brain Injury Association.

Lincoln, Y.S. and Guba, E.G. (1985). *Naturalistic Inquiry*, Newberry Park: Sage.

Marino, M. (February 2001). Special task force convened by the Brain Injury Association to address issues affecting children and adolescents after brain injury. *TBI Challenge*, Washington, D.C.: Brain Injury Association.

Savage, Ronald C. and Wolcott, Gary (1994). *Educational Dimensions of Acquired Brain Injury*, Pro Ed.

Ylvisaker, M., Todis, B., Glang, A., Urbanczyk, B., Franklin C., DePompei, R., Feeney, T., Maxwell, N., Pearson, S. and Tyler, J. (2001). Educating children with TBI: Themes and recommendations. *Journal of Head Trauma Rehabilitation* 16(1) 76-91.





“Please be assured that the Ohio Psychological Association strongly supports the recommendations of the Commission.”

Michael O. Ranney, MPA
Executive director,
Ohio Psychological Association

SUBSTANCE ABUSE AND TRAUMATIC INJURY

Recommendation: Organizations and agencies with an interest in minimizing the effects of substance use disorders on injury outcomes should convene to identify opportunities for improving secondary prevention of substance abuse and treatment for persons during and following trauma care.

Vision

Ohioans who have substance use disorders and incur a traumatic injury should be provided with accurate and timely information about how to reduce their dependence on alcohol and other drugs . Information on ways that have been proven effective for both reducing substance use and the risk of subsequent injury should be provided. For patients requiring formal substance abuse treatment to accomplish these ends, there should be ready access to service providers who are able to work with people with disability due to injury.

Description of the problem

Alcohol use frequently is a factor in all types of injury. Substance use has long been recognized as a major, independent risk factor in unintentional injuries, as well as intentional injuries such as assaults, homicides, and suicides. In 40 percent to 50 percent of fatal motor vehicle crashes and 25 percent to 35 percent of non-fatal crashes, at least one participant is legally intoxicated. Alcohol has been found to play a role in more than half of homicides, more than half of burns, almost half of hypothermia and frost bite cases, and 40 percent of falls. Intoxication is present in between one-quarter and one-third of individuals incurring traumatic brain or spinal cord injuries. Although the role of drugs other than alcohol in traumatic injuries has not been investigated as thoroughly, studies have shown cocaine, amphetamines, and marijuana, especially in combination with alcohol, play a significant role in traumatic injuries of all kinds.

Whether or not an individual is intoxicated at the time of injury, a significant proportion of individuals who incur injuries have histories of chronic substance use disorders. Waller (1988) conservatively estimated 20 percent to 25 percent of all patients hospitalized for injury are alcoholics or have a drinking problem. Studies of patients receiving rehabilitation for either traumatic spinal cord or brain injury have found more than half of adolescents and adults have diagnosable histories of substance use disorders (Heinemann, et al, 1988; Corrigan, 1995). Rivera, et al (1993a) found evidence of chronic alcoholism in up to three-fourths of adult trauma patients.

There are multiple ways in which alcohol and other drug use increases the risk for injury. Intoxication:

- Decreases the level of alertness;
- Impairs motor function, diminishing coordination and balance, and increasing reaction time;
- Impairs judgment, resulting in poor decision making;
- Diminishes perception and cognitive abilities;



- Increases risk taking behavior and especially including feelings of invulnerability (especially among adolescents and young adults);
- Reduces inhibitions and intensifies feelings of anger and depression;
- Is associated with increased violent behavior;

Additionally, chronic use may render a person more medically fragile, resulting in more severe injuries. Obtaining illicit drugs may place an individual in an unsafe environment. Beyond substance use being a risk factor for injury, injury is a risk factor for substance abuse. Contributing factors include:

- Self-medication for pain;
- Seeking relief of frustration resulting from changes in lifestyle due to disability;
- Feelings of entitlement due to lost abilities;
- Filling time to reduce boredom resulting from changed social roles and reduced daily structure;
- Seeking relief from loneliness or isolation frequently caused by disability.

Persons who experience one traumatic injury are at greatly increased risk for re-injury. For example, after one traumatic brain injury, a person is three times more likely to have a subsequent injury than someone in the general population. After a second injury, the relative risk for a third increases to eight times the norm (Annegers et al, 1980). Untreated alcohol and other drug use disorders play a significant role in re-injury. Rivera and colleagues (1993b) found the re-admission rate for more than 2,500 adult patients treated at a level I trauma center was 2.5 times more likely for patients who were intoxicated at their initial admission. Patients who showed physiological signs of chronic alcohol abuse were 3.5 times more likely to be re-admitted.

While alcohol and other drug use are associated highly with injury, it also has been found that an injury may provide an opportunity for intervention to change contributing behaviors. There is extensive evidence that traumatic injury creates a teachable moment that is a unique opportunity in the course of the addiction process (Gentilello et al, 1988; Reyna et al, 1985; Soderstrom and Cowley, 1987). When a patient makes a connection that the injury is a direct result of alcohol and other drug use, they become more open to accepting education or treatment, which can in turn reduce the alcohol or other drug consumption and improve the course of subsequent recovery. The impact of even brief interventions that take advantage of this opportunity can be quite dramatic (Gentilello et al, 1999). Thus, systematic screening and education have been recommended for acute treatment settings working with injured patients (Hungerford and Pollock, 2002).

Despite the potential benefits of screening and education, these activities are not carried out routinely in trauma centers. Limited resources during hospitalization, the singular focus on treating the immediate injury, and the perceived futility of making referrals for follow-up treatment all provided barriers to addressing substance abuse routinely. While there may be a greater opportunity during the course of rehabilitation to identify histories of substance use disorders, dramatically shorter lengths of stay and greater medical acuity of rehabilitation patients has reduced the attention given to issues viewed as psychosocial in nature.

Proposed strategies

Goal

Develop a structure in which the multiple agencies and organizations that serve persons with substance use disorders and traumatic injuries can meet, educate each other, identify specific opportunities and barriers, and develop a plan to address systematically the needs of this population. Given the scope of the problem, as well as the multiple issues and stakeholders involved, the structure developed should have sufficient resources to sustain a longer-term, systematic effort.

Principles

While there are many potential approaches to bringing together the stakeholders needed to achieve this goal, the chosen method should incorporate the following:

- Provide an opportunity for all involved to benefit from existing information about the scope of the problem of injury and substance use disorders, evidence-based methods for acute intervention, and the special needs and problems of accessing treatment for persons with disabilities arising from injury;
- Take advantage of the unique expertise and resources in each of the service-delivery systems working with these individuals;
- Find solutions that promote collaboration among stakeholders, including formal agreements for communication, consultation, and cooperative ventures;
- Allow adequate time and resources for evaluating impact and planning subsequent iterations to benefit from successes and failures.

Implementation

The Post-critical Care Trauma Commission believes the effects of alcohol and other drug use on injury outcomes, both human and economic, have been underestimated greatly. Substance abuse — current, previous, or resultant — complicates and often confounds trauma care and rehabilitation. Yet, it is equally evident to the commission that adequately addressing substance abuse will require an infusion of knowledge and funding resources not currently within the grasp of trauma care programs, rehabilitation providers, or the publicly funded substance abuse treatment system.

Therefore, the commission recommends further study of the barriers and opportunities for developing resources to address the following questions:

- **What is required to allow screening and intervention in acute medical settings to be implemented routinely?** Emergency departments, trauma programs, and rehabilitation units should be assisted in their capability for taking advantage of the “teachable moment” that can occur as the result of an injury.
- **What resources need to be made available to substance abuse treatment providers to improve the availability of services for individuals who have incurred disability as a result of injury?** The existing substance abuse treatment system should become an accessible and effective source of treatment for persons with disability due to injury.
- **How can projects be supported to identify and promote effective methods of integrated treatment for injured individuals who have co-occurring substance use disorders?** There appear to be significant gains, both human and economic, that could be achieved with greater attention to clinical programs to serve this population.

The commission also recommends consideration of potential stakeholders include, at a minimum, the following agencies and organizations: the state departments of Alcohol and Drug Addiction Services, Health, Public Safety; the Ohio Bureau of Workers’ Compensation; the Ohio Rehabilitation Services Commission; the American College of Surgeons Trauma Committee – Ohio Chapter; the Ohio Society of Trauma Nurse Coordinators; the Ohio Hospital Association; the Ohio Association of Emergency Medical Physicians; the Ohio Association of Rehabilitation Facilities; the Association of Ohio Childrens Hospitals; the Ohio Public Health Association; the Brain Injury Association of Ohio; the Ohio Association of County Behavioral Healthcare Authorities; and the Ohio Council of Behavioral Healthcare Providers.

References

Annegers, J. F., Grabow, J. D., Kurland, L. T., and Laws, E. R., Jr. (1980). The incidence, causes, and secular trends of head trauma in Olmstead County, Minnesota, 1935-1974. *Neurology* 30: 912-919.

Corrigan, J. D. (1995). Substance abuse as a mediating factor in outcome from traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*, 76, 302-309.

Gentilello, L. M., Duggan, P., Drummond, D., and Tonnesen, A., et al. (1988). Major injury as a unique opportunity to initiate treatment in the alcoholic. *American Journal of Surgery* 156: 558-561.

Gentilello, L. M., Rivara, F. P., Donovan, D. M., Jurkovich, G. J., Daranciang, E., and Dunn, C. W., et al. (1999). Alcohol interventions in a trauma center as a means of reducing the risk of injury recurrence. *Annals of Surgery* 230: 473-483.

Heinemann, A. W., Donohoe, R., Keen, M., and Scholl, S. (1988). Alcohol use by persons with recent spinal cord injuries. *Archives of Physical Medicine and Rehabilitation* 69: 619-624.

Hungerford, D. W. and Pollock, D. A. (eds) (2002). *Alcohol Problems among Emergency Department Patients: Proceedings of a Research Conference on Identification and Intervention*. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention; Atlanta, GA.

Reyna, T. M., Hollis, H. W., and Hulsebus, R. C. (1985). Alcohol-related trauma: the surgeon’s responsibility. *Annals of Surgery* 201: 194-197.

Rivara, F. P., Jurkovich, G. J., Gurney, J. G., and Seguin, D., et al. (1993a). The magnitude of acute and chronic alcohol abuse in trauma patients. *Archives of Surgery* 128: 907-913.

Rivara, F. P., Koespsell, T. D., Jurkovich, G. J., and Gurney, J. G., et al. (1993b). The effects of alcohol abuse on readmission for trauma. *Journal of the American Medical Association* 207(16): 1962-1964.

Soderstrom, C. A. and Cowley, R. A. (1987). A national alcohol and trauma center survey: Missed opportunities, failures of responsibility. *Archives of Surgery* 122: 1067-1071.

Waller, J. A. (1988). The physician’s role in preventing alcohol-related injuries. *Journal of the American Medical Association* 260: 2561-2562.



“The data presented by the commission point out a number of areas in which this aspect of the trauma system is in need of additional attention.”

Gary F. Joseph, *Interim director,
Ohio Public Safety*

THE OHIO TRAUMA FOLLOW-UP REGISTRY

Recommendation: A follow-up registry should be established to provide information about the long-term complications and outcomes for trauma-care patients. Data collection methodology should be an extension of the existing Ohio Trauma Registry and should provide information for local, regional and statewide prevention programming and health-care service planning.

Vision

Future examinations of issues and problems following critical trauma care should have the benefit of valid and reliable data from Ohio.

Description of the problem

In H.B. 138, the General Assembly created the Post-critical Trauma Care Commission and charged it “...to determine how to improve the accessibility, affordability, quality, and cost-effectiveness of post-critical adult and pediatric trauma care.” While there is considerable clinical experience and personal testimony to indicate needs persist and more systematic services are necessary, the commission determined there is little or no objective data to address questions such as:

- How many injury survivors experience long-term limitations in their day-to-day functioning?
- What kinds of injuries are more likely to result in long-term consequences?
- Do children have unique consequences of traumatic injuries? Do older adults?
- Are there services available to assist these individuals, and are they using them?
- How much do services cost, and are they effective?

Emergency medical services legislation enacted in 1992 established the authority for the Ohio Department of Public Safety to create the Ohio Trauma Registry. The registry, which became operational in 1999, is a database that contains information about all persons who have suffered an injury and are admitted to a hospital for at least 48 hours. The trauma registry provides information about the number of people in Ohio requiring trauma services, the cause and treatment of their injuries, and status at time of leaving the hospital. However, the registry does not provide information about longer-term consequences of injuries. Medical complications that persist after going home, problems that develop after hospital discharge, effects on independence in one’s home or community, difficulties in educational or vocational roles, or the impact on the individual’s family, all may be significant consequences of injury. These effects of trauma may also carry significant human and economic costs that should be considered when prioritizing prevention activities and planning service delivery systems.

BWC’s analysis of injuries that occurred in 1996 and resulted in workers’ compensation claims is included in Appendix D. The analysis allowed description of the types of services and costs, over the subsequent six years. Most remarkable was that 14 percents of the costs, and 21 percent of the services billed occurred after one year following the injury. These data support the presumption that important health-care issues occur over an extended period following injury.



Policy makers, service providers and the general public want reliable and valid data on which to base decisions regarding the effects of medical conditions, clinical interventions, and funding priorities. Lack of data about post-hospital consequences of traumatic injuries creates a significant gap in Ohio’s ability to address this major public health problem.

The target population of the proposed Ohio Trauma Follow-up Registry is defined in O.R.C. 4765 for trauma systems. The operational definition would parallel that used for the Ohio Trauma Registry. Patients in the trauma registry would be surveyed by phone at six-months post-injury, with further follow-ups at one and five years on sub-groups who have greater risk for disability. Survey respondents would be asked for information on persistent medical problems, health-care utilization since discharge, changes

in living situation, independence in daily activities, ability to engage in work or school, impact of injury on social and financial supports, and psychological functioning. Sampling would be constructed to allow conclusions about the state population and would include sufficient numbers of persons to allow detection of unique issues faced by any age group, gender, socioeconomic strata, type of insurance program, rural or urban community, and type of injury.

Data collection for the follow-up registry also should be an extension of the existing trauma registry. However, it is recommended respondent surveys be centralized and conducted under the auspices of the Trauma Committee convened by the Ohio Department of Public Safety to promote economies of scale and effectiveness of data collection methods. Legislative authority needed to establish and fund the registry should be congruent with Health Insurance Portability and Accountability Act (HIPAA) regulations, thus allowing Ohio trauma centers to provide contact information without patient consent. Beyond this contact information and data currently provided to the trauma registry, no other information or involvement would be required from participating hospitals.

The follow-up registry also would provide an opportunity to give additional information on resources for trauma patients who experience persistent problems due to their injury. All persons for whom contact information is available could be mailed informational brochures that would include statewide information and resource access points. Mailings could also be used to inform individuals about the follow-up registry and its purpose.

While the current Ohio Trauma Registry provides important information about the incidence of traumatic injuries, well-designed and selective follow-up of trauma patients will provide a complete picture of the impact of injury in Ohio. The Post-critical Trauma Care Commission is recommending creating the Ohio Trauma Follow-up Registry to provide much needed information on the consequences of traumatic injuries.

Proposed strategies

Goal

A trauma follow-up registry will provide objective information on which to base public and private policy decisions about the post-critical care and persistent needs of persons at risk of losing life or limb, or experiencing permanent disability or disfigurement. It will identify the nature and scope of the consequences of trauma, inform public policy that addresses the needs of persons who experience these injuries, provide information about access to services and supports, and guide clinical care research. The follow-up registry will allow reliable estimates of the human and economic costs of injuries — vital pieces of information for assessing the scope of this public health problem.

Principles

- The registry should serve all age, gender and socioeconomic groups, geographic regions, and types of injury.
- A public health model should be used to design and implement the registry.
- There should be public access to the data, while protecting the confidentiality of patient information.
- The registry should be flexible enough to adapt to changing needs while remaining consistent enough to be informative about low incidence conditions and outcomes.

Implementation

The Ohio Trauma Follow-up Registry is intended to provide reliable and valid information about the persistent needs of trauma patients. Prior to seeking on-going legislative support and authority for a comprehensive, statewide registry, a time-limited pilot of the methodology for data collection, database management and data analysis is considered essential to develop viable budget projections. Prior to conducting the pilot, support for pre-pilot research should be sought from the state EMS boards’ EMS/trauma grant program. The pilot phase will require new resources to allow for implementing and testing the recommended methodology. Costs for ongoing operation cannot be determined without piloting, and will require new resources as well.

There are three steps to implementing the Ohio Trauma Follow-up Registry:

- Conduct pre-pilot research projects;
- Gain legislative authority and funding to conduct a pilot project;
- Gain legislative authority and support for ongoing implementation.

Pre-pilot research

Specific research projects should be conducted to identify the best approaches to sampling, data collection, and providing linkage information. The existing mechanism for the state EMS boards’ EMS/trauma grant program should be sought for these projects. Projects addressing the following issues should be prioritized:

- Test methods of exchanging data with trauma centers, and using the information to contact patients;
- Test effectiveness of providing information and resource linkage to a toll-free telephone number and/or Web site;

- Analyze the trauma database to determine the sampling procedures for the levels of stratification proposed;
- Determine what issues should be addressed in the survey and the items that should be used.

The commission hopes grants addressing these issues can be funded beginning with the 2003 grant cycle. It may also be useful to allow submission of field-initiated ideas related to the conduct of a follow-up registry.

Pilot project

A large scale, pilot project is needed to determine the resources required for ongoing implementation of the follow-up registry. Based on the pre-pilot research results, a prospectus is recommended for describing the proposed methods and procedures of the follow-up registry, as well as products required to initiate a pilot. Funding will be needed from federal, state, and/or private resources for what will be a multi-year, but time-limited, project. The result of the pilot should be a thorough evaluation of the registry’s effectiveness and projection of costs for its ongoing implementation. Legislative authority as described in No. 4 and No. 8 below will be required to conduct the pilot.

The following conclusions, reached by the Post-critical Trauma Care Commission, should guide the pilot phase:

1. The Ohio Trauma Follow-up Registry should be designed and conducted to provide reliable and valid information about the consequences of traumatic injury, the needs of persons who experience these injuries, and the effective use of clinical-care resources.
2. The registry also should provide information to individuals and their families about services and supports available to assist them.
3. Target population for the registry should be defined in O.R.C. 4765 for trauma systems. The operational definition should parallel that used for the Ohio Trauma Registry.
4. Legislative authority should parallel the trauma registry, with oversight by the Trauma Registry Advisory Subcommittee. A subcommittee structure may be required for start-up or ongoing review. The current structure allows public members to participate, which allows inclusion of representatives of constituencies not currently involved in the Trauma Registry Advisory Subcommittee. An administrative structure parallel to the trauma registry should be authorized, giving implementation responsibility to the Ohio Department of Public Safety.
5. Data collection should be centralized and responsibility given to the Department of Public Safety. While responsibility will be co-located with that for the trauma registry, data collection and data-base management could be conducted directly or via contract.
6. Sampling of respondents for the follow-up registry should be constructed to allow generalization to the entire Ohio population and should include sufficient numbers of persons to allow detection of unique issues faced by any age group, gender, socioeconomic strata, type of insurance program, rural or urban community, and type of injury.

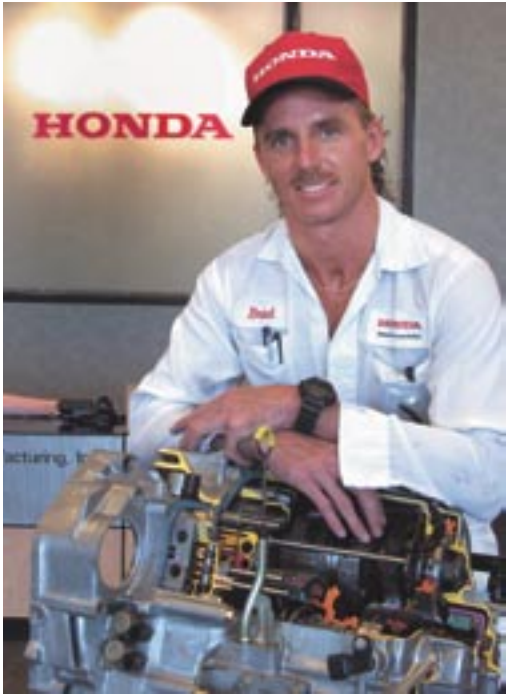
7. Telephone surveys should be conducted six months after the date of injury, with further follow-ups one and five years post-injury on trauma patients with greater risk for medical complications and disability.
8. Legislative authority should state the public health purpose of the registry so as to facilitate its congruence with the Health Insurance Portability and Accountability Act. Because patient contact information will need to be collected from trauma services, comprehensiveness will be enhanced greatly if hospitals are allowed to release personal identifying information without consent. Ascent for participation would be attained at the time of follow-up contact. Legislation should explicitly protect the confidentiality of Social Security Numbers, if it is decided that this information is required.

Legislative authority for ongoing operation

Eventual implementation of the actual operative registry will require statutory changes to the Ohio Revised Code. The following issues may need to be addressed:

- Purpose for collecting the data;
- Governance structure and its powers;
- Rulemaking authority;
- Authority to specify the data elements to be collected by rule;
- Confidentiality of data;
- Authority to collect Social Security Numbers;
- Funding;
- Authority to contract for the performance of functions and hire outside consultants;
- Mandate to ensure compliance and cooperation from hospitals or other organizations;
- Realistic time frame to have the pilot project and the registry in place and operating;
- Requirements for reporting to the General Assembly, EMS Board, or other entities;
- Immunity from liability for any potentially high-risk uses of the data (e.g., risk adjusting or outcome comparisons).

To promote using the data resulting from the follow-up registry, funds should be available for research projects on an ongoing basis. Expanding existing trauma commission research funds should be considered for this purpose.



Injury fact sheet

June 25, 2002
Contact: CDC Media Relations
770-488-4902

Acute Care, Disability, and Rehabilitation

Public Health Issue

- Each year, Americans make between 30 and 40 million emergency department visits for injuries. While the majority of injured patients are treated and released, many are admitted to inpatient trauma units and later receive rehabilitative services.
- Trauma systems deliver coordinated care, from acute care through rehabilitation, but they are not fully operational or do not exist in many parts of the nation. Where trauma systems are lacking, as many as 30% to 40% of deaths among trauma patients are due to preventable problems in clinical care, including missed diagnoses and treatment delays. After trauma systems are introduced, follow-up studies have shown as much as a 50% reduction in preventable trauma deaths.
- Each year, an estimated 80,000 Americans sustain a traumatic brain injury (TBI) that results in long-term disability. An estimated 5.3 million Americans live with TBI-related disabilities, including cognitive problems that affect their ability to perform daily activities.
- Nearly 200,000 people in the United States are living with a disability related to a spinal cord injury (SCI). Every year, another 11,000 are hospitalized for SCI.

CDC’s Role and Expertise

- CDC is the only organization in the federal government responsible for addressing all phases of injury research — from defining the problem to testing the effectiveness and public acceptance of an intervention — for the major causes of injury among all age groups. Funding state and local injury programs allows CDC to rapidly share findings from research with groups that can put the information to immediate use.
- CDC’s multidisciplinary research fosters innovative approaches to clinical preventive services. For example, recognizing that alcohol is often a factor in injury, CDC convened federal agencies and experts in alcohol research, emergency medicine, and trauma care to set a research agenda to improve such services as screening for alcohol problems in emergency departments.
- CDC research and programs frequently become the underpinning for reducing the impact of traumatic brain and spinal cord injuries, or for preventing the development of secondary conditions and other adverse outcomes. CDC findings provide crucial information to help communities prevent these kinds of injuries and disabilities.

The Future of Injury Research — What’s Next?

With extensive input from its academic research centers, national nonprofit organizations, and other federal agencies with a stake in injury prevention, CDC identified the top research priorities for acute care, disability, and rehabilitation — those research issues that CDC must address to fulfill its public health responsibilities. These priorities, published in the *CDC Injury Research Agenda*, will receive CDC’s greatest attention and resources.

Public Health Threat	Injury Center’s Research Priority
<i>Injury prevention services for at-risk patients treated in emergency departments and trauma centers are lacking.</i>	Develop and evaluate protocols that provide interventions for at-risk patients in acute care settings. Study ways to implement multiple services simultaneously.
<i>Despite evidence that trauma care systems save lives, many Americans are not served by a trauma system.</i>	Measure the benefits and costs of trauma care. Assess outcomes such as medical complications, functional status, and quality of life.
<i>People with traumatic brain or spinal cord injury face a range of secondary conditions, from medical conditions such as pressure ulcers, to behavioral changes such as depression and substance abuse.</i>	Increase understanding of risk factors for secondary conditions, especially among persons without access to state-of-the-art information and care. Develop more effective methods to treat and manage these conditions.
<i>Many people with injury-related disabilities do not get the services they need.</i>	Identify methods and strategies to link people with traumatic brain or spinal cord injury with needed services.
<i>Data from electronic, point-of-care clinical information systems are not routinely used for injury surveillance.</i>	Develop and evaluate data standards and methods of linking disparate systems to capture and report data about injuries and other acute health problems.
<i>A limited understanding of the costs and consequences of disabling injuries hinders resource allocation and policy decisions.</i>	Develop and apply methods to calculate population-based estimates of the incidence, costs, and long-term consequences of spinal cord injury and nonhospitalized, “mild” traumatic brain injury.
<i>Many populations affected by traumatic brain injury have not been well studied to date.</i>	Conduct TBI research among children, youth, working adults, institutionalized individuals, victims of intimate partner violence, and people within school systems and the criminal and justice systems.
<i>Studies to date suggest that limb injuries result in substantial disability and affect the ability to return to work.</i>	Conduct population-based studies to accurately describe the public health burden of limb injuries and suggest appropriate interventions to prevent these injuries and resulting disabilities.

Injuries are the leading cause of death for Americans under 45 and the leading cause of potential life lost before age 65. In 1999, nearly 150,000 Americans died from injuries, and one in ten was injured badly enough to seek treatment in an emergency department. The CDC Injury Research Agenda, developed by CDC’s Injury Center and its many partners, will help drive the national initiative to lower the rate of both unintentional and violence-related injuries, which will result in reduced human suffering and loss of life.

Section 6 of amended substitute H.B. 138 as enacted by the 123rd general assembly

The Director of Health shall organize and coordinate a temporary commission to determine how to improve the accessibility, affordability, quality, and cost-effectiveness of post-critical adult and pediatric trauma care. The commission’s study shall include, without limitation, consideration of appropriate transfer of adult and pediatric trauma victims from regional trauma centers to other health care facilities; physical, psychological, and vocational rehabilitation of adult and pediatric trauma victims; re-employment of trauma victims; social support mechanisms for families of adult and pediatric trauma victims; and mitigation of the effects of pediatric and geriatric trauma.

The Rehabilitation Services Commission, Department of Aging, Bureau of Workers’ Compensation, and Bureau of Employment Services shall participate in and assist with the commission’s study.

Within 120 days after the effective date of this act, the director shall appoint to the commission appropriate public health authorities; entities that represent injury victims; certified safety professionals; employers; employment training and placement services; agricultural organizations; highway safety and motorists’ organizations; health insurers; providers of social services to injury victims; nursing and rehabilitation institutions; victims of violent crime; hospitals; and professionals active in physical, psychological, and vocational therapy. Commission members shall have expertise in rehabilitation and retraining of injury victims, broadly represent relevant disciplines, and represent all regions of the state.

Within 120 days after the effective date of this act, the Speaker of the House of Representatives shall appoint to the commission one member of the majority party and one member of the minority party in the House of Representatives and the President of the Senate shall appoint to the commission one member of the majority party and one member of the minority party in the Senate.

In conducting its study and developing its recommendations, the commission can consult with and cooperate with the Trauma Committee of the State Board of Emergency Medical Services. The commission shall conclude its study and disband not later than three years after the effective date of this section, whereupon the director shall transmit the commission’s findings and recommendations to the Governor, General Assembly, chief executive of each state agency specified in this section, and other appropriate persons.

MEMBERSHIP OF THE POST-CRITICAL TRAUMA CARE COMMISSION

Member Name	Represented Agency/Organization
Sen. Steve Austria	Ohio Senate, Republican Caucus
Robert Bates	Ohio State Fire Chiefs Association
Sally Betz	Ohio Nurses Association
Jerrold Blackmore	Association of Ohio Philanthropic Homes, Housing & Services for the Aging
John Corrigan, Ph.D. (Chair)	Ohio Psychological Association
John Edwards	Ohio Bureau of Workers’ Compensation
Peter Feldkamp, D.C.	Ohio State Chiropractic Association
Mike Glenn	Ohio Department of Public Safety
Christopher Goff	Ohio Business Coalition on Health
June K. Gutterman, Ed.D.	Ohio Rehabilitation Services Commission
Sen. Robert Hagan	Ohio Senate, Democratic Caucus
Jill Huntley	Ohio Department of Job & Family Services
Cindy Iske (Co-chair)	Ohio Hospital Association
Tina Kiehmeyer	Ohio Bureau of Workers’ Compensation
Beverley Laubert	Ohio Department of Aging
Michael Link	Ohio Department of Alcohol & Drug Addiction Services
Sandra Miller, M.D.	Ohio State Medical Association
Suzanne Minnich	Brain Injury Association of Ohio
Jana Perry	Ohio Department of Education
Paul Platt	Ohio Association of Rehabilitation Facilities
Karen Nisbet Principe	Ohio Children’s Hospitals Association
Judy Roush	Ohio Farm Bureau Federation
Elaine Schiwy	National Association of Social Workers
Arthur Schlesinger	Ohio Legal Rights Service
Michael Smeltzer	Ohio Public Health Association
Suman Srinivasan	Ohio Rehabilitation Association
Larry Sowers	Ohio State Building Trades
Ron Suprenant, M.D.	Ohio Association of Health Plans
Michael Williams	American Physical Therapy Association
Sheila Young, L.S.W.	The Salvation Army

A longitudinal investigation of medical cost and treatment volume for traumatic injuries: 1996-2002

Ohio Bureau of Workers’ Compensation (BWC) research projects unit for the Ohio Post-critical Trauma Care Commission

Summary

This investigation of the long-term needs of people who suffer traumatic injuries demonstrates the medical needs of these individuals persist long after the acute phase of their treatment ends. Thirty-six percent of the medical payments and 45 percent of the services for traumatic injuries occurred from two months to five years following the injury. In the first month following a traumatic injury, most of the necessary services are provided by physicians and hospitals. As time passes, services are more often provided by non-physician professionals and are likely to involve rehabilitation activities. The proposed Ohio Trauma Follow-up Registry would enable Ohio’s health-care providers to plan for the long-term needs of these individuals and provide the necessary services at the appropriate time.

Introduction

H.B. 138, enacted by the 123rd Ohio General Assembly created the Post-critical Trauma Care Commission. The commission was established to “...determine how to improve the accessibility, affordability, quality, and cost-effectiveness of post-critical adult and pediatric care.” The commission has been meeting since July 2001 to draft recommendations for the Governor, General Assembly and the sponsoring state agencies.

One proposed recommendation is that “a follow-up registry be established to provide data on the longer-term outcomes for trauma-care patients.” A follow-up registry would provide “objective information on which to base public and private policy decisions about the post-critical care and persistent needs of persons at risk of losing life or limb, or experiencing permanent disability or disfigurement. It would (a) identify the nature and scope of the consequences of trauma, (b) inform public policy addressing the needs of persons who experience these injuries, (c) provide information about access to services and supports, and (d) allow clinical research.”

The proposed follow-up registry is viewed as an extension of the Ohio Trauma Registry. The Ohio Department of Public Safety administers the Ohio Trauma Registry , which became operational in 1999, with oversight by the Trauma Registry Advisory Committee. It is a database of information on all people who suffer an injury and are admitted to a hospital for at least 48 hours. The database includes information about the number of people who require trauma services, the cause of the injuries, the treatment provided and the status at discharge from the hospital. One limitation of the Ohio Trauma Registry is that it does not provide information on the long-term consequences of injuries.

The claim records of the BWC provide a unique opportunity to conduct longitudinal investigations of injuries prior to establishing a follow-up registry. BWC claims data include injuries sustained by the worker, the type and timing of the treatment provided, and the treatment cost. By statute, the injured worker is eligible to receive medical treatment for consequences of an industrial injury for as long as necessary, allowing study of the injuries and their long-term effects.

The Ohio Trauma Registry collects information on injuries coded according to the International Classification of Diseases Revision 9 (ICD-9). The code groups are displayed in table 1.

Table 1. ICD-9 code groups included in the Ohio Trauma Registry.

Code group	Group description
800-805	Skull fracture
802-803	Facial fracture
805-807	Spinal fracture
807-808	Chest fracture (rib or sternum)
808-809	Pelvis fracture
810-812	Shoulder girdle fracture
812-820	Upper extremity fracture
820-830	Lower extremity fracture
830-840	Dislocation (includes jaw)
850-851	Concussion
851-852	Brain contusion
852-855	Intracranial hemorrhage
860-861	Hemo/pneumothorax
861.2-861.3	Lung injury
863-864	Gastrointestinal hollow organ injury
864-865	Liver injury
865-866	Spleen injury
870-874	Scalp or facial laceration
875-880	Torso laceration
880-887	Upper extremity laceration or minor amputation
887-888	Upper extremity amputation
890-896	Lower extremity laceration or minor amputation
900-905	Vascular injury
941-949	Burns
950-958	Nerve or spinal cord injury

It should be noted that BWC’s claims data differ from the Ohio Trauma Registry data in two important ways. First, BWC records include only persons who are injured in the course of their employment. Thus, the claims records don’t include data on pediatric or childhood injuries, very little data on teenagers and no data on injuries that befall persons who are not working or are retired. Second, the available records do not permit identification of injuries that require a 48-hour stay in a hospital, one of the Ohio Trauma Registry’s criteria. In light of these differences, BWC data can be expected to include a narrower demographic range of injured persons and a broader range of severity, i.e., from relatively minor to quite significant injuries within each code group. It is assumed that if it were possible to exclude the injuries that do not require admission to a hospital for at least 48 hours, the findings of this study would be amplified.

Methodology

All claims involving the 25 ICD-9 code groups listed above with dates of injury between Jan. 1, 1996, and Dec. 31, 1996, were retrieved from the BWC Data Warehouse. Treatment types and costs were identified by retrieving the first service date and the ICD-9 code for which the provider submitted the bill, bill category (hospital, non-physician, nursing service, other, physician, rehabilitation, vendor, and drug), line item units of service (UOS) provided, reimbursed amount (the amount paid to the provider). The first service date was used to create five treatment intervals that correspond to the anticipated follow-up intervals:

- Interval 1 included treatments provided within 30 days of the date of injury;
- Interval 2 included treatments provided two to six months following the date of injury;

- Interval 3 included treatments provided from six months to one year following the date of injury;
 - Interval 4 included treatments provided from one to five years following the date of injury;
 - Interval 5 included treatments provided more than five years following the date of injury.
- The reimbursed amount and units of service were summed for each ICD-9 group, each bill category and each treatment interval.

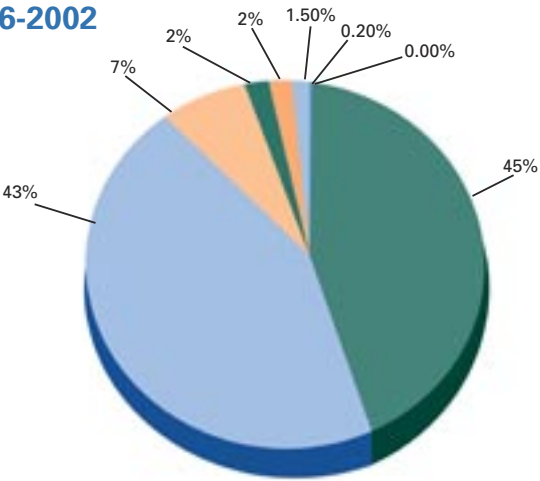
Results

The 25 ICD-9 groups included 106,590 claims. However, since any one injured worker might suffer injuries in more than one ICD-9 grouping, an additional analysis was performed to identify unique individuals. The study sample included 91,738 injured workers. Seventy-five percent were male and 25 percent were female. The mean age of the sample was 41 years and, mean age at injury was 35 years.

The totals and percentages of payments and units of service and percentages for each bill category are displayed in table 2. The table shows that \$74,275,624.38 was paid for medical services from the date of injury to 2002. Forty-five percent of these expenses were for physician services and 43 percent for hospital services. The total units of service for the same period was 2,546,672, with 31 percent (784,352) provided by physicians and 44 percent (1,116,526) in hospitals. The percentage of total medical payments for each bill category is shown in chart 1.

Table 2. Amount paid and units of service billed by bill category.				
Bill category	Amount paid	Amount paid %	Units of service billed	Units of service billed %
Grand total	\$ 74,275,624.38		2,546,672	
Physician	\$ 33,098,017.46	45%	784,352	31%
Hospital	\$ 31,906,549.08	43%	1,116,526	44%
Non-physician	\$ 4,938,977.03	7%	219,892	9%
Nursing service	\$ 1,668,703.53	2%	42,236	2%
Rehabilitation	\$ 1,349,017.97	2%	197,087	8%
Vendor	\$ 1,128,407.72	2%	111,042	4%
Drug	\$ 184,821.59	0%	59,274	2%
Other	\$ 1,130.00	0%	16,263	1%

Medical Payments for Traumatic Injuries
by Bill Category: 1996-2002



The proportions of medical payments during each treatment interval are displayed in chart 2. Sixty-four percent of the payments, totaling \$47,802,315.65, were for treatment services provided during the month following the date of injury. Fifty-five percent of the units of service, totaling 1,411,935, were provided during the same period. Fifteen percent of the payments (\$11,289,466.33) and 17 percent of the units of service (437,215) were provided from one to six months following the injury. From six months to one year following the date of injury, 6 percent of payments (\$4,769,215.50) and 7 percent of units of service (\$168,573) were provided. The first year following the date of injury accounted for 85 percent of the total medical costs and for 79 percent of the units of service provided to injured workers. Table 3 presents the distribution of medical costs and units of service for each treatment interval.

Table 3. Amount paid and units of service billed by treatment interval.				
Treatment Interval	Amount paid	Amount paid %	Units of service billed	Units of service billed %
Grand total	\$ 74,275,624.38		2,546,672	
1 (DOI + 30 days)	\$ 47,802,315.65	64%	1,411,935	55%
2 (DOI + 1-6 months)	\$ 11,289,466.33	15%	437,215	17%
3 (DOI + 6 months-1 year)	\$ 4,769,215.50	6%	168,573	7%
4 (DOI + 1-5 years)	\$ 9,401,275.57	13%	465,135	18%
5 (DOI + 5 years or more)	\$ 1,013,351.33	1%	63,814	3%

Tables 4 and 5 show the percentages of payments and units of service by bill category and treatment interval. It is not surprising the hospital service volume and payments to hospitals decrease over time following the injury. Physician payments and service volume also decrease over time, but at a lesser rate. Payments in the non-physician category (e.g., physical, occupational and other therapists) increase one to six months following the date of injury and continue for the duration of the period studied. It is also evident that services in the rehabilitation category become much more important later in the history of the injury. Payments in this category constitute only 2 percent of total payments and 8 percent of total units of service, but the volume of services is highest in the one to five years and five years or more treatment intervals.

Table 4. Percentage amount paid by bill category and treatment interval.						
Bill category	1 (DOI + 1 month)	2 (DOI + 1-6 months)	3 (DOI + 6 months to 1 year)	4 (DOI + 1-5 years)	5 (DOI + 5 years or more)	totals
All categories	64%	15%	6%	13%	1%	100%
Hospital	54%	30%	24%	16%	18%	43%
Physician	44%	46%	46%	44%	42%	45%
Non-physician	1%	19%	19%	13%	12%	7%
Nursing service	0%	2%	4%	11%	5%	2%
Rehabilitation	0%	1%	4%	10%	12%	2%
Vendor	0%	2%	3%	5%	10%	2%
Drug	0%	0%	0%	1%	1%	0%
Other	0%	0%	0%	0%	0%	0%

Table 5. Percentage of units of service provided by bill category and treatment interval.						
Bill category	1 (DOI + 30 days)	2 (DOI + 31–183 days)	3 (DOI + 184–365 days)	4 (DOI + 1-5 years)	5 (DOI + 5 years or more)	Totals
All categories	55%	17%	7%	18%	3%	100%
Hospital	60%	33%	26%	15%	11%	44%
Physician	35%	28%	28%	25%	13%	31%
Non-physician	2%	26%	22%	10%	6%	9%
Nursing service	0%	1%	15%	30%	41%	8%
Rehabilitation	1%	4%	4%	13%	13%	4%
Vendor	1%	4%	3%	3%	1%	2%
Drug	1%	3%	2%	4%	15%	2%
Other	1%	1%	1%	0%	0%	1%

Discussion

This brief investigation of the long-term needs of persons who suffer traumatic injuries demonstrates the medical needs of these individuals persist long after the acute phase of their treatment ends. Claims records of injured workers, retrieved from BWC’s Data Warehouse, show that 64 percent of payments and 55 percent of units of service provided for traumatic injuries occur in the first month following an injury. The months that follow, up to five years after the injury, account for 36 percent of the payments and 45 percent of the services provided to these individuals. Clearly, individuals who suffer traumatic injuries may continue to require treatment for up to five years following the injury.

The investigation also demonstrates how these needs change over time. It is hardly surprising that, in the first month following a traumatic injury, physicians and hospitals provide most of the necessary services. Physicians continue to provide a significant proportion of services for the duration of the study period. However, as time passes, services are more often provided by non-physician professionals and are likely to involve rehabilitation activities.

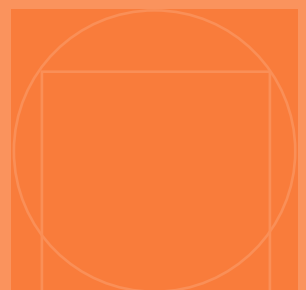
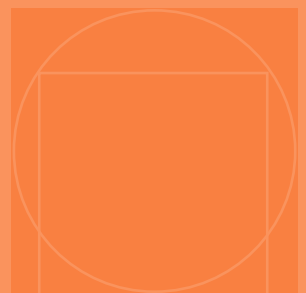
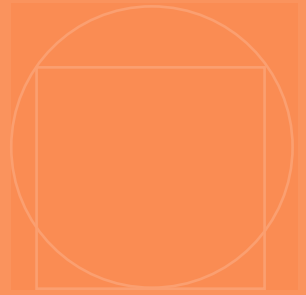
While the population served by BWC does not precisely correspond to the population the Ohio Trauma Registry monitors, this study suggests individuals who sustain an injury involving “risk of losing life or limb, or experiencing permanent disability or disfigurement” have continuing needs for treatment and care long after acute treatment ends. At the present time, the State of Ohio has no means of systematically identifying and responding to these needs. The proposed Ohio Trauma Follow-up Registry would provide timely and statistically sound data on the needs of trauma patients at several points in the recovery process. It would enable Ohio’s health-care providers to plan for these individuals’ long-term needs and provide the necessary services at the appropriate time.

Appendix E

Letters of support for the Post-critical Trauma Care Commission’s recommendations

The following organizations presented letters of support for the research and recommendations provided by the Post-critical Trauma Care Commission. Members of the commission wish to acknowledge and thank these organizations for their support.

- American Physical Therapy Association, Ohio Component, Jonathan Cooperman, P.T., J.D., M.S., president
- Association of Ohio Philanthropic Homes, Housing and Services for the Aging, John Alfano, president/CEO
- Brain Injury Association of Ohio, Philip E. Cole, president
- Central Ohio Trauma System, Jonathan I. Groner, M.D., F.A.C.S., president
- Ohio Association of Professional Fire Fighters, Kevin Watts, president
- Ohio Association of Rehabilitation Facilities, Julie A. Keil, M.P.A., executive director
- Ohio Bureau of Workers’ Compensation, James Conrad, administrator/CEO
- Ohio Children’s Hospital Association, Andrew Carter, president
- Ohio Department of Aging, Joan W. Lawrence, director
- Ohio Department of Alcohol and Drug Addiction Services, Gary Q. Tester, director
- Ohio Department of Education, Susan Tave Zelman, superintendent of public instruction
- Ohio Department of Public Safety, Gary F. Joseph, interim director
- Ohio Farm Bureau, John C. Fisher, executive vice president
- Ohio Fire Chiefs’ Association Inc., Chief Stan Crosley, president
- Ohio Hospital Association, Bridget Gargan, vice president, State Policy & Advocacy
- Ohio Job & Family Services, Tom Hayes, director
- Ohio Legal Rights Service, Carolyn S. Knight, executive director
- Ohio Nurses Association, Gingy Harshey-Mead, M.S.N., R.N., C.N.A.A., chief executive officer
- Ohio Osteopathic Association, Paul A. Martin, D.O., president
- Ohio Psychological Association, Michael O. Ranney, M.P.A., executive director
- Ohio Public Health Association Inc., Ruth Shrock, president
- Ohio Rehabilitation Association, Robin Markey, president
- Ohio Rehabilitation Services Commission, John M. Connelly, executive director
- Ohio Society of Trauma Nurse Coordinators, Vickie Graymire, R.N., M.S., C.E.N., president
- Ohio State Medical Association, William C. Sternfeld, M.D., president
- Ohio State Chiropractic Association, Peter D. Feldkamp, D.C., president
- The Salvation Army, Major Paul Cain, area coordinator
- State of Ohio Rehabilitation Services Commission, John M. Connelly, executive director





Sub. S.B. 124

124th General Assembly
(As Passed by the General Assembly)

Sens. Jordan, Amstutz, Austria, DiDonato, Randy Gardner, Harris, Hottinger, Jacobson, Spada, Wachtmann, Ryan

Reps. Jolivet, Gilb, Schuring, Kearns, Roman, McGregor, Raga, Patton, Seitz, Kilbane, Beatty, Hartnett, Schmidt, Faber, Brinkman, Trakas, Setzer, D. Miller, Seaver, Coates, Schneider, Niehaus, Flowers, Distel, Carano, Allen, Sferra, Clancy, Young, Buehrer, Reidelbach, Schaffer, Hughes, Hoops, Rhine, G. Smith

Effective date: *

ACT SUMMARY

- Requires the imposition of one or more sanctions, including civil penalties, for operating one of the following health care facilities without a license: ambulatory surgical facility, freestanding dialysis center, freestanding inpatient rehabilitation facility, freestanding birthing center, freestanding radiation therapy center, or freestanding or mobile diagnostic imaging center.
- Authorizes the Director to impose one or more sanctions against a licensed health care facility for failure to comply with statutory requirements or administrative rules establishing quality standards.
- Requires an ambulatory surgical facility to require each physician who practices at the facility to comply with all statutes related to obtaining informed consent from a patient.

** The Legislative Service Commission had not received formal notification of the effective date at the time this analysis was prepared. Additionally, the analysis may not reflect action taken by the Governor.*

- Creates an immunity for ambulatory surgical facilities from liability for a physician's failure to obtain informed consent from a patient unless the physician is an employee of the ambulatory surgical facility.
- Specifies procedures that a hospital must follow in applying to the American College of Surgeons for verification or reverification as a trauma center.
- Provides that a hospital may operate as a trauma center under provisional status in the following circumstances: (1) after it properly applies for verification or reverification, (2) until the final results of its reverification are received, if its application was submitted within one year before the verification ceased, and (3) if the process of applying for verification or reverification was initiated on or before May 20, 2002.
- Specifies the period of time during which a trauma center may operate under provisional status.
- Requires a hospital to provide prompt written notice of its status as a trauma center or provisional trauma center to the Director of Health, Emergency Medical Services Division of the Department of Public Safety, and the physicians and physician advisory boards serving the emergency medical services region.

CONTENT AND OPERATION

HEALTH CARE FACILITIES

Sanctions for operating a health care facility without a license

(secs. 3702.30 and 3702.32)

Ohio law prohibits the following health care facilities from operating without a license issued by the Director of Health: ambulatory surgical facilities, freestanding dialysis centers, freestanding inpatient rehabilitation facilities, freestanding birthing centers, freestanding radiation therapy centers, and freestanding or mobile diagnostic imaging centers. Prior law, however, did not specify penalties for violating the prohibition.

Under the act, if the Director determines that one of these health care facilities is operating without a license, the Director is required to do one or more of the following:

(1) Provide an opportunity for the health care facility to apply for a license within a specified time, not exceeding 30 days after the health care facility receives the order;

(2) Issue an order requiring that the facility cease its operations;

(3) Issue an order prohibiting the facility from performing certain types of services;

(4) Impose a civil penalty of not less than \$1,000 and not more than \$250,000;

(5) Impose an additional civil penalty of not less than \$1,000 and not more than \$10,000 for each day the facility operates without a license.

The act requires the Director to adopt rules governing the issuance of orders and the imposition of civil penalties, including a scale for determining the amount of the penalties.

Sanctions for violations by a licensed health care facility

(sec. 3702.32)

The act authorizes the Director to impose sanctions against a health care facility for violations other than operating without a license. The sanctions may be imposed for violating any provision of the quality standards established in rules adopted by the Director and for violating any of the statutes under which the facility is licensed. If the Director determines that a violation has occurred, the Director may do any or all of the following:

(1) Provide an opportunity for the health care facility to correct the violation within a specified period of time;

(2) Revoke, suspend, or refuse to renew the facility's license;

(3) Prior to or during the pendency of an administrative hearing, issue an order that prohibits the facility from performing certain types of services;

(4) Provide an opportunity for the facility to correct the violation;

(5) Impose a civil penalty of not less than \$1,000 and not more than \$250,000;

(6) Impose an additional civil penalty of not less than \$500 and not more than \$10,000 for each day the facility fails to correct the violation.

Informed consent requirements

(secs. 2317.54, 3702.30(C) and (D), and 3702.32(C))

Ambulatory surgical facilities

Under the act, every ambulatory surgical facility must require each physician who practices at the facility to comply with all relevant provisions in the Revised Code that relate to the obtaining of informed consent from a patient. While the Revised Code does not contain a general provision requiring informed consent for all types of medical procedures, there are provisions that apply to specific procedures. For example, criminal penalties can be imposed against a person who performs or induces an abortion without the patient's informed consent.

As a condition of receiving a license to operate an ambulatory surgical facility, the act requires the facility to demonstrate to the Director that it satisfies the act's informed consent compliance requirements.

All health care facilities

If the Department of Health finds that a physician employed in an health care facility is not complying with any informed consent compliance requirement, the act requires the Department to report its findings to the State Medical Board, the physician, and the facility.¹ The act specifies that this requirement does not create a new cause of action or substantive legal right against a health care facility and in favor of a patient who allegedly sustains harm as a result of the failure of the patient's physician to obtain the patient's informed consent before performing a procedure on or otherwise caring for the patient in the facility.

Under the act, if, after making its report, the Department finds that the physician has persisted in the reported violation at the same health care facility and the facility has not taken reasonable steps to correct the physician's violation, the Department may, after providing the facility an opportunity for a hearing pursuant to the Administrative Procedure Act (R.C. Chapter 119.), impose a civil penalty of not less than \$1,000 and not more than \$50,000 on the facility.

¹ *Even though it requires only ambulatory surgical facilities to require physicians to comply with informed consent requirements in the Revised Code, the act requires the Department of Health to report violations of such requirements that occur in any of the health care facilities subject to the act.*

Use of funds from civil penalties

(sec. 3702.31)

Moneys collected from imposition of civil penalties under the act are to be deposited into the Quality Monitoring and Inspection Fund and used to administer and enforce the Department of Health's health care facility licensing program. The money may also be used in administering and enforcing provisions of continuing law that require health care providers of certain specialized services to meet safety and quality-of-care standards established in rules adopted by the Director.²

Injunctions

(sec. 3702.32(B) and (D))

If a health care facility does not comply with an order issued by the Director requiring the facility to cease its operations or prohibiting the facility from performing certain types of services, the Director is authorized by the act to seek an injunction enjoining the facility from not complying with the order.³ The petition for the injunction must be filed in the court of common pleas of the county in which the health care facility is located. The act requires the court to grant an injunction on a showing that the facility is operating without a license or is providing the types of services prohibited by the Director's order.

Immunity

(sec. 2317.54)

Under continuing law, a hospital, home health agency, or provider of a hospice care program is immune from liability for a physician's failure to obtain informed consent from a patient before performing a procedure on or otherwise caring for the patient, unless the physician is an employee of the hospital, home health agency, or provider. The act extends this immunity to ambulatory surgical facilities.

² *The health care services that must meet safety and quality-of-care standards are solid organ and bone marrow transplantation, stem cell harvesting and reinfusion, cardiac catheterization, open-heart surgery, obstetric and newborn care, pediatric intensive care, operation of linear accelerators, operation of cobalt radiation therapy units, and operation of gamma knives.*

³ *This provision of the act has incorrect division cross references.*

References to original rules

(sec. 3702.30)

The act eliminates provisions that referred to the deadlines that applied to the original adoption of rules establishing quality standards for health care facilities.

HOSPITAL TRAUMA CENTERS

Trauma centers

(secs. 3727.09, 3727.10, and 4765.50)

Beginning November 3, 2002, continuing law prohibits a hospital from knowingly representing that it is able to provide adult or pediatric trauma care that is inconsistent with its level of categorization as a trauma center or making an inappropriate transfer of a trauma patient. At the same time, continuing law prohibits a physician from purposefully admitting a trauma patient to a hospital that is not a trauma center or failing to transfer trauma patients to a trauma center in accordance with the law or protocol and transfer agreements.

The act clarifies the effective date of these provisions by specifying that the provisions apply on and after November 3, 2002.

Verification of trauma centers

(secs. 3727.101 and 4765.01)

To be a trauma center, an Ohio hospital must be verified as an adult or pediatric trauma center by the American College of Surgeons.⁴ The act establishes the following requirements pertaining to a hospital's application for verification or reverification:

(1) If a hospital is seeking initial verification as an adult or pediatric trauma center, verification at a different level, or reverification after having ceased to be verified for one year or longer, the hospital must submit an application to the American College of Surgeons for a consultation visit.

(2) If a hospital is seeking reverification after having ceased to be verified for less than one year, the hospital must submit an application for either a consultation visit or a reverification visit.

⁴ *Until December 31, 2004, certain pediatric trauma centers may operate under a designation issued by the Director of Health (sec. 3727.081, not in the act).*

(3) The hospital must undergo the visit and obtain a written report of the results of the visit. If the report is not obtained on or before one year after the application for the visit is submitted, the hospital must submit a new application.

(4) Not later than one year after obtaining a report of the results of the visit, a hospital is permitted to apply to the American College of Surgeons for verification or reverification as an adult or pediatric trauma center if certain conditions are met. First, the hospital's chief medical officer and chief executive officer must certify in writing to the hospital's governing board that the hospital is committed and able to provide adult or pediatric trauma care consistent with the level of verification or reverification being sought. Second, the hospital's governing board must adopt a resolution stating that the hospital is committed and able to provide adult or pediatric trauma care consistent with the level of verification or reverification being sought. Third, the hospital's governing board must approve a written plan and timetable for obtaining the level of verification or reverification being sought, including provisions for correcting at the earliest practicable date any deficiencies identified in the report obtained from the visit.

Provisional status trauma centers

(secs. 3727.101 and 4765.01)

The act recognizes as trauma centers certain hospitals that are not verified by the American College of Surgeons. Under the act, a hospital is permitted to operate as a trauma center "under provisional status," as follows:

(1) On submission of an application for verification or reverification from the American College of Surgeons, in accordance with the act's provisions regarding applications.

(2) Until it receives the final results of its reverification, if the application was submitted within one year before it ceased to be verified.

Under the act, a trauma center operating under provisional status must limit its provisional status activities to those activities authorized by the level of verification or reverification being sought. The trauma center must also make a reasonable, good faith effort to comply with all requirements established by the American College of Surgeons that must be met for the level of verification or reverification being sought.

Ceasing operation under provisional status

The act requires a hospital to cease operating as a trauma center under provisional status if any of the following applies:

(1) The application for verification or reverification is denied, suspended, terminated, or withdrawn.

(2) In the case of a hospital seeking initial verification, verification at a different level, or reverification after having ceased to be verified for one year or longer, the hospital has not obtained verification or reverification by the date that occurs 18 months after commencing to operate under provisional status.

(3) In the case of a hospital seeking reverification after having ceased to be verified for less than one year, the hospital has not obtained reverification by the date that occurs one year after commencing to operate under provisional status.

Under the act, a hospital that is required to cease to operate as an adult or pediatric trauma center under provisional status must do all of the following:

(1) Except as otherwise provided by federal law, at the earliest practicable date transfer to one or more appropriate trauma centers all trauma patients in the hospital to whom the hospital is not permitted to provide trauma care.

(2) Promptly comply with the laws that prohibit a hospital from misrepresenting its trauma center status and from improperly admitting trauma patients.

(3) Not later than 180 days after ceasing to operate under provisional status, comply with the trauma care laws according to its current status by adopting appropriate trauma care protocols and entering into appropriate patient transfer agreements. The act specifies that a hospital is not in violation of the trauma care laws during the time it develops different trauma care protocols and enters into different patient transfer agreements.

A hospital that ceases to operate as an adult or pediatric trauma center under provisional status may not operate as an adult or pediatric trauma center under provisional status until two years have elapsed since it ceased to operate under that status.

Availability of records

The act provides that a trauma center operating under provisional status must make available for public inspection during normal working hours a copy of its declarations to being committed and able to provide trauma care and a copy of its application for verification or reverification. On request, the trauma center must provide a copy of the documents. The trauma center is permitted to charge a reasonable fee to cover the necessary expenses incurred in furnishing the copies, except that no fee can be charged if the copies are being furnished to the Director of Health.

On request, the trauma center must furnish to the Director a copy of the report of the consultative or reverification visit obtained from the American College of Surgeons and a copy of the plan and timetable for obtaining verification. The act specifies the following:

- (1) Patient-identifying information can be omitted.
- (2) Submission of the documents does not waive any privilege or right of confidentiality that otherwise applies to the documents and the information in them.
- (3) The documents and the information in them are not public records and cannot be disclosed to any person except employees of the Department of Health who are expressly authorized by the Director to examine the copies and information in them.
- (4) The documents and information in them are not subject to discovery or introduction into evidence in a civil action, except an action brought by the Director against the trauma center or a person that authorized, approved, or created the original documents and the information in them.

Pending applications for verification

Irrespective of its provisions regarding the receipt of a report of the results of a consultation visit or reverification visit from the American College of Surgeons, the act provides that a hospital may operate under provisional status if it submitted an application for a consultation visit or reverification visit on or before May 20, 2002. The act requires the hospital to do all of the following:

- (1) Comply substantively with the act's requirements to attest to the hospital's commitment and ability to provide trauma care;
- (2) Approve through its governing board a written plan and timetable for obtaining the level of verification or reverification being sought, including provisions for correcting at the earliest practicable date any deficiencies identified in the exit interview and any subsequent report received;
- (3) Comply with all other provisions of the act applicable to the operation of trauma centers under provisional status, including the act's provisions expressing when a hospital must cease operating under provisional status.

Trauma center notices to state and local entities

(sec. 3727.102)

The act requires a hospital to provide prompt written notice of its trauma center status to the Director of Health, the Emergency Medical Services Division of the Department of Public Safety, and the physicians and physician advisory boards serving as regional directors and regional advisory boards for the applicable emergency medical service region. Specifically, a notice must be provided when any of the following occurs:

(1) The hospital ceases to be an adult or pediatric trauma center verified by the American College of Surgeons.

(2) The hospital changes its level of verification as an adult or pediatric trauma center verified by the American College of Surgeons.

(3) The hospital commences to operate as an adult or pediatric trauma center under provisional status.

(4) The hospital changes the level of verification or reverification it is seeking under its provisional status.

(5) The hospital ceases to operate under its provisional status.

(6) The hospital receives verification or reverification in place of its provisional status.

HISTORY

ACTION	DATE	JOURNAL ENTRY
Introduced	06-06-01	p. 626
Reported, S. Health, Human Services & Aging	06-28-01	pp. 778-779
Passed Senate (32-0)	06-28-01	p. 782
Reported, H. Health & Family Services	05-21-02	p. 1787
Passed House (95-0)	05-22-02	pp. 1794-1795
Senate concurred in House amendments (28-0)	05-23-02	pp. 1814-1815

02-sb124.124/jc



STATE OF OHIO

A REASSESSMENT OF EMERGENCY MEDICAL SERVICES

February 15-17, 2011

**National Highway Traffic
Safety Administration
Technical Assistance Team**

**Christoph Kaufmann, MD, MPH, FACS
D. Randy Kuykendall
W. Dan Manz
Susan D. McHenry, MS
Curtis Sandy, MD, FACEP
Jolene R. Whitney, MPA**

TABLE OF CONTENTS

Subject	Page
BACKGROUND	4
ACKNOWLEDGMENTS	7
INTRODUCTION	8
A. REGULATION AND POLICY	10
Standard	10
Status	10
Recommendations.....	15
B. RESOURCE MANAGEMENT	17
Standard	17
Status	17
Recommendations.....	18
C. HUMAN RESOURCES AND EDUCATION	20
Standard	20
Status	21
Recommendations.....	21
D. TRANSPORTATION	24
Standard	24
Status	24
Recommendations.....	25
E. FACILITIES	27
Standard	27
Status	27
Recommendations.....	28
F. COMMUNICATIONS	30
Standard	30
Status	31
Recommendations.....	32
G. PUBLIC INFORMATION AND EDUCATION	33
Standard	33
Status	33
Recommendations.....	35
H. MEDICAL DIRECTION.....	36
Standard	36
Status	36
Recommendations.....	38
I. TRAUMA SYSTEMS.....	39
Standard	39
Status	39
Recommendations.....	42

J. EVALUATION.....	43
Standard	43
Status	44
Recommendations.....	45
K. PREPAREDNESS.....	46
Standard	46
Status	46
Recommendations.....	48
L. CURRICULUM VITAE	49

BACKGROUND

Injury is the leading cause of death for persons in the age group one through 44 as well as the most common cause of hospitalizations for persons under the age of 40. The financial costs of injuries are staggering: injuries cost billions of dollars in health care and social support resources. In 1995, for example, the lifetime costs of all injuries were estimated at \$260 billion annually. These estimates do not include the emotional burden resulting from the loss of a child or loved one, or the toll of severe disability on the injured person and his or her family. Each year over 37,000 people lose their lives on our nation's roads, and approximately 70 percent of those fatalities occur on rural highways. The National Highway Traffic Safety Administration (NHTSA) is charged with reducing death and injury on the nation's highways. NHTSA has determined it can best use its limited EMS resources if its efforts are focused on assisting States with the development of integrated emergency medical services (EMS) programs which include comprehensive systems of trauma care.

To accomplish this goal, in 1988 NHTSA developed a Technical Assistance Team (TAT) approach which permitted states to utilize highway safety funds to support the technical evaluation of existing and proposed emergency medical services programs. Following the implementation of the Assessment Program, NHTSA developed a Reassessment Program to assist those states in measuring their progress since the original assessment. The Program remains a tool for States to use in evaluating their statewide EMS programs. The Reassessment Program follows the same logistical process, and now uses the same ten component areas plus the area of preparedness with updated standards. The standards now reflect current EMS philosophy and allow for the evolution into a comprehensive and integrated health management system, with regional accountable systems of care, as identified in the 2006 IOM Report on the Future of Emergency Care. NHTSA serves as a facilitator by assembling a team of technical experts who demonstrate expertise in emergency medical services development and implementation. These experts demonstrate leadership and expertise through involvement in national organizations committed to the improvement of emergency medical services throughout the country. Selection of the Technical Assistance Team is also based on experience in special areas identified by the requesting State. Examples of specialized expertise include experience in the development of legislative proposals, data gathering systems, and trauma systems. Experience in similar geographic and demographic situations, such as rural areas, coupled with knowledge in providing emergency medical services in urban populations is essential.

The Ohio Department of Public Safety, Division of Emergency Medical Services (DEMS) requested the assistance of NHTSA. NHTSA agreed to utilize its technical assistance program to provide a technical reassessment of the Ohio Statewide EMS program. NHTSA developed a format whereby the DEMS staff coordinated comprehensive briefings on the EMS system.

The TAT assembled in Mt. Sterling, Ohio on February 15-17, 2011. For the first day and a half, over 20 presenters from the State of Ohio, provided in-depth briefings on EMS and trauma care, and reviewed the progress since the 2001 Reassessment. Topics for review and discussion included the following:

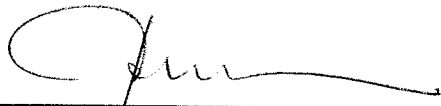
General Emergency Medical Services Overview of System Components

- Regulation and Policy
- Resource Management
- Human Resources and Education
- Transportation
- Facilities
- Communications
- Trauma Systems
- Public Information and Education
- Medical Direction
- Evaluation
- Preparedness

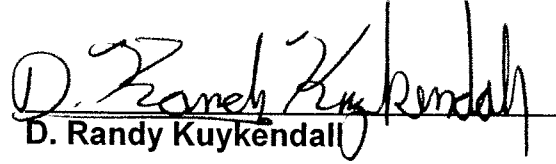
The forum of presentation and discussion allowed the TAT the opportunity to ask questions regarding the status of the EMS system, clarify any issues identified in the briefing materials provided earlier, measure progress, identify barriers to change, and develop a clear understanding of how emergency medical services function throughout Ohio. The team spent considerable time with each presenter so they could review the status for each topic.

Following the briefings by presenters from the DEMS, public and private sector providers, and members of the medical community, the TAT sequestered to evaluate the current EMS system as presented and to develop a set of recommendations for system improvements. When reviewing this report, please note the TAT focused on major areas for system improvement.

The statements made in this report are based on the input received. Pre-established standards and the combined experience of the team members were applied to the information gathered. All team members agree with the recommendations as presented.



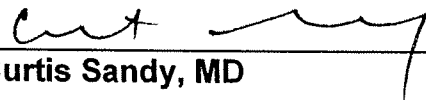
Christoph Kaufmann, MD, MPH



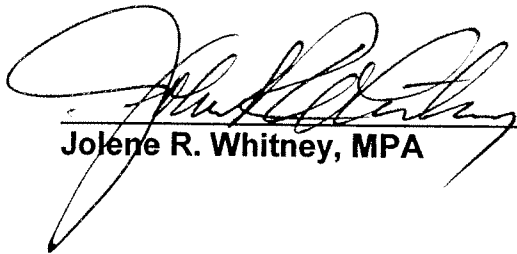
D. Randy Kuykendall



W. Dan Manz



Curtis Sandy, MD



Jolene R. Whitney, MPA

ACKNOWLEDGMENTS

The Technical Assistance Team (TAT) would like to acknowledge the Ohio Department of Public Safety, Division of Emergency Medical Services (DEMS) for their support in conducting this assessment and the Ohio Traffic Safety Office for supporting the assessment process.

The TAT would like to thank all of the presenters for being candid and open regarding the status of EMS in Ohio. Each presenter was responsive to the questions posed by the TAT which aided the reviewers in their evaluation. Many of these individuals traveled considerable distance to participate.

Special recognition and thanks go to Dr. Carol Cunningham, State EMS Medical Director and Richard Rucker, Executive Director, DEMS and his staff and all the briefing participants for their extraordinary efforts and well-prepared presentations.

INTRODUCTION

As the State song suggests, “Beautiful Ohio” is a state with much to admire. Ohio is the crossroads of America. It is the home of nationally recognized institutions of higher education and healthcare. Ohio teams frequently dominate in many sports. The economy is founded on a diverse mix of agriculture, manufacturing and service industries. Ohioans reside in a blend of communities ranging from livable mid-size cities to beautiful rural countryside.

As the nation’s seventh most populous state, Ohio has plenty of demand for emergency medical services. The State’s 11.5 million people depend on their EMS system to respond promptly and effectively to time critical diagnoses. That system has evolved over the past forty or more years to include basic and advanced care available in all areas of the State.

Despite substantial progress, the job of building Ohio’s EMS system remains far from done. The State’s lead agency does not have clear uniform regulatory authority over all forms of EMS agencies and vehicles. The increased use of safety belts and corresponding decrease in revenues from fines are threatening the financial viability of the EMS system infrastructure. The State holds a rich repository of EMS and trauma care data that has not yet been fully transformed into useful information for guiding further policy development.

While there are notable gaps in the system, a great deal has been accomplished that has provided a foundation for future improvements. Partnerships exist between essential stakeholders at all levels. EMS education is well established and supporting the growth of Paramedic availability statewide. Trauma triage criteria have been implemented statewide. Post 9/11, EMS has been integrated into a number of Ohio preparedness initiatives. Wireless 9-1-1 system access has been almost fully implemented statewide. There are a variety of public information and education initiatives aimed at preparing the public to prevent injuries and take action when an emergency confronts them. The needs of children are being considered as system decisions are being made.

The next steps in Ohio’s EMS system development include a focus on the fundamentals. Authorities at state, regional and local levels must be clarified. A reliable level and source of funding needs to be secured. Structural differences between the regulation of varying forms of EMS agencies must be eliminated. Priorities need to be established for verifiable trauma care.

Ohio’s EMS system meets key elements of each NHTSA standard. With some careful planning, cooperation, and commitment, there is good reason to believe the State can make substantial progress towards becoming a national example of excellence. The Buckeyes deserve nothing less.

OHIO DIVISION OF EMERGENCY MEDICAL SERVICES (DEMS)

The TAT revisited the ten essential components of an optimal EMS system that were used in the Ohio: *An Assessment of Emergency Medical Services*, in 2001. These components provided an evaluation or quality assurance report based on ten standards. While examining each component, the TAT identified key EMS issues, reviewed the State's progress since the original report, assessed its status, and used the eleven 2009 Reassessment Standards as the basis for recommendations for Ohio EMS system improvement.

A. REGULATION AND POLICY

Standard

Each State should embody comprehensive enabling legislation, regulations, and operational policies and procedures to provide an effective state-wide system of emergency medical and trauma care and should:

- Establish the EMS program and designate a lead agency;
- Outline the lead agency's basic responsibilities and authorities including licensure and certification including the designation of emergency medical services regions;
- Require comprehensive EMS system planning;
- Establish a sustainable source of funding for the EMS and trauma system;
- Require prehospital data collection which is compatible with local, State and national efforts such as the National EMS Information System (NEMSIS) and evaluation;
- Provide authority to establish minimum standards related to system elements such as personnel, services, specialty care facilities and regional systems and identify penalties for noncompliance;
- Provide for an injury/trauma prevention and public education program; and
- Integrate the special needs of children and other special populations throughout the EMS system;
- Integrate pediatric EMS needs into State statutes, rules and regulations.

All of these components, which are discussed in different sections of this guideline, are critical to the effectiveness of legislation, regulations or policies/procedures which are the legal foundation for a statewide EMS system.

Status

In 1992, responsibility for Emergency Medical Services (EMS) was moved from the Department of Education to the Department of Public Safety, creating the Division of Emergency Medical Services (DEMS). A new State Board of Emergency Medical Services (hereinafter "the EMS Board") was established to oversee emergency medical services and the certification and the training of EMS and fire service personnel in Ohio. The DEMS, in conjunction with the EMS Board, has statutory authority for the following:

- Establishing training and certification standards for fire and emergency medical services personnel;
- Fire and EMS instructor training and certification standards;
- Accreditation of EMS programs of instruction and approval of EMS continuing education programs / Chartering of firefighter and fire safety inspector programs of instruction;
- Oversight of Ohio's trauma system;
- Distribution of grants for emergency medical services organizations;
- Emergency Medical Services for Children (EMSC);
- Regional Physician Advisory Boards;
- Investigations to insure compliance with Chapter 4765 of the Ohio Revised and Administrative Codes;
- Collection and analysis of data submitted to the EMS Incident Reporting System and the Ohio Trauma Registry; and
- Preparation of a statewide emergency medical services plan and a plan for the statewide regulation of emergency medical services during periods of disaster.

The EMS Board is responsible for the promulgation of rules and regulations pertaining to EMS in Ohio. The DEMS staff serves as the administrative arm of the EMS Board. The Executive Director of the DEMS serves as the Chief Executive Officer of the EMS Board. This position reports to both the Board Chair and the Director of Public Safety. That reporting structure is not optimal in that there could be differences in policy direction between the EMS Board and the Department. Serving two masters in this way is not an ideal supervisory structure.

The EMS Board consists of 20 members mostly appointed by the Governor with Senate concurrence. These members are appointed from nominations submitted by EMS stakeholder groups and must have background or experience in emergency medical services or trauma care. EMS Board members include emergency and pediatric physicians, a trauma surgeon, nurses, educators, hospital administrators, fire chiefs and emergency medical technicians. A final member of the EMS Board is designated by the Director of the Ohio Department of Public Safety. EMS Board members serve for a three year term without compensation, but are reimbursed for their expenses. The EMS Board currently meets every other month to carry out its duties and appoints committees and subcommittees as necessary.

The primary funding source for the DEMS and the EMS Board is safety belt violation fines. Due to increase in safety belt use rates (a good thing) this revenue source is decreasing (a bad thing). An increase in fees to obtain driving abstracts was recently added to legislation. Sixty cents of each fee has been designated for the EMS and Trauma fund. The money generated through this fee has been sufficient to maintain operations however a recent challenge has been made to the collection of the fee which is concerning as it could result in a loss of the funds in the future. The net result is that the Division and the EMS Board are under resourced to fulfill their legislatively assigned

functions. The strategy Ohio has used for its funding sources makes good sense but has created instability in support due to a declining base of fines collected.

Each year the DEMS offers grant funding to eligible EMS agencies in Ohio. Since its inception, the grant program has awarded funding for training, training equipment, and patient care equipment. Over 700 EMS agencies benefit annually from Ohio EMS grant support. The Ohio Revised Code defines the priority distribution of available funds for Ohio's EMS and trauma system grant program.

First priority is given to EMS organizations for training, purchase of equipment and vehicles, and to improve the availability, accessibility, and quality of EMS in Ohio. In this category, the Board gives priority to grants for training and equipping of EMS personnel. This is commonly called the EMS Training and Equipment Grant.

Second priority is given to entities that research the causes, nature, and effect of traumatic injuries, educate the public about injury prevention, and implement, test, and evaluate injury prevention strategies. This is commonly called the Trauma System Injury Prevention Grant.

Third priority is given to entities that research, test, and evaluate procedures that promote the rehabilitation, retraining, and re-employment of adult or pediatric trauma victims and social service support mechanisms for adult or pediatric trauma victims and their families. This is commonly called the Trauma Rehabilitation Grant.

Fourth priority is given to entities that research, test, and evaluate medical procedures related to adult and pediatric trauma victims and their families. This is commonly called the Trauma Procedures Grant.

The EMS Board is seeking a change to the above designations to allow for a one-time allotment of funds to assist educational institutions in obtaining national accreditation.

Institutions wishing to offer training for initial First Responder or EMT certification must be accredited (approved) by the EMS Board. Programs offering continuing education must be similarly approved. In keeping with the national *EMS Education Agenda for the Future*, the Board recently voted to require Ohio's paramedic institutions to obtain national accreditation through the Committee on the Accreditation of Allied Health Education Programs, (CAAHEP) by January 1, 2018.

In the State of Ohio, there are more than 42,000 certified EMS personnel. The Division certifies these persons based upon the successful completion of an approved course of education and successful completion of National Registry of EMTs certification. The levels of certification recognized in Ohio include First Responder, EMT-Basic, EMT-Intermediate and EMT-Paramedic. Approximately 4,000 initial certifications and 10,000

certification renewals are processed annually. Certificate holders must meet continuing education requirements and renew their certification every three years.

The EMS Board and the Executive Director are statutorily required to investigate all complaints or allegations of violations involving emergency medical technicians, fire fighters, instructors, and EMS or fire training institutions. The DEMS conducts all investigations, to include, but not limited to, interviewing witnesses and subjects of investigations, collecting and interpreting data and evidence, preparing case summaries, case notes, and cases for presentation to the EMS Board and the DEMS Executive Director for conclusive findings. Additionally, the staff prepares affidavits and exhibits for hearings, drafts the subsequent adjudication orders and record of proceedings for appeals and monitors compliance with all imposed disciplinary sanctions. Over the last two years, the office has conducted over 1600 investigations. All disciplinary actions taken by the EMS Board are posted on the DEMS web site and included in the Division's newsletter.

The State of Ohio has a legislated trauma system with the purpose of ensuring that seriously injured people get to the right hospital in the right amount of time. The EMS Board, with advice from its Trauma Committee, and working through the DEMS is tasked with monitoring, coordination and facilitating the trauma system. It is not clear that the authority in statute and resources available are achieving this charge. Guidelines for the care of trauma victims and their transport to trauma facilities by EMS personnel, consistent with state trauma triage protocols adopted by the EMS Board, have been developed and distributed. The Trauma Committee is established in law and consists of 24 members which may be too large to be practical.

The EMS Board has two statewide databases, created in legislation, that provide it with information to guide decision making. The EMS Incident Reporting System (EMSIRS) collects data on all emergency runs made by EMS units in Ohio. The Ohio Trauma Registry (OTR) is a database of clinical information from all Ohio hospitals on all seriously injured people they admit. These databases are maintained and operated by the DEMS, and are used by the EMS Board to make data-based decisions. They are also used by medical researchers studying EMS and trauma care.

EMSC is a federally funded initiative designed to improve emergency care for children and ensure that the children of Ohio receive the very best emergency care the EMS system can provide. The EMS Board includes a designated position for a pediatric physician and the EMSC committee of the EMS Board serves as the advocate for pediatric issues.

The State of Ohio is divided into ten pre-hospital emergency medical services regions for the purpose of overseeing the delivery of pre-hospital emergency medical services. For each region, the EMS Board may appoint up to nine members to a Regional Physician Advisory Board (RPAB). Care is taken to ensure broad representation of the counties in the region. The RPAB may provide assistance to regional EMS

organizations in such areas as continuing education programs, equipment procurement, establishing mutual aid agreements, development of written medical protocols and in obtaining a medical director. The regions as currently configured may not be ideal. Beyond their assigned role in medical direction, it is not clear that the regions are fulfilling other functions often performed by similar organizations.

The EMS Board is charged with the preparation of a statewide emergency medical services plan and a plan for the statewide regulation of emergency medical services during periods of disaster. The DEMS maintains an active role in homeland security and disaster preparedness, representing the interests of EMS and fire personnel through participation on various committees, including the Homeland Security Advisory Council. The Division facilitates the exchange of critical information through participation in the Strategic Analysis and Information Center. The DEMS is an integral part of the state's planning and response to disasters through work with various preparedness committees and initiatives and staffing of the state EOC during times of disaster.

The EMS Board has established a Strategic Planning Committee to develop a 5-year plan for the advancement of Ohio's EMS system. All current committees of the Board have completed a S.W.O.T. analysis and submitted goals. The recommendations of this Technical Assistance Team (TAT) report will also be reviewed with the Strategic Planning Committee and incorporated into the plan.

In addition to its responsibilities for EMS, the DEMS is also the lead agency for the training and certification of fire service personnel in Ohio. There are over 42,000 firefighters certified by the state of Ohio and 10,000 certified fire safety inspectors. Until recently, fire certificates were issued without an expiration date. At the request of fire service partners, legislation was passed requiring the renewal of fire certificates. Certificate holders must now meet continuing education requirements and renew their certification every three years. Approximately 5,000 new certificates are issued annually, and over 13,000 renewals are completed each year.

Institutions wishing to offer training for initial Firefighter or Fire Safety Inspector certification must be approved by the Executive Director with the advice and counsel of the Firefighter and Fire Safety Inspector Training Committee of the EMS Board. There are currently 70 institutions approved to offer fire training and over 4000 firefighter and fire safety inspector instructors certified through the DEMS.

The Firefighter and Fire Safety Inspector Training Committee of the EMS Board is one of two committees established in law. The Executive Director of the DEMS, with the advice and counsel of the committee, is responsible for adopting standards to regulate firefighter and fire safety inspector training and the chartering of training programs. The DEMS charts institutions interested in offering fire service training programs. The DEMS is accredited by the National Board of Fire Service Professional Qualifications (Pro Board).

While the Division and the Board have significant responsibilities and appear to be doing excellent work in many areas of EMS and trauma care, they are lacking some of the fundamental capabilities that would enable them to meet the NHTSA standard. Having a separate Medical Transportation Board that regulates predominately private-for-profit EMS agencies is an anomaly. The lack of authority to submit Ohio's substantial pre-hospital database into the National EMS Information System (NEMSIS) represents a missed opportunity for both Ohio and the nation. A very limited ability to enforce requirements such as the reporting of agency medical directors is concerning in that it hampers a fundamental understanding of who is doing what within the EMS system. Similar "home rule" excuses pervaded many presentations to the TAT when there appeared to be a common understanding about why DEMS is unable to enforce requirements that are clearly the right thing for EMS patients.

Recommendations

- The DEMS and the EMS Board should complete their strategic planning process with the inclusion of recommendations from this report.
- The EMS Board should in its strategic planning process re-evaluate the current map and functions of EMS regions in Ohio to determine if there can be improvements by updating roles and aligning with the State's Homeland Security regions or other functional model.
- **The legislature should reassign the current functions, authorities and resources of the Ohio Medical Transportation Board to the DEMS as a step towards achieving a single lead EMS agency in Ohio.**
- **The EMS Board should work cooperatively with the Legislature to identify a stable and ongoing source of funding to adequately support all of the functions assigned to the EMS Board and the DEMS.**
- The Director of Public Safety and the EMS Board should clarify the supervisory hierarchy of the EMS Executive Director to establish a single point of oversight.
- The EMS Board should provide the Legislature with models that can be used as a foundation to establish comprehensive lead agency authority to improve the care of patients with trauma, stroke, STEMI and other time critical emergency conditions.
- The Division and the EMS Board should take steps as the opportunity presents in policy, legislation, regulation and other venues to move towards the use of current nomenclature for "licensure" of EMS personnel, "accreditation" in reference to national educational program accreditation rather than State program approval, titles for levels of EMS personnel levels, etc.

- **The EMS Board and the Legislature should assure that DEMS has the necessary authority to enforce existing or future statutory and rule requirements for the provision of EMS.**

B. RESOURCE MANAGEMENT

Standard

Each State EMS lead agency should identify, categorize, and coordinate resources necessary for establishment and operation of regionalized, accountable EMS and trauma systems. The lead agency should:

- Maintain a coordinated response to day-to-day emergencies as well as mass casualty incidents or disasters and ensure that resources are used appropriately throughout the State;
- Have policies and regulations in place to assure equal access to basic emergency care for all victims of medical or traumatic emergencies;
- Provide adequate triage, including trauma field triage, and transport of all patients by appropriately certified personnel (at a minimum, trained to the emergency medical technician [EMT] level) in properly licensed, equipped, and maintained ambulances;
- Provide transport to a facility that is appropriately equipped, staffed and ready to administer to the needs of the patient including specialty care hospitals (section 4: Transportation);
- Appoint an advisory council, including pediatric EMS representation, to provide broad-based input and guidance to the state EMS system and to provide a forum for cooperative action and for assuring maximum use of resources; and
- Coordinate with State Highway Safety Agency and other State Agencies in the development of the Strategic Highway Safety Plan to ensure that EMS system information is used to evaluate highway safety problems and to improve post-crash care and survivability.

Status

The EMS Board continues to be responsible for the promulgation of rules and regulations pertaining to Ohio EMS and the development of the EMS system. The Board is statutorily created and is authorized to promulgate rules, make disciplinary decisions and, in conjunction with the Department of Public Safety, supervise the activities of the Executive Director of the DEMS. Although this board clearly fulfills the responsibilities of an advisory committee to state government on matters of EMS and trauma, it also holds significant regulatory, enforcement and oversight authority with regard to the DEMS and system stakeholders. Since the Board is codified not only as

an advisory council, but an official body of state government, it is positioned in a pivotal leadership role to drive the development of policies and resources necessary to ensure the continued success of trauma and EMS throughout the state of Ohio.

Ohio's forty-five verified trauma centers are evidence of hospital commitment to ensuring quality care for trauma patients. Statewide trauma triage protocols with regional modifications are in place and require EMS providers to transport severely injured patients directly to verified trauma centers. The trauma registry system provides data to the DEMS and through the existence of several regional trauma registry data collection points; data are available in those areas for regionalized quality improvement efforts as well.

Ambulance staffing requirements have recently changed in Ohio and seem to be controversial in terms of ensuring timely responses to emergency calls. Due to the existing bifurcated system of ambulance service regulation, the DEMS is unable to determine the numbers and locations of ambulance service assets across the state.

The Ohio Fire Chiefs' Association's Ohio Fire Service Emergency Response System (ERS) provides local fire chiefs with easy access to large quantities of fire service resources that may be needed to respond to a major fire or natural or man-made disaster. This system provides for rapid activation and response of fire service resources in quantities beyond the means of a single fire department and local mutual aid.

The DEMS continues to work closely with Ohio's Strategic Transportation Safety Plan (STSP). Although EMS clinical data has not been used in this effort, data are available and should be considered in the continued development of the STSP.

Recommendations

- **The EMS Board and the DEMS should work cooperatively with the Legislature to identify a stable and ongoing source of funding to adequately support all of the functions assigned to the Board and the DEMS.**
- The EMS Board should redefine the EMS grants program to appropriately prioritize funding that will support system-wide development activities at the state, regional and local level with priority given to rural and underdeveloped EMS and trauma system components.
- **The EMS Board should develop and present a proposal to the Legislature to consolidate the responsibilities of the Ohio Medical Transportation Board within the DEMS.**

- The EMS Board should implement regulatory changes that will require that all ambulance services and ambulance vehicles, regardless of ownership or service provision model, are inspected and licensed by the DEMS.
- **The DEMS should develop and maintain a comprehensive database of EMS and trauma system resources that provides an accurate accounting of personnel, equipment and services throughout Ohio.**
- The DEMS should continue to support the collection, evaluation and dissemination of system resource information to local, regional, statewide and national stakeholders by improving the effectiveness of existing data collection systems.
- The EMS Board and the DEMS should evaluate the statewide availability of EMS and trauma resources to ensure that these resources are adequately matched to the evolving needs of the EMS and trauma system.

C. HUMAN RESOURCES AND EDUCATION

Standard

Each State should ensure that its EMS system has essential trained and certified/licensed persons to perform required tasks. These personnel include: first responders (e.g., police and fire), prehospital providers (e.g., emergency medical technicians and paramedics), communications specialists, physicians, nurses, hospital administrators, and planners. Each State should provide a comprehensive statewide plan for assuring a stable EMS workforce including consistent EMS training and recruitment/retention programs with effective local and regional support. The State agency should:

- Ensure sufficient availability of adequately trained and appropriately licensed EMS personnel to support the EMS system configuration;
- Assure an ongoing state EMS personnel needs assessment that identifies areas of personnel shortage, tracks statewide trends in personnel utilization and which establishes, in coordination with local agencies, a recruiting and retention plan/program;
- Establish EMT as the state minimum level of licensure for all transporting EMS personnel;
- Routinely monitor training programs to ensure uniformity, quality control and medical direction;
- Use standardized education standards throughout the State that are consistent with the National EMS Education Standards;
- Ensure availability of continuing education programs, including requirements for pediatric emergency education;
- Require instructors to meet State requirements;
- Assure statutory authority, rules and regulations to support a system of EMS personnel licensure that meets or exceeds the national EMS Scope of Practice Model, new National EMS Education Standards, as they are available, and other aspects of the EMS Education Agenda for the Future; and
- Monitor and ensure the health and safety of all EMS personnel.

Status

Training and certification has long been an area in which Ohio has had strong capabilities. Both DEMS staff and educational program presenters shared a common perspective and commitment to doing the right things for candidates. The obvious respect and support between DEMS staff and education program managers was refreshing to see and no doubt works to the ultimate best interest of EMS patients.

In the summer of 1986, legislation moved the authority for training of advanced EMTs and Paramedics out of the Board of Regents and into the Ohio Department of Education. The Office of Public Safety was established within the Vocational Education section of the Department of Education with authority to establish minimum training and certification standards for EMTs, EMS instructors and the accreditation of educational institutions.

Controversy over the use of the National Registry of EMTs (NREMT) testing as the Ohio certification examination led to the establishment of the Division of EMS within the Department of Public Safety (previously Department of Highway Safety). A new twenty member board was established with authority to create the rules and regulations for the development of EMS. Fines associated with the violation of safety belt usage laws have provided the funding for the EMS Board and DEMS as well as establishing a grant fund.

Ohio currently certifies four levels of EMS providers: First Responder, EMT-Basic, EMT-Intermediate and EMT-Paramedic. In general, Ohio has shown a steady increase in the number of certifications issued. In 1992, there were approximately 34,000 certified EMTs at all levels in Ohio. Today, there are over 42,000 EMTs. A small amount of this increase (approximately 2100) can be attributed to the addition of First Responder as a certification level beginning in late 2000. The most noticeable change has occurred at the Paramedic level jumping from approximately 6,000 certified in 1992 to over 16,000 today. The majority of personnel are still certified at the EMT-Basic level which has remained a fairly constant number over the past twenty years (approximately 24,000 in 1992 and approximately 21,500 today). The NREMT examination is used for certification at all four levels.

Although a needs assessment has not been completed, Ohio has served as a training ground for many other states. As an example, Tennessee reported approximately 75% of the 150 new paramedics hired at a department that went from volunteer to paid status came from Ohio. The EMS agencies who lost personnel, in most cases easily found others to take their place. Rural areas with volunteers were reported to be having more trouble recruiting and retaining personnel. Some volunteer agencies report using their grant money to pay for personnel to complete additional training only to have those personnel move to the urban and metropolitan areas in search of jobs once their training is complete. To assist the rural volunteer agencies, a Recruitment and Retention Committee was established and a section of the DEMS web site has been

established to provide resources and information to those needing assistance. Data about the adequacy of EMS staffing across Ohio is not consistently evaluated to assure that community needs are being met.

Institutions wishing to offer training for initial First Responder or EMT certification must be State accredited by the EMS Board. The term “accreditation” in Ohio refers to the State’s approval process for educational programs and is not consistent with the national terminology for non-governmental, independent, national accreditation by CAAHEP. In keeping with the national *EMS Education Agenda for the Future*, the Board recently voted to require Ohio’s paramedic institutions to obtain national accreditation through CAAHEP by January 1, 2018. The cost of obtaining national accreditation has been cited as a barrier.

There are currently 93 institutions approved to offer EMS training, which include colleges and universities, vocational schools, hospitals, EMS organizations and fire departments. Only five of the 51 institutions approved for Paramedic training currently hold CAAHEP accreditation. Ohio’s state “accreditation” approval process for all levels closely mirrors the national accreditation standards. The DEMS is currently in the process of developing an on-line application process for initial and renewal program approvals that will include annual reporting. On-site reviews and audits will continue to be completed as in the past, but the on-line reporting will make it easier to monitor programs between reviews.

Recent changes in Ohio law permits the DEMS to issue program approvals for a period of up to five years, but most are issued for three. Provisional State accreditation may also be issued to programs that fail to meet the standards established by the Board. Rules are in place to permit the provision of didactic portions of the initial certification courses through distance learning. Although not yet being utilized by most programs, this is intended to provide an opportunity for those candidates with limited access to training or those facing scheduling problems to have more access to quality education.

The Ohio curriculum at each level is currently under review to bring it in line with the National EMS Educational Standards as a minimum. Ohio’s scope of practice will remain at or above the *National EMS Scope of Practice Model*, including the use of supraglottic airways by EMT-Basics in the pulseless and apneic patient and endotracheal intubation of apneic patients at the EMT-Intermediate level.

There are over 500 institutions which have been awarded a Certificate of Approval by the EMS Board to offer continuing education to currently certified EMS personnel. Certificates of Approval may be issued for up to five years but are generally renewed every three years. The renewal process includes an on-site review of facilities, equipment and records along with interviews of key program personnel. An on-line application process is being developed for the continuing education sites as well.

All instructors for initial and continuing education must hold a certificate to teach issued

by the EMS Board. There are currently over 3600 EMS, Assistant EMS and Continuing Education instructors certified through the DEMS. To become an EMS instructor, an individual must have at least five years experience, pass a knowledge exam and skills exam at their level of certification and complete a seventy-hour course of instruction, including supervised teaching. Renewal requirements include instructional continuing education and active teaching.

A physician serving as a medical director of an EMS agency may apply to become an EMS instructor. Requirements for training and testing are waived for these individuals. This was done to encourage physician involvement in the educational processes.

To qualify for Ohio EMS certification, EMS personnel are required to successfully complete an approved course of instruction and pass the state-specified NREMT examinations. Ohio's curricula meet, and in some cases exceed, the National Education Standards.

Recommendations

The DEMS and the EMS Board should:

- Conduct a formal needs assessment of the numbers, levels, and placements of EMS personnel required for optimal system performance as part of the current focus on recruitment and retention.
- **Reform the current Ohio “accreditation” process into a State approval process that works in conjunction with the nationally recognized EMS education program accreditation to assure Ohio students continue to get the best possible educational preparation.**
- **Assure that after January 1, 2013, graduates of non-CAAHEP accredited paramedic education programs understand their eligibility for Ohio certification but not national certification through the NREMT.**
- Continue to implement the *EMS Education Agenda for the Future* including the *National EMS Scope of Practice Model* as a foundation for the Ohio authorized EMS scope of practice, National EMS Education Standards, national certification and national EMS education program accreditation.
- Assess and report the outcome evaluations of all levels of EMS education programs.
- Support the initial cost of paramedic program accreditation with EMS grant funds.

D. TRANSPORTATION

Standard

Each State should require safe, reliable EMS transportation. States should:

- Develop statewide EMS transportation plans, including the identification of specific EMS service areas and integration with regionalized, accountable systems of emergency care;
- Implement regulations that establish regionalized, accountable systems of emergency care and which provide for the systematic delivery of patients to the most appropriate specialty care facilities, including use of the most recent Trauma Field Triage Criteria of the American College of Surgeons/Committee on Trauma;
- Develop routine, standardized methods for inspection and licensing of all emergency medical transport services and vehicles, including assuring essential pediatric equipment and supplies;
- Establish a minimum number of personnel at the desired level of licensure on each response and delineate other system configuration requirements if appropriate;
- Assure coordination all emergency transports within the EMS system, including public, private, or specialty (air and ground) transport and including center(s) for regional or statewide EMS transportation coordination and medical direction if appropriate; and
- Develop regulations to ensure ambulance drivers are properly trained and licensed.

Status

The DEMS, as the state lead agency, does not license or inspect all EMS organizations operating ambulances within the state. Only private-for-profit EMS organizations are required to be licensed. Licensing for these organizations is accomplished by the Ohio Medical Transportation Board, which operates independently from the DEMS and EMS Board. However, the DEMS also has authority to “prepare for the operations of EMS” which may include determining equipment and supplies, minimum ambulance staffing and needed communications. There appears to be some confusion and duplication of

effort by having two boards regulate the provision of emergency medical services within Ohio.

Annually, the OMTB licenses 443 EMS organizations, 133 MICU's and conducts inspections on 3200 vehicles. Seventy percent of the ambulance services in Ohio are fire based and are not state regulated. There are 15 licensed air ambulance services, with 57 helicopters located throughout the state. There is no certificate of need for establishing the necessity for an air ambulance or the vehicle locations. It was reported that there is no central dispatch for air ambulance, no standardized activation guidelines and no other accreditation required (such as CAAMTS).

To this day, the DEMS does not have the ability to monitor and assess the number of EMS organizations and vehicles, or the level of care provided by every EMS organization in the state. This greatly impacts their ability to assess the number of resources, utilization, and appropriate use of resources for routine patient care, let alone the needs of a region in the event of a disaster.

With regard to ambulance staffing, a 2008 legislative amendment brought about a modification to the minimum staffing requirements. The minimal level of staffing is now one First Responder and one EMT. Historically, the minimum level of staffing has been two EMTs. The statutory change now requires both personnel to respond in the ambulance when dispatched. This change created a burden for rural providers who would previously ensure minimum staffing of two EMT's, with one EMT arriving at the scene.

The DEMS has no regulations for ambulance drivers. However, the Transportation Board requires the non-EMT drivers to be EVOC trained. Emergency vehicle operations courses are provided within the state.

Recommendations

- The Legislature should merge the functions of the OMTB within the DEMS to create efficiencies, reduce duplication and confusion to the public and EMS providers.
- **The Legislature should establish authority for DEMS to require all EMS agencies operating ambulances within Ohio to be licensed and inspected regularly.**
- **The Legislature should authorize DEMS to establish regulations for all ground and air ambulances operating within the state to ensure standardization of equipment, staffing and communications statewide.**
- With stakeholder input, the Board of EMS and Department of Public Safety should establish a graduated fee schedule for EMS organization licensure and ambulance permits.

- The Legislature should restore the minimum staffing requirement for ambulances to be two EMT's.
- The EMS Board should establish rules that require all ambulance drivers to be trained in emergency vehicle operations.
- **The EMS Board should utilize the Air Ambulance Committee and the RPABs to establish a statewide standardized air medical activation guideline.**

E. FACILITIES

Standard

It is imperative that the seriously injured (or ill) patient be delivered in a timely manner to the closest appropriate facility. Each State should ensure that:

- Both stabilization and definitive care needs of the patient are considered;
- There is a statewide and medically accountable regional system, including protocols and medical direction, for the transport of patients to state-designated specialty care centers;
- There is state designation of specialty medical facilities (e.g. trauma, burns, pediatric, cardiac) and that the designation is free of non-medical considerations and the designations of the facilities are clearly understood by medical direction and prehospital personnel;
- Hospital resource capabilities (facility designation), including ability to stabilize and manage pediatric emergencies, are known in advance, so that appropriate primary and secondary transport decisions can be made by the EMS providers and medical direction;
- Agreements are made between facilities to ensure that patients, including pediatric patients, receive treatment at the closest, most appropriate facility, including facilities in other states or counties;
- Hospital diversion policies are developed and utilized to match system resources with patient needs – standards are clearly identified for placing a facility on bypass or diverting an ambulance to appropriate facilities.

Status

There are 181 hospitals in the state of Ohio with 33,860 beds. Only 45 of these are verified trauma centers at any level. These include fourteen Level I trauma centers, thirteen Level II trauma centers, and eighteen Level III trauma centers. Included in these numbers are three Level I and three Level II pediatric-specific trauma centers. Additionally, there are nine burn centers in Ohio including the nationally recognized Shriners' Hospitals for Children in Cincinnati.

As Ohio currently uses the American College of Surgeons (ACS) verification process

exclusively and the ACS only verifies Levels I through III, the State of Ohio has neither criteria for nor verification of Level IV or V trauma centers. However, it should be noted that the verification of trauma centers within the state is entirely voluntary. It is quite impressive that 45 hospitals have elected to undergo the ACS verification process (every three years) and participate in the state trauma system without financial incentives.

Many states have developed statewide funds for uncompensated trauma care that serve, in part, to offset the expense incurred with maintaining an adequate and available hospital staff to respond to the myriad needs of injured patients in a timely fashion. Such a fund may also serve to facilitate completion of an inclusive trauma system in Ohio, with all hospitals participating in the system at a level commensurate with their abilities. Other states have used a variety of sources for these funds, including: vehicle licensing, seatbelt fines, moving violation/DUI fines, tobacco taxes, etc. Some of these statewide trauma center funds are established in a manner that qualifies the state for federal Medicaid matching funds.

Statewide trauma triage protocols, which are routinely modified as needed, require EMS providers to transport severely injured patients directly to verified trauma centers. Five circumstances are outlined in law that permits transport to non-trauma centers. Acute care hospitals are required to have protocols that address the emergency care of trauma patients and their appropriate transfer to a trauma center. Trauma centers are required to have transfer agreements with acute care facilities to ensure continuity of care and the appropriate transfer of trauma patients.

Although there has been no statewide survey of hospital capabilities, this has been accomplished at the local level in many areas of the state. The Region I RPAB (SW Ohio) has completed surveys of the hospitals in the region for the past two years. The reported capabilities are provided to local medical directors and EMS agencies to assist in transport decision-making. The Central Ohio Trauma System (COTS) also maintains Franklin County and Central Ohio Hospital Resource Guides for EMS providers.

While currently not as mature as the trauma system, systems of care for other time critical diagnoses are being developed in Ohio. Individual hospitals have begun the effort to improve care of patients with stroke and STEMI through voluntary accreditation as stroke or cardiac centers. Successful implementation of these systems of care will require additional support not only from local EMS agencies, but also from the DEMS. The number of these efforts can be expected to rapidly increase as the State works to provide timely care and for all citizens for all time critical diagnoses.

Ohio EMSC, housed within the DEMS at the Ohio Department of Public Safety, was created to incorporate children's issues into all aspects of the EMS system. Ohio has received funding consistently since 1987 for the EMSC Program. Although the early EMSC Program focused on injury prevention activities, the release of EMSC Performance Measures by the Health Resources and Services Administration in 2005

changed the focus to pediatric emergency care. These measures include inter-facility transfer guidelines and agreements.

Recommendations

The Legislature should:

- Create a trauma fund to partially compensate all verified trauma centers for unreimbursed care provided to trauma patients.
- **Pass legislation that includes criteria for verification of Level IV, and possibly Level V trauma centers in order to support completion of an inclusive trauma system for the citizens of Ohio.**
 - **This legislation should also include provisions for designation and de-designation of trauma centers.**
 - **This legislation should also mandate reporting of all trauma-specific data to the Ohio State Trauma Acute Care Registry or link trauma data reporting to receiving uncompensated care financial offsets.**

The DEMS should:

- Utilize data to review, modify, and monitor state and regional use of Ohio trauma triage guidelines, including over triage and under triage rates.
- Enhance current efforts to provide for the specialized triage and emergency care needs of children and the elderly.
- **Continue to systematize the care of patients with stroke, STEMI and other time critical diagnoses.**

F. COMMUNICATIONS

Standard

An effective communications system is essential to EMS operations and provides the means by which emergency resources can be accessed, mobilized, managed, and coordinated. Each State should assure a comprehensive communication system to:

- Begin with the universal system access number 911;
- Strive for quick implementation of both wire line and wireless enhanced 911 services which make possible, among other features, the automatic identification of the caller's number and physical location;
- Strive to auto-populate prehospital patient care report (NEMSIS compliant) with all relevant times from the public safety answering point (PSAP);
- Provide for emergency medical dispatch training and certification for all 911 call takers and EMS dispatcher.
- Provide for priority medical dispatch;
- Provide for an interoperable system that enables communications from dispatch to ambulance, ambulance to ambulance, ambulance to hospital, hospital to hospital and ambulance to public safety communications.
- Provide for prioritized dispatch of EMS and other public safety resources.
- Ensure that the receiving facility is ready and able to accept the patient; and
- Provide for dispatcher training and certification standards.
- The statewide communications plan includes effective, reliable interoperable communications systems among EMS, 911, emergency management, public safety, public health and health care agencies.
- Each State should develop a statewide communications plan that defines State government roles in EMS system communications.

Status

The Governor established a task force that oversees the State Interoperability Executive Committee (SIEC). The Public Safety Director links the task force with the SIEC which provides guidance and strategic direction to the emergency responders for reliable wireless communications interoperability.

A county-by-county communications capability assessment was completed in 2005. This created a database of equipment and frequencies for each county and support agency. It also established multi-disciplinary capabilities for an interoperable communications system.

The Ohio Office of Information Technology implemented the Multi-Agency Radio Communications Systems (MARCS), an 800 MHz radio system that provides effective communications throughout Ohio. The system is used by all state agencies, sheriff dispatch centers, county emergency management, many EMS providers, hospitals and health departments. The Ohio Emergency Management Agency has a remote deployable site called a Transportable Communications System (TCS) which can be used to patch UHF, VHF and redundancy for the 800 MHz system.

Currently, enhanced wireline 9-1-1 service is provided statewide (88 counties) and enhanced wireless 9-1-1 service is provided in 84 counties. As of December 2010, Phase I automatic number identification has been implemented in four counties. Phase II which includes automatic number and location identification has been implemented in 78 counties. Legislation supporting funding for further development of the 9-1-1 system is due to sunset by December 31, 2012. This is an area of concern as these funds could be utilized by counties to support emergency medical dispatch (EMD) training for centers with wireless 9-1-1.

There appears to be no clear authority for emergency medical dispatch training or requirements. However, the State Board of Education has an emergency service telecommunicator training program which is offered at vocational centers throughout the state. The 40 hour course is offered 8 times a year and the tuition covered for employees of emergency medical service providers from a fund created by law. However, very little funding has actually been realized.

Dispatch centers in Ohio vary from sophisticated to minimally staffed in rural areas. There are neither Emergency Medical Dispatch Center standards nor standards for personnel who routinely dispatch emergency medical services.

Recommendations

- **The EMS Board should seek authority to develop dispatch center and emergency medical dispatcher certification standards.**
- The EMS Board should create a dispatch subcommittee to establish medical priority dispatching standards and emergency medical dispatcher certification standards.
- **The DEMS should encourage standardized EMD training for dispatchers supported by wireless 9-1-1 funds to counties and/or the EMS grants program.**
- The Ohio Emergency Management Agency with the Department of Public Safety should conduct regular assessments for ambulances, hospitals and dispatch centers within the emergency healthcare system to ensure routine and redundant communications systems are sufficient and interoperable.
- The EMS Board and stakeholders should create a central dispatch center for air medical services with flight-following and the ability to track resources and availability of aircraft.

G. PUBLIC INFORMATION AND EDUCATION

Standard

Public awareness and education about the EMS system are essential to a high quality system. Each State should implement a public information and education (PI&E) plan to address:

- The components and capabilities of an EMS system;
- The public's role in the system;
- The public's ability to access the system;
- What to do in an emergency (e.g., bystander care training);
- Education on prevention issues (e.g., alcohol or other drugs, occupant protection, speeding, motorcycle and bicycle safety);
- The EMS providers' role in injury prevention and control; and
- The need for dedicated staff and resources for PI&E.

Status

The Ohio Injury Prevention Partnership (OIPP) is the CDC's Injury Community Planning Group (ICPG) for Ohio. The OIPP is a statewide group of professionals representing a broad range of agencies, organizations and disciplines concerned with building Ohio's capacity to address the prevention of injury. There is a very close relationship between OIPP and the DEMS. They have been a participating member of the OIPP since its inception in 2009 and currently serve in a leadership position.

The President of OIPP serves as the injury prevention liaison to the EMS Board's Trauma Committee. Because of its wide array of available expertise, OIPP was selected as the primary author of the injury prevention section of *A Framework for Improving Ohio's Trauma System*. The first plan of action identified in the injury prevention section of the document is to develop a statewide injury prevention plan on high priority injuries. They also identified a strategy within the plan to support public health policies designed to advance injury and violence prevention.

Annually, the DEMS offers grant funding to eligible EMS agencies statewide. These grants are categorized into four priorities. The second priority is commonly called the "Trauma System Injury Prevention Grant" and is awarded to entities that research the cause, nature, and effect of traumatic injuries, educate the public about injury prevention, or implement, test, and evaluate injury prevention strategies. Since 2003-2004, the DEMS has awarded over \$2.2 million in this category.

The EMS for Children's program resides within the DEMS. The coordinator has been active with injury prevention programs though recent efforts have been focused on meeting national performance measures associated with the grant funding. The Safe Kids Ohio is currently located in the DEMS and is managed by the EMSC coordinator. Ohio provides administrative assistance and fiscal oversight for the 15 coalitions and 6 local chapters, and coordinates their monthly phone meetings. The EMSC coordinator also serves on the OIPP and plans to become more involved with the organization.

The DEMS has a designated liaison from the Department of Public Safety Public Information Office. The liaison handles all media inquiries and information releases pertaining to EMS initiatives and also assists the DEMS with postings to its web site and publication of a newsletter – *The Siren*. The PIO is very active in marketing campaigns and collaborates with the State Office of Traffic Safety (SOTS) on many initiatives. The SOTS was instrumental in providing funds to support this NHTSA assessment.

The Department of Public Safety provides numerous printed safety materials and safety videos to the public, free of charge. This includes information related to such topics as bicycle safety, pedestrian safety, teen drinking and driving, and vehicle occupant safety. Several PSA campaigns have been provided to the public with a focus on CPR training, toy safety and child passenger safety.

Every year, the DEMS supports activities associated with EMS week and provides recognition to outstanding EMS personnel. The materials developed for EMS week have been recognized by the ACEP at the national level. They also conduct activities related to other national recognition programs like Trauma month.

Most P.I. & E. activities are conducted at the local level. The DEMS has had limited involvement in educating the public in regards to accessing EMS or in the provision of bystander care.

Recommendations

- The DEMS should seek funding from the Office of Traffic Safety or the Office of Rural Health to support a train-the-trainer course for a bystander care program;
- **The DEMS should seek opportunities to collaborate with the Ohio Department of Health on data linkages and injury prevention priorities;**
- The DEMS should require recipients of EMS grant funds to submit information regarding the effectiveness of their injury prevention programs;
- The DEMS should utilize existing databases to assess injury prevention needs and to focus educational efforts to the public and EMS providers;
- The DEMS should utilize social networks like Twitter and Facebook, to educate the public regarding preparedness, injury prevention and other aspects of the EMS and trauma system.

H. MEDICAL DIRECTION

Standard

Physician involvement in all aspects of the patient care system is critical for effective EMS operations. EMS is a medical care system in which physicians oversee non-physician providers who manage patient care outside the traditional confines of the office or hospital. States should require physicians to be involved in all aspects of the patient care system, including:

- A state EMS Medical Director who is involved with statewide EMS planning, overseeing the development and modification of prehospital treatment protocols, statewide EMS quality improvement programs, scope of practice and medical aspects of EMS provider licensing/disciplinary actions;
- On-line and off-line medical direction for the provision of all emergency care including pediatric medical direction, when needed and the authority to prevent and EMS provider from functioning based on patient care considerations; and
- Audit and evaluation of patient care as it relates to patient outcome, appropriateness of training programs and quality improvement.

Status

The State EMS Medical Director is a contract position designated in Ohio law and must be a board-certified emergency medicine physician in active practice and actively involved in EMS for at least 5 years. The Medical Director directs the Executive Director of the Division of EMS and advises the EMS Board with regard to trauma and EMS issues. The State EMS Medical Director however, has limited authority in regards to agency medical directors and has limited involvement with air medical transport within the state.

The State EMS Medical Director for the past several years provides many hours of service beyond what her contract provides and is recognized at a national level for her contributions.

Each EMS region has appointed a Regional Physician Advisory Board (RPAB) that serves in an advisory capacity to the EMS agencies in their region. Each physician on the RPAB serves a 3 year term and is selected to ensure geographic representation within the region. The RPABs meet 4 times a year.

The RPAB advisory role includes the development and recommendation of patient treatment protocols including approving state trauma triage rules, assisting in

developing EMS continuing education programs, assisting in the organization, evaluation, and procurement of equipment for EMS organizations, and facilitating agreements for mutual aid and assistance between EMS organizations in the region. The RPAB also serves as a resource to maintain agency medical director contacts as well as help identify issues and solutions that affect the provision of medical care to patients. The RPAB cannot however serve as a “regional medical direction” board because of liability concerns. The RPAB’s mission is mostly trauma focused.

Region 6 has not had an active RPAB in several years. This seems to be due to its rural nature, the large size of the region and the lack of a true regional referral center within the region. A new chairman has recently been appointed and attempts to revitalize the RPAB are underway.

The Chairs of the RPABs meet quarterly with the State Medical Director and contribute to the development of the State of Ohio EMS Guidelines and Procedures Manual.

The Medical Oversight Committee of the EMS Board is composed of physicians and providers and recommends scope of practice changes based upon evidence-based best practices when available.

Each EMS agency is required to have a medical director and notify the DEMS regarding the name of that individual. The medical director must be board-certified or board-eligible in emergency medicine, be actively involved in emergency care of patients, and actively participate in quality improvement activities, education and protocol development and updates. For agencies without a board-certified or board-eligible emergency medicine physician, the medical director must meet all other requirements as well as complete a medical director education course as approved by the state. This includes the NAEMSP Medical Director Course or the Ohio ACEP course which is available on-line. However, there is no mechanism in place to track completion of these courses unless a physician submits a request for CME.

Currently, the DEMS does not have an accurate database of medical directors as there is no mechanism to enforce the agency notification requirement. While physicians must register as a medical director with the Board of Pharmacy, there is no such registration requirement for the DEMS.

The agency medical director is required to establish patient treatment protocols and can use the state guidelines as a resource. The medical director can restrict a provider’s scope of practice but cannot expand beyond the state adopted scope of practice for each licensure level.

Medical directors have a level of protection from civil liability related to acts and omissions except in cases of willful and wanton misconduct. There is no administrative liability protection in statute however.

Recommendations

- **The DEMS and Legislature should expand the role of RPAB from an advisory role to an authoritative role under direction of the EMS Board and the State Medical Director.**
- **The Legislature should extend the existing medical director liability protection to the RPABs to enable the provision of regional medical direction.**
- The DEMS should redefine EMS regions to better align regions with Homeland Security Planning Regions and reduce geographic size to increase RPAB activities.
- **The DEMS should expand RPABs' mission from that of trauma to all time-critical diagnoses and require development of regional triage criteria for STEMI, stroke, post-cardiac arrest, and pediatrics.**
- The Legislature should provide limited immunity for administrative liability of medical directors.
- The EMS Board and the DEMS should develop and require medical director certification for all agency medical directors and develop a statewide database to ensure compliance with minimum standards and increase medical director communication.
- The DEMS should require verification of medical director registration for all EMS agencies.

I. TRAUMA SYSTEMS

Standard

Each State should maintain a fully functional trauma system to provide a high quality, effective patient care system. States should implement legislation requiring the development of a trauma system, including:

- Trauma center designation, using American College of Surgeons Committee on Trauma guidelines as a minimum;
- Trauma field triage and transfer standards for trauma patients;
- Data collection and trauma registry definitions for quality assurance, using American College of Surgeons Committee on Trauma National Trauma Data Standards, as soon as practicable;
- Systems management and quality assurance; and
- Statewide Trauma System Plan, consistent with the Health Resources and Services Administration Model Trauma System Planning & Evaluation Document.

Status

Ohio, the seventh most populous state, faces most of the trauma system development challenges represented by all states; there exist challenges of population density disparity, funding, geography, “home rule” politics, lack of a state trauma plan, cross-border issues, EMS and air medical inconsistency across the state. Trauma system development has been ongoing in Ohio for over three decades. An initial focus on the development of prehospital emergency medical service capacity has evolved to a view that encompasses a desire to achieve comprehensive and integrated EMS and trauma systems. Despite the appropriate breadth of this view and many successes, there remain many opportunities for improvement

In the 1980's, Ohio hospitals were included in a voluntary, loosely coordinated trauma system: larger urban hospitals self-identified as regional trauma centers. There was no formal verification of trauma care among hospitals. In July 2000, legislation was passed that established a mandated statewide trauma system, created a statewide trauma committee (the Ohio Trauma Committee), defined “trauma victim”, and set official verification standards for trauma centers. One of the recognized shortcomings of the current Ohio trauma system is that it is “exclusive”; it focuses exclusively on the severely injured patient rather than all injured patients and is centered exclusively on

hospitals verified by the ACS as trauma centers rather than all hospitals who may receive injured patients. The state trauma registry only collects data on those trauma patients admitted to a hospital for at least 48 hours, are transferred, or who die. A true inclusive trauma system would concern itself with all injured patients seeking hospital care within the state.

It is not known whether the non-participating hospitals (non trauma centers) do submit all required data to the Ohio Trauma Acute Care Registry. These facilities are to report trauma patient data, as do the verified trauma centers. The difficulty is that these facilities are also expected to transfer all trauma patients at risk of complication or death. This is a “Catch 22” in which small hospitals are expected to submit reports voluntarily that may bring their care into question at the State level. For this reason and many others, it will be beneficial to the victims of injury in Ohio to add Level IV trauma centers and perhaps Level V trauma centers also. Periodic visits by the State would be expected to improve trauma care simply through the hospital site visit process.

A trauma rehabilitation registry, the first of its kind in the nation, was established as a module of the Ohio Trauma Registry in 2005. This registry was developed to track and understand longer-term outcomes of trauma victims. To date, the data captured in this registry have not been linked to acute care data in such a way that meaningful analyses have been forthcoming. Statewide trauma triage protocols have been developed that require EMS providers to transport severely injured patients directly to verified trauma centers with a few exceptions. Acute care hospitals are required to have protocols that address the emergency care of trauma patients and their appropriate transfer to a trauma center. Trauma centers are to have transfer agreements with acute care facilities to ensure continuity of care and the appropriate transfer of trauma patients. The presence and consistency of these various protocols and agreements across the many hospitals in Ohio is not tracked. Verifying that these protocols and agreements exist and are appropriately written is an important body of work yet to be accomplished.

Despite its limitations (functioning as an advisory group) the Ohio Trauma Committee has had numerous successes. The Trauma Committee is charged with assisting the State Board of EMS in the development of a variety of trauma system elements including prehospital triage of patients to trauma centers, restrictions on admission of trauma patients by non-trauma centers; and oversight of EMS quality of care and provider education. The advisory nature and large size of the 22-member (plus three liaison members) Ohio Trauma Committee limits its potential.

Only a lead agency that monitors patient care and transfer, has designation and de-designation authority over trauma centers, and has approval authority for triage protocols can be expected to successfully implement a comprehensive and integrated inclusive trauma system. Similarly, the trauma lead agency needs to be properly positioned and structured within the DEMS in order to be successful and achieve its potential. The work of the trauma office is large and requires adequate FTE resources. This work includes (but is not limited to): Level IV (and Level V) trauma center

verification, designation and de-designation of trauma centers, ensuring data collection from all trauma centers throughout the state, managing the Ohio Trauma Acute Care Registry, updating and approving regional trauma triage guidelines, ensuring seamless transfer of trauma patients through the trauma system (including special populations such as pediatric, elderly, and burns), ensuring adequate and appropriate use of rehabilitation resources, and developing agreements for trauma patient repatriation to neighboring states.

The forty-five verified trauma centers in Ohio are self-selected and undergo voluntary verification by the American College of Surgeons. There was no state needs assessment to determine the optimal level, number, and location of trauma centers; neither is there a state designation process. As such, the Level I and II trauma centers are in population centers, while the Level III trauma centers are more rural in location. This non-ideal geographic distribution leaves nearly 4% of the Ohio population more than one hour away from definitive care at a Level I or II trauma center, whether by ground or air transport (American Trauma Society TIEP data, 2009). Regions with “gaps” in their ability to provide timely trauma care need state involvement and assistance to solve the access problems these underserved areas represent. Addition of a State Trauma Medical Director would be expected to solve problems such as these and facilitate implementation of the Ohio Trauma Plan.

In 2008, the Ohio Trauma Committee convened to evaluate the strengths and weaknesses of the current system. A general assessment was conducted utilizing the *Model Trauma Systems Planning and Evaluation* document created by HRSA. In 2009, a workgroup was formed by the Ohio Trauma Committee to develop a strategic plan for Ohio's trauma system based on the results of the system assessment. In October 2010, the EMS Board approved *A Framework for Improving Ohio's Trauma System*. The “Trauma Visionary Committee,” including members of the Trauma Committee and the EMS Board, has been tasked with developing the Ohio Trauma Plan. Implementation challenges will follow Trauma Plan development. The membership of this new workgroup appears conducive to successful inclusive trauma system development.

Finally, as Ohio looks to improve disaster preparedness, the broad distribution of trauma centers throughout the State makes an excellent foundation for medical plans for disasters, either manmade or natural. Similarly, as homeland defense planning efforts mature, the “hub and spoke” trauma system model should not be overlooked as the base on which patient and medication distribution strategies can be built.

Recommendations

The Legislature should:

- **Modify existing trauma system legislation to establish criteria for and develop an inclusive trauma system for Ohio.**
 - **Develop Ohio criteria for verification of Level IV (and consider Level V) trauma centers (even if the American College of Surgeons has not/will not).**
- **Create and fund the position of State Trauma Medical Director.**

The DEMS should:

- **Complete and implement the Ohio Trauma Plan based on the preliminary document, “*A Framework for Improving Ohio’s Trauma System.*”**
 - **Formalize the Trauma Visionary Committee as a permanent adjunct to the trauma program.**
 - **Provide adequate support for current and future work of the Trauma Visionary Committee in developing and implementing the Ohio Trauma Plan.**
- **Provide additional FTE’s for the DEMS to be able to manage the trauma program.**
- **Overcome apparent obstacles to full use of trauma system data to support statewide and national quality assurance and prevention efforts and to support future trauma system maturation.**
 - **Develop strategies to ensure trauma patient data is submitted from all Ohio hospitals to the Ohio Trauma Acute Care Registry.**
 - **Work with the Ohio Attorney General to be authorized to publish statewide aggregate trauma and EMS data and submit statewide aggregate data to the National Trauma Data Bank and NEMSIS.**
 - **Develop and implement an evidence-based injury prevention and control plan integrated with interested agencies.**
- **Appoint a State Trauma Medical Director.**
 - **Ideally, this should be a trauma/critical care surgeon (of at least 0.25 FTE)**

J. EVALUATION

Standard

Each State should implement a comprehensive evaluation program to assess effectively and to improve a statewide EMS system. State and local EMS system managers should:

- Evaluate the effectiveness of services provided to victims of medical or trauma-related emergencies;
- Define the impact of the system on patient care and identify opportunities for system improvement;
- Evaluate resource utilization, scope of service, patient outcome, and effectiveness of operational policies, procedures, and protocols;
- Evaluate the operation of regional, accountable emergency care systems including whether the right patients are taken to the right hospital;
- Evaluate the effectiveness of prehospital treatment protocols, destination protocols and 911 protocols including opportunities for improvement;
- Require EMS operating organizations to collect NEMSIS compliant data to evaluate emergency care in terms of the frequency, category, and severity of conditions treated and the appropriateness of care provided; Assure protection from discoverability of EMS and trauma peer review data;
- Ensure data-gathering mechanism and system policies that provides for the linkage of data from different data sources through the use of common data elements;
- Ensure compatibility and interoperability of data among local, State and national data efforts including the National EMS Information System and participation in the National EMS Database;
- Evaluate both process and impact measures of injury prevention, and public information and education programs; and
- Participate in the State Traffic Records Coordinating Committee (TRCC) – a policy-level group that oversees the State’s traffic records system, to develop and update a Statewide Traffic Records System Strategic Plan that ensures coordination of efforts and sharing of data among various State safety data systems, including EMS and Trauma Registry data.

Status

The Division of EMS requires all EMS patient encounters be reported to the EMS Incident Reporting System (EMSIRS) by the transporting agency. This system was built by the state and is transitioning to NEMSIS V2 compliance. The state has provided grants to EMS agencies to help facilitate the access to EMSIRS and simplify data submission. The EMSIRS is compatible with commercial PCR programs through a batch file and FTP transfer.

Currently, there is no mechanism to monitor compliance with the data submission requirement nor is there provision for enforcement but the DEMS reports around 85% of all patient encounters are submitted. However, these submissions are from ground transport agencies and may not necessarily reflect care provided by first responder agencies or air medical services. Agency data submission is tied to state EMS grant eligibility. Ohio does not submit to the national EMS database (NEMSIS) over concern of an Ohio law addressing release of medical information that tends to reveal patient identity. The DEMS has published annual benchmark reports including regionalized breakdowns of incident time intervals and procedure success rates.

The Trauma Registry (TR) is used to compile all trauma related admissions greater than 48 hours, trauma deaths, and trauma transfers from hospital to hospital. It is currently being upgraded to be National Trauma Data Standard (NTDS) compliant. The Ohio Office of Traffic Safety has provided \$350,000 in Section 408 grant funding to facilitate the upgrade of this registry.

The Division of EMS participates in the Ohio Traffic Records Coordination Committee. This committee's focus is on the collection and analysis of traffic safety data to reduce crash-related deaths and injuries. The upgrade of both the TR and EMSIRS will allow high-quality data submissions into Ohio's Crash Outcome Data Evaluation System (CODES) program.

Several EMS agencies have utilized information from both of these databases for system enhancements and research projects. Several papers have been published by outside researchers including in peer-reviewed medical journals.

The use of these databases by the DEMS and the EMS Board has been limited mainly due to the lack of personnel to analyze the data. When benchmarked against other states, the DEMS lacks the human resources to optimally analyze the acquired data.

The EMS Board requires each EMS agency to implement a peer-review and quality assurance program. This program is focused on improving the ability to provide effective trauma care and takes into account the trauma care guidelines developed by the board. This peer-review and QA process is protected from discovery for liability purposes.

Recommendations

- **The DEMS should require all hospitals to submit trauma registry data for all trauma admissions, deaths and transfers.**
- The Department of Public Safety should provide funding for additional staff for increased analysis of database data.
- **The DEMS should seek clarification of law in order to submit EMSIRS data to the national EMS database (NEMSIS) and trauma registry data to the NTDB.**
- The DEMS should increase analysis of database information to drive EMS and trauma system design and policies including patient destination criteria and appropriate use of air medical resources.
- The DEMS should resolve the confidentiality issues which currently restrict access to de-identified data for public purposes.
- The DEMS should use the EMSIRS and TR data to regularly provide reports to hospitals and EMS providers.

K. PREPAREDNESS

Standard

EMS is a critical component in the systematic response to day-to-day emergencies as well as disasters. Building upon the day-to-day capabilities of the EMS system each State should ensure that EMS resources are effectively and appropriately dispatched and provide prehospital triage, treatment, transport, tracking of patients and documentation of care appropriate for the incident, while maintaining the capabilities of the EMS system for continued operations, including:

- Clearly defining the role of the State Office of EMS in preparedness planning and response including their relationship with the State's emergency management, public health and homeland security agencies;
- Establishing and exercising a means to allow EMS resources to be used across jurisdictions, both intrastate and interstate, using the Emergency Management Assistance Compact and the National Incident Management System;
- Identifying strategies to protect the EMS workforce and their families during a disaster;
- Written protocols, approved by medical control, for EMS assessment, triage, transport and tracking of patients during a disaster;
- A current statewide EMS pandemic influenza plan; and
- Clearly defining the role of emergency medical services in public health surveillance and response.

Status

Statutorily, the roles of the EMS Board and the DEMS in domestic preparedness are defined in Ohio Revised Code (ORC). The ORC requires the EMS Board to provide a liaison to the Ohio Emergency Operations Center (EOC) when there is a disaster that warrants a Governor's emergency declaration. This requirement is being met through the DEMS participation at the state Emergency Operations Center (EOC). The EMS Board is required to establish a statewide emergency medical services plan, and a plan for the regulation of EMS during periods of disaster. The latter must be consistent with the statewide plan and the State EOP, and must be sent to the Ohio Emergency Management Agency (EMA).

Although the statutory responsibilities and authority of the EMS Board and the DEMS are somewhat limited concerning domestic preparedness, both the EMS Board and DEMS work to ensure that the needs of the EMS community related to preparedness are met. The Ohio Emergency Management Agency and Ohio Homeland Security are also divisions of the Department of Public Safety. As components of the same department, cooperation between the agencies is enhanced. The DEMS provides staff support through its Homeland Security Coordinator. The lack of authority to regulate EMS agencies inhibits the DEMS's ability to adequately identify and track resources, thus being a barrier in terms of planning for mass casualty events.

The DEMS works with the Ohio Department of Health (ODH) in developing protocols and training to deploy both EMS and hospital based CHEMPACKS. In partnership with ODH, the EMS Board and DEMS completed the deployment of regional equipment caches, as well as supporting a training capacity expansion project. Funding for EMS agencies to purchase radios compatible with the Multi Agency Radio Communications System (MARCS) was authorized by the EMS Board.

In 2009, the DEMS and the EMS Board worked with the ODH to address the H1N1 influenza outbreak. As a result of the declared public health emergency, certified EMT-Intermediate and EMT-Paramedic personnel were made available to local public health officials to perform H1N1 immunizations under physician direction.

In order to meet the requirements of the ORC, the EMS Board adopted the Ohio Fire Chiefs' Association's Ohio Fire Service Emergency Response System (ERS) as Ohio's plan. The ERS provides local fire chiefs with easy access to large quantities of fire service resources that may be needed to respond to a major fire or natural or man-made disaster. This system provides for rapid activation and response of fire service resources in quantities beyond the means of a single fire department and local mutual aid.

The ERS is a database of typed resources maintained and updated regularly by regional coordinators. Activation of the plan is through the Ohio Central Dispatch Facility, and in time of disaster is coordinated through the State Emergency Operations Center. The system includes validation of all necessary mutual aid and emergency management assistance compact documentation. The success of this plan has been validated through actual uses, and exercises. Although this system is predominately centered around fire service resources, non-fire based agencies may choose to participate.

Recommendations

- **The EMS Board and the DEMS should require the use of a statewide patient tracking system by all ambulances during a multiple casualty or mass casualty incident.**
- **The EMS Board and the DEMS should develop a comprehensive data base of EMS resources to be utilized during multiple casualty or mass casualty incident.**
- **The DEMS should work closely with the ODH to support the continued development of hospital preparedness planning and effective use of HPP and other grant funds targeted to increase medical facility surge capabilities.**

L. CURRICULUM VITAE

Christoph (Chris) R. Kaufmann, MD, MPH, FACS

Professor of Surgery, East Tennessee State University
Medical Director, Trauma and Acute Care Surgery Services
Johnson City Medical Center
400 N. State of Franklin Road
Johnson City, TN 37604
(423) 431-1896
Cell: (423) 747-7478
kaufmanncr@msha.com
chriskaufmann@earthlink.net

ORGANIZATIONS/APPOINTMENTS

American College of Surgeons Committee on Trauma,
Past Chair, ATLS Subcommittee 2003-2006, International Chair 2006-2009
Trauma Systems Consultation Committee (reviewer NC, CT, HI, Team leader AZ, TN, IN, TX)
Member and Lead Reviewer, Trauma Center Verification & Review Committee (VRC)
Region Chief, Military Region 1999-2002
Trauma Center State Site Surveyor (Virginia, Pennsylvania, Illinois, Washington, Oregon)
Institute of Medicine, Committee on a Vision for Space Medicine Beyond Earth Orbit
NATO Emergency War Surgery Handbook, 3rd US Revision, Editorial Board
American Board of Surgery, Associate Examiner
Ambroise Pare Military Surgical Forum of ISS-SIC, Past President
Society of Apothecaries of London, Diploma in the Medical Care of Catastrophes, Diplomate and Examiner
Madigan Army Medical Center, Tacoma, Washington, Staff Surgeon, Surgical Chief, ICU
47th Combat Support Hospital, Saudi Arabia and Iraq, Chief, Trauma Surgery
Inova Fairfax Hospital, Falls Church, Virginia, Vice Chief, Trauma Services
Emanuel Hospital, Associate Medical Director, Trauma Services, 2002-2009
U.S. Public Health Service, Division of Trauma and Emergency Medical Systems, BHRD, HRSA, Director 1994-1995
Uniformed Services University of the Health Sciences
Professor of Surgery 2002-
Division of Trauma and Combat Surgery, Chief
National Capital Area Medical Simulation Center, Surgical Simulation Laboratory, Director
Oregon Health Sciences University, Clinical Professor of Surgery, 2004-2009
East Tennessee State University, Professor of Surgery, 2009-present
Journal of Trauma, Senior Reviewer
Program Committee, Medicine Meets Virtual Reality, 2000-2003
HRSA Ad Hoc Committee to write Model Trauma Care System Plan/MTSPE, 1992/2003
Member, Resources Revision Committee, ACS COT and Contributing Author (Green Book)
Member, Pro Tem, ACS Health Policy Steering Committee
Member, Oregon State Trauma Advisory Board, 2004-2009
USDOT, NHTSA EMS Reassessment Program, Technical Assistance Team, Member, States of Mississippi, North Dakota, and Missouri.

D. Randy Kuykendall, MLS, NREMT-P

EMS Section Chief
Colorado DPH&E
4300 Cherry Creek Drive
DPHE, A2
Denver, Colorado 80246

(303)-692-2945
FAX (303)-691-7720
randy.kuykendall@state.co.us

ORGANIZATIONS/APPOINTMENTS

Colorado Emergency Medical and Trauma Services Section, Colorado Department of Public Health and Environment, Chief
National Association of State EMS Officials (NASEMSO), President, 2010 – Present.
Committee on the Accreditation of Education Programs for the EMS Professions (CoAEMSP) 2006-2010, Past Chairman
Pueblo Community College, Department Chairman
State of New Mexico Emergency Medical Services Bureau, State EMS Training Coordinator/EMS Program Operations Manager
National Council of State EMS Training Coordinators, Inc., Chairman
US Department of Transportation, Paramedic Curriculum (1986) Leadership and Development Committee
Injury Prevention Program for EMS Providers, Leadership and Development Committees
States of Colorado and New Mexico, Legislative Policy Development and Implementation
Colorado and New Mexico Statewide EMS Advisory Councils
Colorado statewide EMS and Trauma Advisory Council, Executive Secretary
New Mexico EMS Statewide Advisory Committee, Former Vice Chairman
Emergency Medical Technician and Paramedic, Las Cruces, New Mexico
1990- New Mexico Governor's Award
1998-Colorado EMS Instructor of the Year
2006-Colorado EMS Association President's Award
USDOT, NHTSA EMS Assessment Program, Technical Assistance Team, Member, Puerto Rico.

W. Dan Manz

Director
Emergency Medical Services Office
Department of Health
Box 70, 108 Cherry Street
Burlington, VT 05402

(802) 863-7310
Fax: (802) 863-7577
dmanz@ahs.state.vt.us

ORGANIZATIONS/APPOINTMENTS

National Association of State EMS Directors
Past President
Past Treasurer
New England Council for EMS
Past President
Executive Committee
EMS Agenda for the Future, Co-Chair
EMS Education Agenda For The Future, National Implementation Team, Chair
FLEX Program, National Resource Center, Board Member
EMS Agenda for the Future Implementation Guide Committee Member
Vermont State Firefighters Association
National Registry of EMTs, Board Member
Essex Rescue, EMT-I Captain
Health Care Finance Administration Negotiated Rule Making, NASEMSO, Committee Member
National Scope of Practice Model Project – Principal Investigator
American College of Surgeons – Trauma System Assessment Team Member
EMSC Grant Review Team Member
USDOT, NHTSA EMS Assessment Program, Technical Assistance Team, Member, States of Delaware, Texas, and North Dakota
USDOT, NHTSA EMS Reassessment Program, Member, States of Colorado, Alaska, Ohio, Connecticut, Delaware, Mississippi, Oregon, Michigan, Kansas, North Dakota, American Samoa, Nevada and Oklahoma.

Susan D. McHenry, MS

EMS Specialist

U.S. Department of Transportation
National Highway Traffic Safety Administration
1200 New Jersey Ave., SE, NTI-140
Washington, DC 20590

202-366-6540
FAX 202-366-7149

Email: susan.mchenry@dot.gov

EMS Specialist
DOT, National Highway Traffic Safety Administration
(March 1996 - to Present)

Director, OEMS
Virginia Department of Health
(1976 to March 1996)

ORGANIZATIONS/APPOINTMENTS

National Association of State EMS Directors (1979-1996)
Past President
Past Chairman, Government Affairs Committee
National Association of EMS Physicians, Member
American Trauma Society
Founding Member, Past Speaker House of Delegates
ASTM, Former Member, Committee F.30 on Emergency Medical Services
Institute of Medicine/National Research Council
Pediatric EMS Study Committee, Member
Committee Studying Use of Heimlich Maneuver on Near Drowning Victims, Member
World Association on Disaster and Emergency Medicine
Executive Committee, Former Member
Editorial Reviewer for *A Prehospital and Disaster Medicine*, (former).

Curtis C. Sandy, MD, EMT-T, FACEP

EMS Medical Director
Pocatello, ID 83201

208-705-7752
ccsandymd@gmail.com

ORGANIZATIONS/APPOINTMENTS

American College of Emergency Physicians (ACEP), Fellow
Immediate Past President, Idaho Chapter, 2009-pres
President Idaho Chapter 2004-2009
President Elect – Idaho Chapter 2003-2004
Councilor - Idaho Chapter 2004-2005
Academic Affairs Committee 2001-2003
Alternate Councilor, Representative Council, Oct 2002
American Board of Emergency Medicine, Diplomate
Emergency Medicine Residents Association (EMRA)
Board of Directors, Academic Affairs, Director, 2001-2003
Board Liaison to the Council of Residency Directors 2001-2003
Board Liaison to the Medical Student Committee of EMRA 2001-2003
Participant in CORD Core Competencies conference, March 2002
National Association of EMS Physicians (NAEMSP)
Air Medical Physician Association (AMPA)
Idaho EMS Physician Commission, Board of Medicine Representative, 2006-pres
Idaho EMS Code Task Force – 2007- pres
Idaho Cardiac Level One Steering Committee 2009 – pres
Medical Director, Bannock County Ambulance/Pocatello Fire, Pocatello, ID 2007- pres
Medical Director, Ft. Hall Fire and EMS, Fort Hall, ID 2007- pres
Medical Director, Bannock County Search and Rescue 2007- pres
Medical Director, Portneuf, Life Flight, Pocatello, ID 2004- pres
Medical Director, BYU-Idaho Paramedic Program, Rexburg, ID 2008- pres
Tactical Physician, Bannock County Sheriff Southeast Idaho STAR, 2008-pres
Assistant Associate Clinical Medical Director, College of Southern Idaho Paramedic Program, Twin Falls, ID 2004-pres
Idaho State EMS Bureau Air Medical Utilization Task Force 2005
Medical Direction Subcommittee, Idaho EMS Advisory Committee 2005-2006
Affiliate Clinical Faculty: Idaho State University, Department of Family Medicine, Pocatello, ID, 2003-present.
Consultant, SafeTech Solutions, LLP
USDOT, NHTSA, EMS Reassessment Program, Technical Assistance Team, Member, States of Oklahoma and Missouri.

Jolene R. Whitney, MPA

Deputy Director
State of Utah
Department of Health
Bureau of Emergency Medical Services & Preparedness
3760 South Highland Drive PO Box 142004
Salt Lake City, UT 84114-2004

Office: 801-273-6665
Fax: 801-273-4165
Cell: 801-560-2821

Email: jrwhitney@utah.gov

ORGANIZATIONS/APPOINTMENTS

Utah Bureau of EMS and Preparedness, Deputy Director
Chair National Council of State Trauma
Systems Managers
NASEMSO liaison for the ACS Trauma System
Planning and Evaluation Executive Committee
NHTSA EMT Refresher Course Curriculum Development
HRSA Rural Trauma Grant Reviewer
Utah Public Health Association, Member
American Trauma Society, Member
Task Force Chair for Utah Trauma System Development
Air Ambulance Rules Task Force, Chair
Appointed to Governor's Council on Blood Services
Previous member of State EMS Training Coordinators Council
CLEAR Certified Inspector
Utah Emergency Managers Association, Member
Certified EMT-I, 1983.
ACS, State Trauma System Assessment, Team Member, States of Alaska, Minnesota,
Colorado and Louisiana, Texas.
USDOT, NHTSA, EMS Reassessment Program, Technical Assistance Team, Member,
States of Michigan, Oklahoma, Delaware and Missouri.

Final Report of the Workgroup on Provisional Trauma Center Designation

Amended Senate Bill 138 of the 123rd General Assembly was signed into law in July 2000¹. It set into motion the development of an organized system of care for the seriously injured patient in Ohio. As work progressed on various tasks mandated by the law, it became clear that it was legally difficult, if not impossible, for hospitals not verified as a trauma center by November 3, 2002 to gain the experience needed in order to do so. Discussions among stakeholders in the trauma system lead to proposals of various provisional designation processes, including which organization or agency should assume the authority to oversee the process.

Formation of and Charge to the Workgroup

In late April 2002, J. Nick Baird, MD, Director of Health, requested that Virginia Haller, MD, liaison from the Ohio Department of Health (ODH) to the Trauma Committee, form a workgroup to examine the issues of provisional designation of trauma hospitals in Ohio. Dr. Baird's charge to the Workgroup was to present to him by November 2002 the arguments for and against a series of options for handling provisional designation. Members of the Workgroup were to include representatives from the ODH, the Ohio Department of Public Safety (ODPS), the Trauma Committee and Ohio hospitals. Members of the Workgroup on Provisional Trauma Center Designation are listed in Appendix A

At about the same time but unrelated to the workgroup, the Ohio General Assembly sought to provide immediate relief to hospitals seeking to operate as trauma centers under a provisional status as of November 2002. Substitute Senate Bill 124 (SB 124) served as the vehicle and was signed into law with an effective date of November 2002². Members of the Workgroup viewed SB 124 as short term relief for the need for provisional designation. Long term resolution would require a process for provisional designation that focused on clinical criteria and the establishment of a designating authority. Thus, the Workgroup chose to compare the provisional designation process mandated by SB 124 with several other options.

The Evolution of Trauma Care

Twentieth century military experience first demonstrated that patients with severe multiple injuries could survive if they received prompt coordinated care from a team of specialists. Later, urban hospitals expanded the team model, showing that patient outcomes were enhanced by a smooth flow of care between the emergency room and intensive care units. As well-trained emergency physicians and trauma surgeons moved from urban settings to rural areas, they found that dedicated equipment, resources and personnel were as critical as their own knowledge and abilities in saving the lives of trauma patients³.

Accidental Death and Disability: The Neglected Disease of Modern Society, published in 1966, highlighted the enormous costs of death and disability in the United States due to preventable injury⁴. The authors of Accidental Death and Disability underlined the need for partnership between government and those in the health care field in resolving the

complex conditions which often lead to injury. Public policy was considered essential to the community infrastructures that supported effective prevention efforts, as well as the coordination of health care services delivered in the field and in the hospital.

Over the next twenty years, several states and large urban areas developed systems for delivering trauma care which integrated government and health services. Evaluation of efforts undertaken in Maryland, Florida, Illinois, Oregon and in Orange County and San Diego demonstrated marked survival of trauma patients after implementation of the systems. At the same time, the medical field was working to develop guidelines to standardize the approach to care of the injured patient³.

Development of the ACS Guidelines and the Verification Process

The American College of Surgeons (ACS) was founded in 1913 on the basic principles of improving the care of the surgical patient and the education of surgeons. The ACS Committee on Trauma (ACS COT) is the oldest of the standing committees of the College. Established in 1922 this committee focuses on improving care of the injured patient. In the mid 1970s, the ACS COT formalized its recommendations for care of the injured patient via the publication of a document entitled *Optimal Hospital Resources for Care of the Injured Patient* (1976). This document provided a foundation for the development of the ACS COT Verification Review Committee (ACS COT VRC). The mission statement of the Verification Review Committee states the following: "To create national guidelines for the purpose of optimizing trauma care in the United States. This [objective] may be accomplished through a voluntary review of potential and existing trauma centers to ensure that they provide an organized and systematic approach to the care of the injured patient. Essential elements include trained and capable personnel, adequate facilities, and ongoing self-assessment as outlined in the "Resources for Optimal Care of the Injured Patient", 1998 document. The goals of the ACS COT VRC are 1) that hospitals providing care for injured patients request consultation and/or verification from the American College of Surgeons to assist in the development and implementation process; 2) that the guidelines be updated at periodic intervals to reflect changes in patient care consistent with new diagnostic and treatment modalities. Socioeconomic issues are to be considered as well. And, 3) that the consultation/verification process be monitored in order to identify issues and opportunities for improvement of the program.

An obvious outgrowth of the ACS COT guidelines for optimal care was the development of a verification process whereby a hospital could be evaluated to determine whether ACS criteria were being met. This verification process was established in 1987 and by 2001 more than 1100 verification and consultation visits were completed. Currently, the ACS COT Verification Review Committee stands as the recognized authority on the provision of care for the injured patients. The guidelines of the ACS COT as published in the *Optimal Resources handbook* are utilized (either verbatim or as guidelines) by the majority of legislated trauma systems in the United States. Trauma center verification is the process by which the ACS confirms that the hospital is performing as a trauma center and meets the criteria contained in the *Resources for Optimal Care of the Injured Patient* document⁵.

In 1998, researchers conducted a survey of all state emergency medical directors on the status of trauma system development in their state. 41 of 51 respondents indicated that

their criteria for determining trauma center status was based on or actually utilized ACS criteria. 2 states did not use ACS criteria. The remaining 8 states had not undertaken significant trauma system development⁶. During its deliberations, members of the Workgroup on Provisional Trauma Center Designation contacted 23 states regarding their use of ACS criteria in determining trauma center status. Of the 23 states, all either utilized the ACS verification process in its entirety or based their criteria on ACS guidelines (Appendix B).

The process of ACS verification is well-established. Following the receipt of a request for a consultative site visit from a hospital and the completion of a pre-review questionnaire, the ACS proposes a review team and a date for the review. All reviewers are from out-of-state and selected from present and past members of the COT, thus ensuring an objective review process. The hospital to be reviewed must agree with the reviewers selected and the date for the visit.

The consistency of the review process is facilitated by

- 1.) a pre-review questionnaire which allows the site visitors to have a better understanding of the existing trauma care capabilities and the performance of the hospital and medical staff before beginning the review
- 2.) the guidelines used by the site visitors to conduct the review, in which evaluation of the quality improvement activities and review of medical charts are emphasized.
- 3.) an organized agenda for the review and an outline for writing the report in a standard format
- 4.) final review of the report by the Verification Consultation Committee, and
- 5.) a formalized appeal process to the VRC.

The entire process encompassing the VRC and the publication of the *Resources* document is a dynamic and constantly evolving process. The standards of the *Resources* publication are constantly reviewed and updated every three to five years to reflect the most current medical data regarding the optimal resources for care of the injured patient. Through state commitment to the standards of the ACS COT and the verification process as described in the *Resources for Optimal Care of the Injured Patient*, the citizens of Ohio may be assured of the finest trauma care.

Not all stakeholders in a developing or mature trauma system support use of the ACS standards in their entirety. Those states whose trauma systems were organized prior to the establishment of the ACS verification process tend to use ACS standards as minimum criteria for participation in the state trauma system, with some standards being set much higher. Still other states use ACS standards or the ACS verification process itself for designation of Level I and Level II hospital facilities. It is common for states to use ACS standards as a model for Level III and Level IV facility designation, modifying the standards to varying degrees. In these states, facility designation must be conducted by the state apart from ACS verification.

Ohio Legislation

Amended Substitute House Bill 138 (HB 138) of the 123rd Ohio General Assembly

HB 138, as signed into law July 2000, amended Chapters 3727 and of the Ohio Revised Code. It established critical elements of a statewide trauma system. Beginning November 3, 2002, hospitals cannot represent themselves as trauma centers unless they are verified by the ACS. The legislation mandated that emergency medical services and hospitals develop protocols for the triage and treatment of seriously injured patients, as well as quality improvement activities that would assure continual self-evaluation and correction. HB 138 broadened the membership of the EMS Board and established the Trauma Committee to support the EMS Board in its work. The integrity of data gathered through the trauma registry was increased by adding risk adjustment parameters and confidentiality protections. EMS and Trauma Grant programs were expanded. Finally, HB 138 called for special studies through ODPS and two Commissions through ODH to provide information for further development of the trauma system¹.

Impact of SB 124

The intent of HB 138 was to lay the groundwork for a statewide trauma system with the goal of matching the needs of injured patients to available health care resources. Trauma hospitals are a key resource for Ohio's trauma system. As population and injury patterns throughout the state change, it will be important to develop and support new trauma hospitals. Likewise, should existing trauma hospitals relinquish or lose their trauma center status, the state will require flexibility to respond to the needs of injured patients.

During initial trauma system development it was determined that new trauma hospital development may be difficult due to conflicts in the state's definition of a trauma hospital, state triage rules, and criteria for trauma center verification by the American College of Surgeons (ACS). Therefore, a need for provisional trauma center designation was identified.

SB 124 made several changes to chapter 3727 of the Ohio Revised Code². Prior to SB 124, a hospital was required to have ACS verification in order to function as a trauma center in Ohio. SB 124 created a mechanism for a hospital to operate as a provisional trauma center before completing ACS verification. To attain provisional trauma center designation, a hospital must undergo a consultative or re-verification visit by the ACS. Based on the report from this visit, a hospital can attain provisional trauma center status after completing the following tasks: (1) the hospital's chief medical officer and chief executive officer certify in writing to the hospital's governing board that the hospital is committed and able to provide trauma care consistent with the level of verification being sought; (2) the hospital's governing board adopts a resolution stating that the hospital is committed and able to provide trauma care consistent with the level being sought; and (3) the hospital's governing board approves a written plan and timetable for obtaining the level of verification being sought, including provisions for correcting any deficiencies identified during the ACS review. Status as a provisional trauma center is terminated if the hospital withdraws its application for verification, the ACS terminates or suspends the

application, or if the hospital is not an ACS verified trauma center within 18 months after operating under provisional status (12 months if the hospital is being re-verified).

All hospitals must notify the Director of Health of any changes in their trauma center status (See ORC 3727.101-102). This would include achievement or loss of provisional trauma center status and achievement, loss, or change in their level of trauma center verification. The Director may request a copy of the hospital's ACS report and timetable for correcting any identified deficiencies. While these documents are confidential, they can be used in any action brought by the Director against the trauma center or a person that authorized, approved, or created the original documents and the information in them. There is no statutory authority for the Ohio Department of Health to administer a provisional designation system. There is also no funding to support activities related to provisional designation.

Benefits

SB 124 sets forth a simple approach to the complex problem of provisional designation and requires no formal implementation process. Prior to the passage of SB 124, many constituents believed that a provisional designation system should be in place prior to the November 2002 trauma system implementation deadline (as specified in HB 138). There was concern that, without provisional designation, hospitals actively pursuing trauma center status would not be able to develop the track record of patient care required for ACS. SB 124 addressed this concern and may have prevented a possible delay in trauma system implementation. Hospitals desiring provisional trauma center status will like this law because it provides an easy mechanism for them to function as trauma centers while building experience and a database for ACS verification. Advocates for SB 124 further point out that, although there is no regulatory oversight of provisional trauma center designation, liability concerns will constrain hospitals from operating outside their capabilities.

Risks

SB 124 lists no minimum clinical criteria with which provisional trauma centers must comply. The ACS lists over 170 possible criteria deficiencies that may be identified in the course of either a consultative or verification visit. Among the criteria are both administrative and clinical deficiencies, and within these categories are deficiencies that have either major or minor impact on patient outcomes. It is possible that provisional trauma center status could be attained in the presence of major clinical deficiencies. The realization of provisional status without consideration of the impact of a hospital's specific criteria deficiencies erodes the intent of HB 138 to match trauma care resources with patient needs.

There is no authority for any group to monitor hospitals operating as provisionally designated trauma centers. Therefore, there is no mechanism to insure that these centers are providing an appropriate level of care or making significant progress toward successful ACS verification. Even if such authority existed, this new law contains no actions or penalties associated with non-compliance of the criteria for attaining provisional trauma center status. While advocates for SB 124 argue that liability is a significant deterrent to hospitals operating outside their capabilities to provide trauma

care, hospital staff may misinterpret ACS criteria and unknowingly provide substandard care.

The workgroup was concerned that, while SB 124 addresses the needs of hospitals wanting to become trauma centers, it does not adequately address the needs of patients. This concern was based upon the lack of clinical criteria associated with provisional status and lack of system oversight. SB124 should be viewed as a short-term solution. Ultimately, a comprehensive long-term solution must be defined. The rest of this report will outline potential actions related to this issue.

Justification of the Need for a Designating Authority

In order to appreciate the interplay of the ACS and Ohio law in the development of a statewide trauma system, it is necessary to understand key terminology and concepts.

Verification is the ACS COT process which uses experienced on-site reviewers to evaluate the trauma care capabilities and performance of an institution.⁷ Verification is an entirely voluntary process initiated by the institution¹. Once achieved, verification as a Level I, II, III or IV Trauma Center is granted for three years. ACS does not monitor performance of a verified trauma center within those three years, although the institutional performance is evaluated at the re-verification visit. “The **designation** of trauma facilities is a political process enacted by bodies of government duly authorized to designate.”⁸ Designating authorities establish trauma systems, select participating institutions and designate the role of those institutions within the trauma system. Provisional designation, though built on the ACS verification process, is a function of a designating authority. Monitoring of poor patient outcomes between ACS verification visits would also be a role for the state designating authority.

Provisional designation can take place without a designating authority, as Ohio is now doing. SB 124 addressed several circumstances in which hospitals can complete the process of ACS verification as a trauma center while continuing to receive trauma patients. Evolution of the science underlying trauma medicine, shifting population demographics and economic pressures can be expected to create a demand for ongoing changes in the trauma system. For example, an ACS verified trauma center may decide to close its trauma services due to loss of key staff or financial constraints. Other hospitals willing to fill the void would need time to prepare for ACS verification. The existence of a designating authority in the state could facilitate their ability to provide valuable services to many seriously injured patients, while safeguarding the most critical patients who need care elsewhere. Areas of Ohio are currently underserved in terms of trauma facilities, most notably, southeastern Ohio. The ability to function under provisional trauma center status would allow a local hospital to obtain the track record necessary to satisfy ACS verification requirements.

In states with a designating authority, the ACS shares results of its activities with that entity. In the 1998 survey of state EMS Directors, 39 of 51 respondents indicated their

¹ In those states with a legally established designating authority, the ACS will respond only to a request for verification of an institution when approved by the state designating authority.

state had a designating authority. (Appendix B.) Recall that 8 of the 51 had no trauma system whatsoever.

A state designating authority not only allows response to changing conditions that affect the hospitals, but also allows focus on the quality of clinical care. Under SB 124, a hospital with deficiencies of any magnitude may operate as a trauma center if they develop the requisite resolutions and action plans for correction. Yet the affect on patient outcomes may be dramatically different. A designating authority can address such differences. The locus for a state designating authority, as established in law, can reside with a state agency or a private organization.

Options for the Designation of Provisional Trauma Centers in Ohio

What are the benefits and risks inherent in the current approach to designation of provisional trauma centers? What other options might Ohio pursue as its trauma system evolves? The Provisional Trauma Center Designation Workgroup debated the merits of several methods for recognizing provisional trauma centers. Each option is presented below, along with its benefits and challenges. Special note is made for the legal authority, legislative changes and funding issues required by each. The Workgroup also addressed confidentiality issues which would have a bearing on the willingness of hospitals to share data with a designating authority.

As stated earlier in this document, the Workgroup strongly supports ACS verification and the continued use of the ACS criteria for trauma center designation in Ohio. Options for creating a non-ACS based designation process are not presented here.

Option 1

ODH would be given the statutory authority to establish a provisional designation program and rules to govern that program. A group of professionals with expertise in trauma would advise and assist ODH on the development of criteria, the writing of rules, the granting of provisional status, etc.

Option 1A – Use of the Trauma Committee as the Advisory Body (See Figure 1).

Currently, ODH has neither the expertise nor the resources to undertake provisional designation activities. The Trauma Committee, which was created under HB 138 to advise and assist the EMS Board. Its focus under EMS has been on pre-hospital activities. The Trauma Committee is composed of a cross-section of professionals, many of whom have experience with hospital verification by the ACS. They also have in-depth knowledge of the development of the trauma system to date. In this option, the Trauma Committee would assist and advise ODH on hospital matters related to trauma and trauma care within Ohio. A statutory connection between ODH and the Trauma Committee would be required. The Trauma Committee would then assist ODH in the writing of rules related to provisional designation. A major advantage of this option would be the inclusion of clinical criteria necessary for successful designation as a provisional trauma center. Any hospital meeting provisional trauma center criteria would be designated as such. The Ohio General Assembly would need to assign authority for provisional designation to ODH. Ohio public record laws would need to be amended to protect the sharing of sensitive data between hospitals and ODH. Under this option, few

additional resources would be needed. The Workgroup envisioned one FTE (or less) at ODH to coordinate provisional designation activities. No site visits would be conducted, eliminating a major expense. The membership of the Trauma Committee may need to be expanded to accommodate additional expertise and work volume. Any necessary funding would be dependent either upon the General Revenue fund (unlikely) or fees generated from the hospitals.

Ohio law equates ACS verification with designation. Many hospitals pursued ACS verification prior to passage of HB 138 as a means of improving their own performance and recognition as trauma centers. This limits the number of hospitals seeking provisional designation. It is anticipated that between 10 and 20 hospitals will seek provisional trauma center status under SB 124 during the first few months after implementation of HB 138/SB 124. Members of the Workgroup estimate that only 3 or 4 hospitals per year will seek provisional status afterwards. It seems efficient to rely on an already existing group of experts to perform specialized oversight of a process involving so few hospitals.

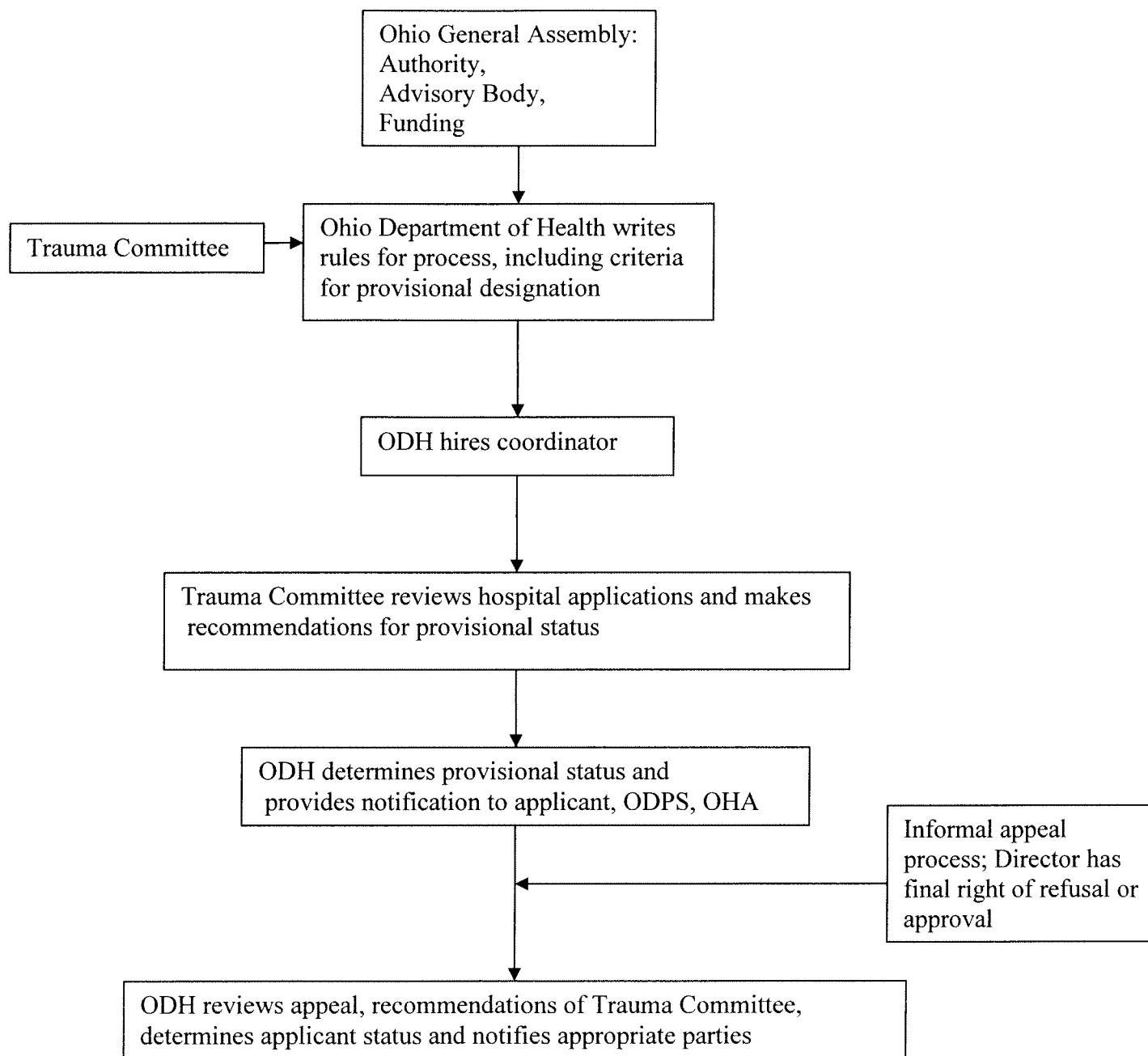
Figure 1

Table 1. Risk/Benefit Analysis of Option 1A

Benefits/Pros	Risks/Cons
Trauma Committee already is established in statute as a committee of the EMS Board	Statutory connection between Trauma Committee and ODH would be needed
Trauma Committee members offer a broad range of clinical and administrative expertise	Membership of Trauma Committee may require expansion due to need for additional expertise and increased responsibilities
Meetings have been open and involved participation by a large number of stakeholders, along with the voting members	ODH currently does not want authority for provisional designation
Trauma Committee has track record of completing work on schedule or before	Those opposed to ODH involvement in designation during negotiation of the original trauma bill may remain opposed to a role for ODH
Continuity of care would be aided by one body (Trauma Committee) drafting work products for two major components (EMS and Trauma Centers) of a comprehensive trauma system	EMS/ODPS is concerned that the Trauma Committee will be given more responsibility than it can handle, thus weakening its effectiveness.
Trauma Committee could handle wide variations in the number of hospitals seeking provisional designation over time	Confidentiality of data would need to be addressed
Trauma Committee decision process has been by consensus	Set-up of an appeals process would need to be addressed; could be handled informally
	May require additional FTE within ODH to act as program coordinator.

Option 1B - ODH has statutory authority to establish a provisional designation program and the rules to govern that program. All major activities would be contracted out to a third party (See Figure 2).

This possibility was discussed extensively among members of the Trauma Committee in late 2001 and early 2002 when the need for provisional designation was first recognized. Those discussions centered on awarding a competitively bid contract to a 501-C-3 organization. A number of potential organizations for providing this service were considered. As in option 1A, statutory authority for provisional designation would need to be assigned to ODH. The same Ohio public record laws, third party involvement, and funding would also need to be addressed. While an existing 501-C-3 organization would need some time to prepare to administer a provisional designation process, it is likely to take less time than developing the process de novo from within a state agency. Of caution is that the amount of work associated with provisional designation may not be large enough to justify the ongoing involvement of an outside organization.

Figure 2

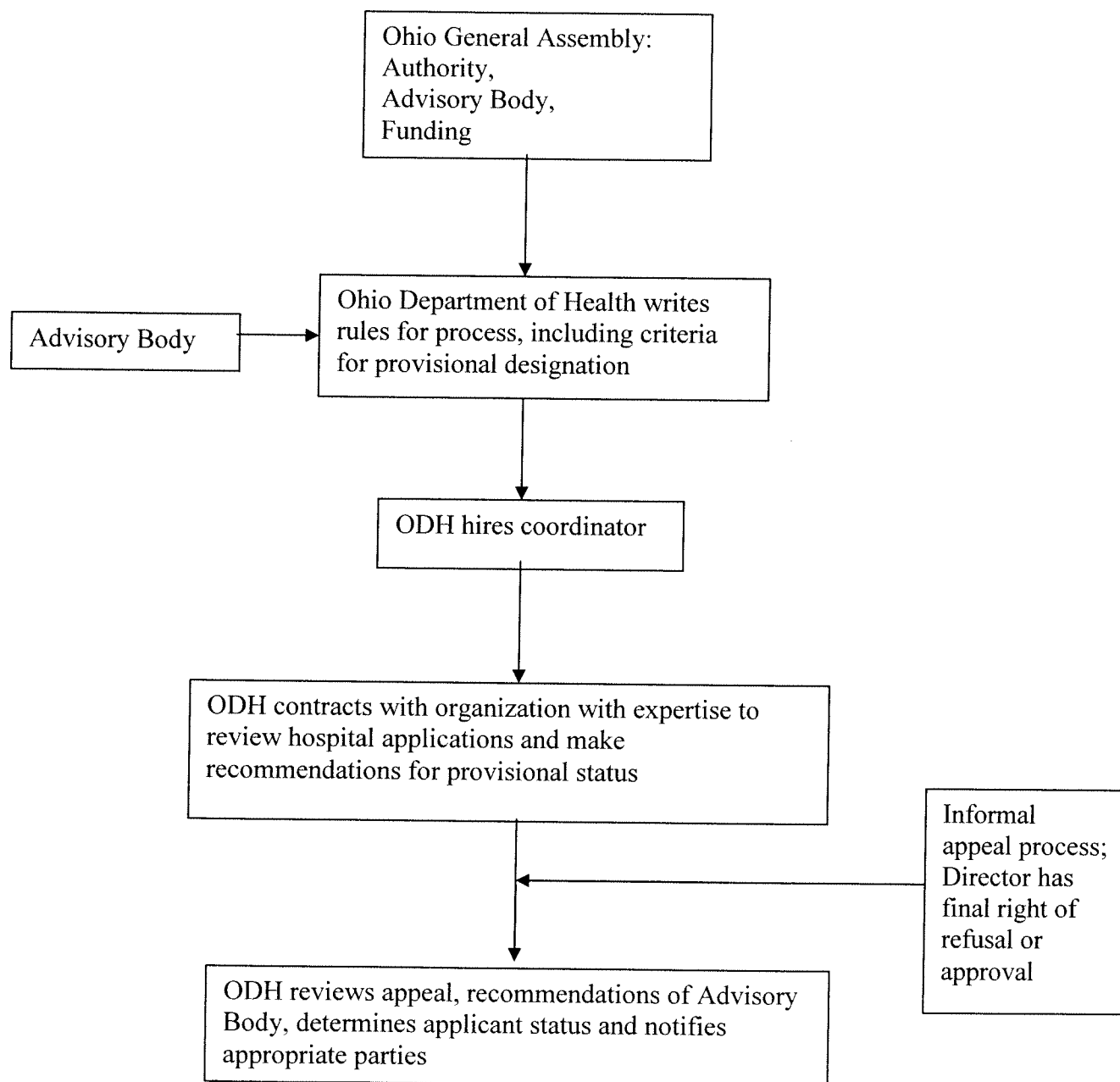


Table 2. Risk/Benefit Analysis of Option 1B

Benefits/Pros	Risks/Cons
Clear locus of authority and responsibility (ODH)	Selected 501-C-3 may not be fully prepared to handle provisional designation
Existing 501-C-3 with at least some administrative structure in place; better able to expand or contract as number of hospitals seeking provisional designation changes	Those opposed to ODH involvement in designation during negotiation of the original trauma bill may remain opposed to a role for ODH in provisional designation
RFP would solicit bids from organizations with expertise in trauma care/systems	ODH may be uncomfortable with ultimate authority, despite recommendations offered by the 501-C-3
Rules promulgated by ODH would direct work of 501-C-3; contract process could further specify desired work	Funding would need to be addressed as in the previous model
Once contract signed, 501-C-3 can administer funds with greater ease than ODH	Confidentiality of data would need to be addressed
	Set-up of an appeals process would need to be addressed; could be handled informally

Option 2 - A private agency (501-C-3) handles all provisional designation situations, including the time period between a hospital's consultative visit and new level of trauma center verification, focused review periods for trauma centers undergoing re-verification (See Figure 3).

The State of Pennsylvania, with one of the nation's oldest trauma systems, provides a robust model for creation of a designating authority that includes but is not dominated by representatives of state government. In 1985, the Pennsylvania Legislature directed the establishment of the Pennsylvania Trauma Systems Foundation. Four members of the legislature and a representative of the Director of Health, along with 15 representatives of other disciplines/agencies, compose the Board of the Foundation. While the legislation refers to the Foundation as a "private, voluntary accreditation program", it also states that no hospital can hold itself forward as a trauma center unless it is accredited by the Foundation.⁹

The Pennsylvania Trauma Systems Foundation pre-dated the development of the current ACS verification process. Today, the Foundation considers the ACS criteria as a minimum for hospital accreditation, with several criteria aimed at higher standards. The Foundation is responsible for all aspects of trauma center designation. While the Pennsylvania Legislature designated certain fees for operation of the Foundation, the bulk of its funding comes from its member hospitals. Annual fees per hospital are approximately \$35,000 - \$40,000. The Foundation maintains a trauma registry, used for accreditation and performance improvement. It employs outside reviewers, many of whom review for ACS, to conduct consultative and verification site visits. In addition to these basic functions, Foundation staff provides limited assistance to hospitals as they develop aspects of their trauma program.

Establishing an "Ohio Trauma System Foundation" would require extensive changes in Ohio statute. The Ohio General Assembly would need to assign responsibility for provisional designation to a separate 501-c-3. The relationship among the Foundation, the Ohio Department of Public Safety and the Ohio Department of Health would need to be stated in this legislation. While funding would eventually be drawn from hospital fees, initial "seed money" would be needed.

Pennsylvania has an enviable system. It had considerable influence on the development of the ACS verification process as we know it today. It is important to remember, however, that it is a mature system. Since it encompasses all designation activities, and hospitals must be designated to advertise themselves as trauma centers, the Pennsylvania Trauma Foundation has a large membership that depends on its smooth operation.

In Ohio, all hospitals verified by the ACS will be designated hospitals. Only those hospitals seeking provisional designation would require the services of a comparable Ohio Foundation. The workgroup is concerned that after these 10 – 20 hospitals complete their verification process, there may be only 3 – 4 hospitals that seek provisional status in any given year. Hence, it seems doubtful there would be enough sustained interest to merit the expense of building a new foundation.

Figure 3

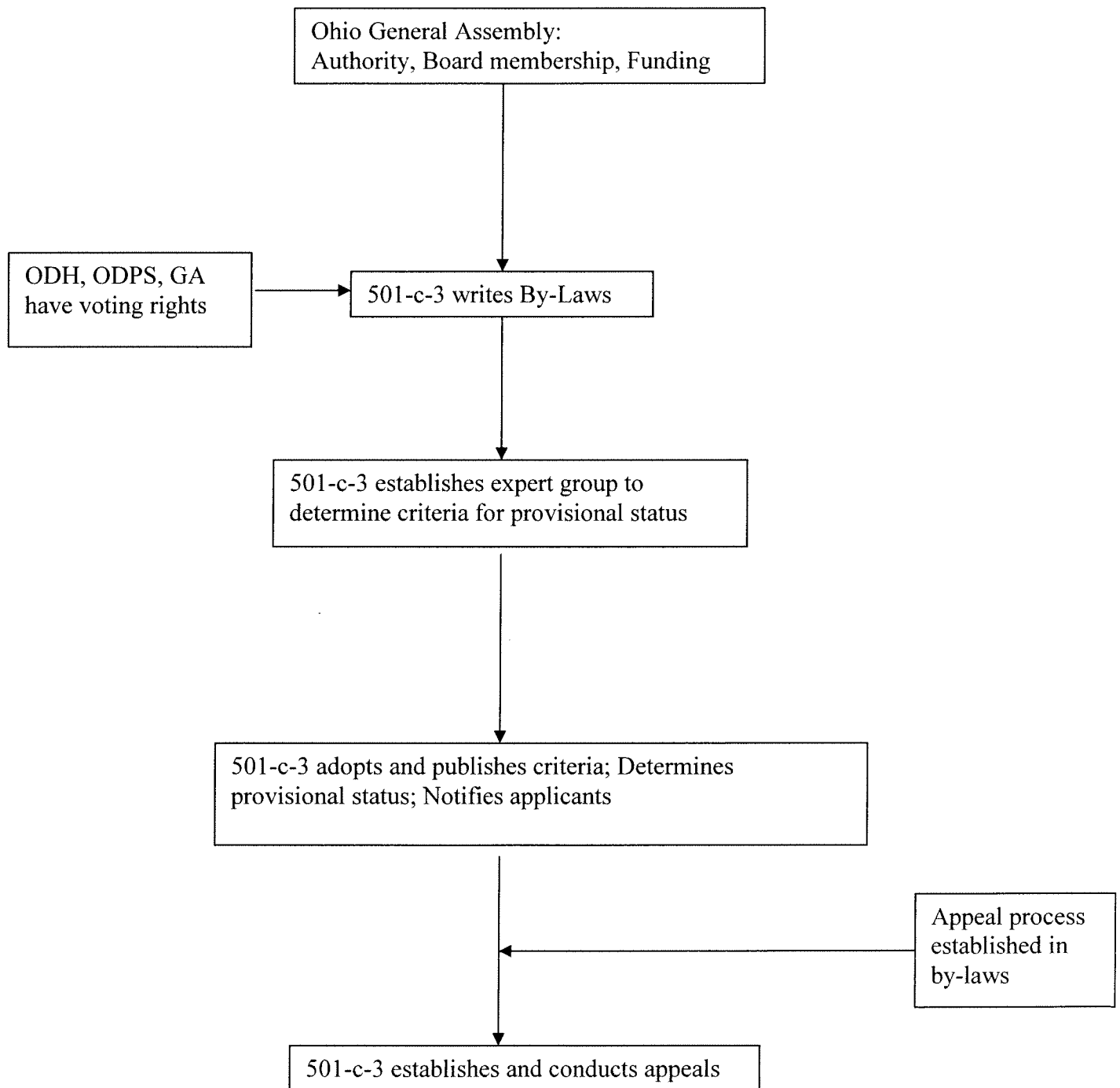


Table 3 – Risk/Benefit Analysis of Option 2

Benefits/Pros	Risks/Cons
Governing Board composed of representatives of many stakeholders with important connections to the state legislature and executive branches; no one group dominates	Executive Director must serve at the will of and be directed by the Board of Governors, as established in by-laws
Foundation has statutory authority and responsibilities	Foundation activities could be disconnected from other Trauma System activities conducted by state agencies
PA. Statute also requires Director of Health to integrate Foundation designation activities with EMS, injury prevention and rehabilitation activities	Relatively small number of hospitals seeking provisional designation probably would be insufficient to sustain separate foundation (Note: PA. Foundation is responsible for all designation, not just provisional.)
Foundation funding relies on fees from the hospitals it serves rather than on state general revenue fund	The success of foundations is dependent on their value to sustaining organizations. Efficient and effective management is critical and not always realized.
Relative ease of administration compared to program in state system	Would need to work carefully within HIPAA regs to utilize and share data
Uses ACS criteria as minimum needed for designation	The foundation would need access to the Trauma Registry and EMS Incident Run database to accomplish performance improvement and designation activities.
Foundation staff provide education and consultation to hospitals throughout the trauma system	Data gathered would require protection (through change of Ohio public record laws) in order to gain hospital participation
Successful 20 year track record of Solid Organ Transplant Consortium in Ohio demonstrates potential for this approach	
In Ohio, an independent Foundation may engender more trust and participation than designation activities under control of ODH	

Option 3 - The Ohio Department of Health handles all provisional designation situations using in-house staff.

Improving outcomes for the seriously injured patient is affected by prompt response in the field; minimized transport time to definitive care in an appropriate trauma center, and the immediate availability of experts in trauma care and rehabilitation at the receiving hospital. In Ohio, the Ohio Department of Public Safety, Division of Emergency Services, along with the Emergency Services Board, shoulders responsibility for oversight of field operations. ODPS leadership believes oversight for the hospital segment of the trauma system is not within their purview. The Ohio Department of Health traditionally has been the state agency most strongly associated with the operation of hospitals and health care facilities. Yet debates surrounding the passage of HB 138 resulted in there being only a few temporary roles for ODH in regard to operation of a trauma system. In re-examining a role for ODH, what are the advantages and disadvantages to basing designation activities within a state agency?

In discussions among workgroup members and with the Trauma Advisory Committee and its Hospital Subcommittee, it appears several of the risks (See Table 4) could be minimized or resolved. For example, changes in the Revised Code discussed previously under Option 1 of this report would address barriers related to hospitals sharing information with ODH. The Revised Code could be amended to allow such hospital fees to be deposited in an account for the sole purpose of conducting provisional designation activities. By virtue of being a state agency, ODH would still be hampered by the slowness of the bureaucratic process. Slow response might seriously impact patient care if hospitals were to fail a re-verification visit by the ACS and ODH were unable to determine provisional status before disrupting patient triage. The reluctance of ODH to take on any designation activities will take time to heal. Continued development of working relationships with key agencies, such as the Ohio Hospital Association and ODPS, will be needed. The workgroup views this as a less desirable option.

Figure 4

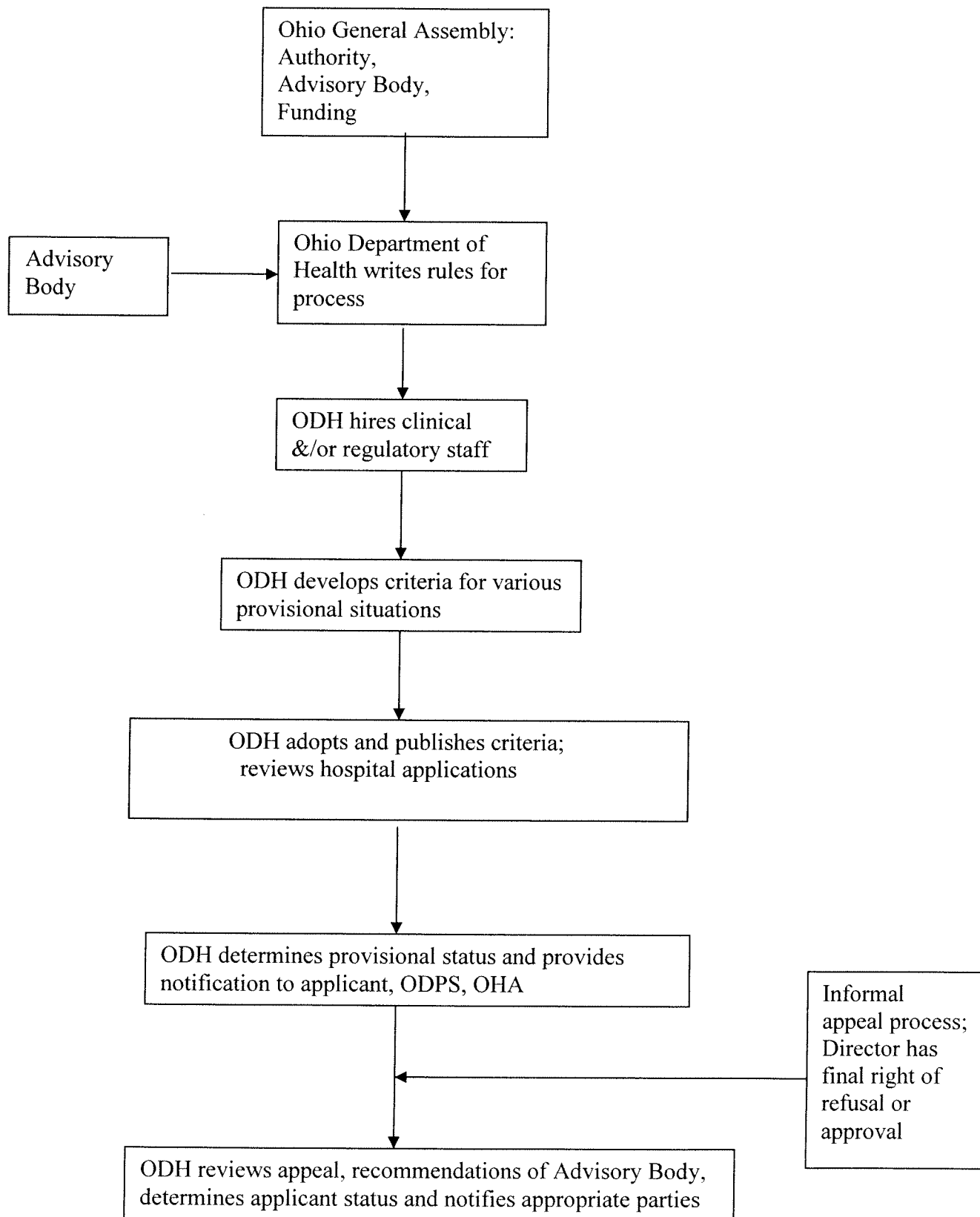


Table 4 – Risk/Benefit Analysis of Option 3

Benefits/Pros	Risks/Cons
Clearly identifiable authority and responsibility	Ohio's public record laws confound issues of data collection that is sufficient for effective performance improvement, yet protective of individual and institutional confidentiality
Many administrative functions necessary to support programmatic activities are already in place	Lack of agency staff expertise in trauma care and lack of resources necessary to implement provisional designation exist
Organizationally situated close to injury prevention, health care facilities and health care services activities	Dependency of state agency on General Revenue Fund, which is severely constrained by current economic downturn
Established rulemaking process with several opportunities for public input	Insistence during negotiation of original trauma bill that ODH not play a role in trauma center designation has left agency resistant to involvement
ODPS views their role as concerned with pre-hospital activities and ODH as agency to take lead in relationship to hospitals	Timely program activity and production slowed by bureaucratic process

Option 4 - No change in Ohio Revised Code (Appendix C)

Under existing Ohio law, a hospital may operate as a provisional trauma center prior to completing ACS verification. To attain provisional trauma center designation, the hospital must undergo a consultative or re-verification visit by the ACS. Based on the report from this visit, the hospital will attain provisional trauma center status after completing the following tasks: (1) the hospital's chief medical officer and chief executive officer must certify in writing to the hospital's governing board that the hospital is committed and able to provide trauma care consistent with the level of verification being sought; (2) the hospital's governing board must adopt a resolution stating that the hospital is committed and able to provide trauma care consistent with the level being sought; and (3) the hospital's governing board must approve a written plan and timetable for obtaining the level of verification being sought, including provisions for correcting any deficiencies identified during the ACS review. Status as a provisional trauma center is terminated if the hospital withdraws its application for verification, the ACS terminates or suspends the application, or if the hospital is not an ACS verified trauma center within 18 months after operating under provisional status (12 months if the hospital is being re-verified). All hospitals must notify the Director of Health of any changes in their trauma center status¹⁰. This would include achievement or loss of provisional trauma center status and achievement, loss, or change in trauma center verification. The Director may request a copy of the hospital's ACS report and timetable for correcting any identified deficiencies. While these documents are confidential, they can be used in any action brought by the Director against the trauma center or a person that authorized, approved, or created the original documents and the information in them. There is no statutory authority for the Ohio Department of Health to administer the system. There is also no funding to support activities related to provisional designation.

Table 5 – Risk/Benefit Analysis of Option 4

Benefits/Pros	Risks/Cons
Already in statute: No legislation, or change in legal authority is necessary	There are no minimum clinical criteria necessary for provisional designation
Relatively easy to implement: No funding is necessary	Hospitals self-monitor; no oversight or authority
Provides mechanism for non-verified hospitals to develop track record for future ACS verification	No penalties for failure to follow plan for correcting deficiencies
Allows for development of new trauma centers in areas currently underserved or where population shifts or facility closures might demand	Potentially greater liability for hospitals attempting to serve trauma victims beyond their capacity
Directly dependent on ACS consultation and ACS criteria	

Financing Considerations

Information from other states that have undertaken designation activities can provide guidance to Ohio in determining the resources it will need to implement and sustain a program of its own.

Assumptions

Current Ohio law establishes that trauma centers are those hospitals that have been verified by the ACS as such or, under provisional status, have undergone a consultative visit by the ACS and formally adopted an action plan and timeline that will lead them to ACS verification. The cost of the process is borne directly by the hospital seeking verification, except for the minimal cost incurred by ODH staff in reviewing, acknowledging and filing notification by hospitals of their intent to operate under provisional status. The discussion below assumes Ohio law will continue to equate ACS verification with automatic designation as a trauma center. Should Ohio law change in regard to use of the ACS process or standards as the basis for our state trauma system, the approach to financing will need to change as well. Departure from ACS is likely to increase costs as Ohio either replicates or redesigns a trauma designation system. Although monitoring of trauma center performance between ACS verification visits is an appropriate role for a designating authority, the workgroup decided not to include such activity at this time. Once the newly implemented trauma system has stabilized and databases, such as the Trauma Registry and EMS Incident Run Reports, are receiving regular statewide input, monitoring of hospital improvement by the designating authority could be re-considered.

Required Resources

Human, financial, data and equipment resources are necessary supports for the verification and/or designation process. The cost to a hospital seeking verification is roughly \$10,000 per visit, usually with a minimum of two visits (one consultative and one verification) by the ACS. This includes time and travel reimbursements for the site

visitors who conduct the visit. The majority of states with legislated responsibilities for a trauma system look to out-of-state experts for review of their level I and II trauma centers. Some use out-of-state reviewers for level III and IV trauma centers. Other states have substituted in-state staff to conduct visits to Level III and IV hospitals. According to a 2001 survey by the Trauma Resource Network¹¹, Illinois is the only state which pays the cost for site visits for all its trauma centers. Two other states pay for site visits for Level III and IV trauma centers. In the remainder of states, individual hospitals shoulder all the costs of site visit review.

Of the 23 states surveyed directly by the Workgroup, only 7 had staff assigned to administration of the trauma system (Appendix B). The amount of time dedicated to administration ranges from 0.65 FTE in South Carolina to 2.5 FTE in Texas. It is difficult to equate the number of FTE in any of these 7 states with a specific workload. The following resource table compares the options presented in this paper.

Table 6 – Suggested Resources the Provisional Trauma Center Designation Options

Option No.	Type	ODH - in-house and FTE (nurse coordinator)	Other Expenses	Source of funding*
1A	Trauma Committee	.25 or less ODH indirect for processing expenses	Reimbursed expenses of participating TC members	Hospital fee
1B	Contract	.25 ODH indirect for administrating contract	Administrative overhead for contractor; expenses and honorariums for reviewers	Hospital fee
2	501-c-3		Start-up costs – mostly for incorporation	General revenue fund or fines/license surcharges, etc; Hospital fees after start-up
3	All ODH	1.0	N/A	Hospital fees
4	No change	N/A	N/A	N/A

* Hospitals participating in the various discussion groups have stated they would be willing to pay fees in order to maintain a provisional designation authority in Ohio. The small number of hospitals likely to seek provisional designation on an annual basis will limit the amount of funding available.

Confidentiality Concerns

Members of the workgroup were concerned about the willingness of hospitals to participate in a provisional designation process that would allow public access to their ACS consultative reports. Sections 3727.101 to 3727.102 of the Revised Code were reviewed and several changes recommended. These changes will allow the provisional designation process to have confidentiality protections similar to the peer review sections of the Revised Code. In addition, HIPPA was also examined for its potential impact on the provisional designation process. HIPPA does not appear to apply meaningfully to the system of provisional designation put in place by Substitute Senate Bill 124 (124th General Assembly). The recommended changes to Sections 3727.101 and 3727.102 of the Revised Code are attached in Appendix D.

Conclusion

There has been a marked increase in the survival of trauma patients after the establishment of organized systems of trauma care. Over 80% of states have enacted legislation authorizing major elements of a trauma care system. In Ohio, HB 138 initiated the development of a statewide trauma system. The Emergency Medical Services (EMS) Board, in conjunction with ODPS, is responsible for implementing and overseeing the pre-hospital component of the state system. As the date for mandatory triage of seriously injured patients to designated trauma centers approached, it became clear that HB 138 had not addressed situations requiring some type of provisional designation of trauma centers. SB 124 was signed into law to cover three of the situations in which non-ACS verified hospitals would need to operate under a provisional status. Other legitimate situations have arisen, however, to point out the need for a state designating authority which would consider exceptions to provisional designation as permitted in SB 124. In addition, several stakeholders have been concerned about the ability of hospitals to operate under provisional status without a set of minimum clinical criteria in place to guard the quality of patient care.

The Workgroup on Provisional Trauma Center Designation presents here several options for developing a legal designating authority in Ohio. Foremost in the minds of Workgroup members was the provision of excellent care to seriously injured persons. At the same time, resolutions need to be found which address hospitals' concerns about over triage of patients. Discussions took place in light of current economic conditions, particularly the constraints on the state budget.

As the Ohio statewide trauma system matures, there may be other roles to play for a state designating authority. Investigating complaints and monitoring trauma center performance between ACS verification visits may be the next challenge. Ohio may want to follow the lead of Pennsylvania and move towards a state authority responsible for all accreditation. The Workgroup believes it is too soon to pursue these activities.

Finally, the Workgroup emphasizes the desirability of a comprehensive statewide trauma system. A state designating authority should work closely with ODPS, the EMS Board, the Ohio Hospital Association, the Health Forum and health professional organizations to ensure optimal transition of the patient from the field through definitive hospital care and rehabilitation. Formalized opportunities for sharing responsibility should be sought among these groups.

¹ Revised Code Chapters 3727 and 4765

² Revised Code §3727.09 - §3727.102 and Chapter 4765

³ Mullins, R.J. A Historical Perspective of Trauma System Development in the United States. *J. Trauma.* 1999; 47: S15-21.

⁴ Committee on Trauma and Committee on Shock, Division of Medical Sciences, National Academy of Sciences/National Research Council (U.S). *Accidental Death and Disability: The Neglected Disease of Modern Society.* Washington: National Academy of Sciences; 1966.

⁵ ACS Website

⁶ Bass, R.R., et.al. Update on Trauma Systems Development in the United States. *J. Trauma.* 1999; 47: S15-21.

⁷ Committee on Trauma, American College of Surgeons. *Resources for Optimal Care of the Injured Patient: 1999.* Chicago, IL. p 131.

⁸ Ibid. p 97.

⁹ Selected sections from Act 1985-45 Laws of Pennsylvania, No. 1985-45 AN ACT. Pennsylvania Trauma Systems Foundation. 1999. <http://www.patramasystemsfdn.com/faq_law.htm>

¹⁰ Revised code reference (See RC 3727.101-102)

¹¹ Bishop + Associates. "Trauma System Issues". *The Trauma Center Connection.* Spring 2002. Vol. III, Issue I; p3.

Appendix A

Roster of the Workgroup on the Provisional Designation of Trauma Centers

Workgroup on Provisional Designation

Bridget Gargan
Ohio Hospital Association

Mike Glenn, RN
Ohio Department of Public Safety

Kathy Haley, RN
Trauma Committee/EMS Board

Virginia Haller, MD, Chair
Ohio Department of Health

Jay Johannigman, MD
Trauma Committee

Jeff Kading, JD
Ohio Department of Health

Joseph Luria, MD
Trauma Committee

Carol Ray, JD
Ohio Department of Health

Heather Reed, JD
Ohio Department of Public Safety

Debbie Scott
Ohio Department of Public Safety

Brenda Stittmatter, RN
Berger Health System

Laura Tiberi
Ohio Department of Public Safety

Appendix B

Amended Senate Bill 124 of the 124th General Assembly Provisional Trauma Center Process

Flow Chart #1: Centers Seeking Initial Verification

Flow Chart #2: Centers Seeking Re-Verification

Appendix C

Workgroup Survey of Other State Trauma Coordinators

Appendix D

Proposed Changes to the Revised Code Regarding Public Record Laws

MEMORANDUM

TO: Members of the Work Group

THROUGH: Kathy Haley, Children's Hospital

FROM: Jeff Kading, ODH
Carol Ray, ODH
Heather Reed, ODPS

DATE: July 2, 2002

SUBJECT: Confidentiality Issues with Substitute Senate Bill 124 (124th General Assembly)

I. Background

In its meeting on June 12, 2002, the workgroup on provisional designation (after this "the group") asked us to review Substitute Senate Bill 124 (124th General Assembly) for the adequacy of its confidentiality provisions. The group instructed us to make sure the records submitted by a hospital--other than the certification, application, and resolution specified in division (E)(1) of section 3727.101 of the Revised Code, which are all public records--are strictly confidential. The group believes confidentiality will ensure that hospitals fully disclose and discuss any deficiencies identified by the American College of Surgeons in a consultative visit and other sensitive documents relating to provisional designation when seeking provisional status.

II. Approach

We compared the confidentiality provisions of Substitute Senate Bill 124 (124th General Assembly) against the provisions governing the confidentiality of peer reviews as set forth in sections 2305.24 to 2305.26 of the Revised Code. We then "lifted" any peer review language that we thought was of use to accomplish the group's confidentiality goal. Attached as attachment I is the result of the above process. Suggested changes to Substitute Senate Bill 124 (124th General Assembly) are indicated in red.

We also reviewed the provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPPA) to ensure that it does not create any issues of which the group needs to be aware. Based on our review of HIPPA, specifically 45 C.F.R. 164.512, a hospital, a "covered entity", may use or disclose private health information to the Ohio Department of Health without the written consent or authorization of the individual to whom the private health information pertains. Further, a hospital does not need to grant the

individual the opportunity to agree or object to the use or disclosure of the information for provisional designation purposes.

III. Summary of suggested changes

Division (A) of section 3727.09 was changed to specify what is meant by the term "application" and to define "director" and "health care professional." The definition for "application" is needed to clarify that only the *Application for Site Visit* of the American College of Surgeons' Verification/Consultation Program for Hospitals is a public record and disclosable. The term "director" was defined to allow authorized members of the director of health's staff to do the same activities as the director. "Health care professional" was added because of the new immunity from the betrayal of a professional confidence language. See division (E)(2) of section 3727.101 of Attachment 1.

The lead in language to division (E) of section 3727.101 was changed to clarify that the director of health is subject to the language of division (E) as well as an adult or pediatric trauma center.

Division (E)(2) was changed to more clearly identify the documents that the director must keep confidential.

Immunity from betrayal of a professional confidence language was lifted from the peer review sections of the Revised Code and added to division (E)(2) of section 3721.101 of the Revised Code.

IV. Conclusion

With the addition of the recommended changes, sections 3727.101 to 3727.102 of the Revised Code will contain similar confidentiality protections to the peer review sections of the Revised Code. In addition, HIPPA does not appear to apply meaningfully to the system of provisional designation put in place by Substitute Senate Bill 124 (124th General Assembly).

Attachments(1)

Attachment I

Existing section 3727.09 (with suggested changes in red)

(A) As used in this section and sections 3727.10 and 3727.101 of the Revised Code:

- (1) "Application" means the *Application for Site Visit* of the American college of surgeons' verification/consultation program for hospitals;
- (2) "Director" means the director of health and any of his or her authorized employees;
- (3) "Health care professional" means any of the following who provide medical, dental, or other health-related diagnosis, care, or treatment:
 - (a) Physicians authorized under Chapter 4731. of the Revised Code to practice medicine and surgery or osteopathic medicine and surgery;
 - (b) Registered nurses and licensed practical nurses licensed under Chapter 4723. of the Revised Code;
 - (c) Physician assistants authorized to practice under Chapter 4730. of the Revised Code;
 - (d) Dentists and dental hygienists licensed under Chapter 4715. of the Revised Code;
 - (e) Physical therapists licensed under Chapter 4755. of the Revised Code;
 - (f) Chiropractors licensed under Chapter 4734. of the Revised Code;
 - (g) Optometrists licensed under Chapter 4725. of the Revised Code;
 - (h) Podiatrists authorized under Chapter 4731. of the Revised Code to practice podiatry;
 - (i) Dietitians licensed under Chapter 4759. of the Revised Code;

(j) Pharmacists licensed under Chapter 4729. of the Revised Code.

(3) "Trauma," "trauma care," "trauma center," "trauma patient," "pediatric," and "adult" have the same meanings as in section 4765.01 of the Revised Code; and

(4) "Stabilize" and "transfer" have the same meanings as in section 1753.28 of the Revised Code.

(B) On and after November 3, 2002, each hospital in this state that is not a trauma center shall adopt protocols for adult and pediatric trauma care provided in or by that hospital; each hospital in this state that is an adult trauma center and not a level I or level II pediatric trauma center shall adopt protocols for pediatric trauma care provided in or by that hospital; each hospital in this state that is a pediatric trauma center and not a level I and II adult trauma center shall adopt protocols for adult trauma care provided in or by that hospital. In developing its trauma care protocols, each hospital shall consider the guidelines for trauma care established by the American college of surgeons, the American college of emergency physicians, and the American academy of pediatrics. Trauma care protocols shall be written, comply with applicable federal and state laws, and include policies and procedures with respect to all of the following:

(1) Evaluation of trauma patients, including criteria for prompt identification of trauma patients who require a level of adult or pediatric trauma care that exceeds the hospital's capabilities;

(2) Emergency treatment and stabilization of trauma patients prior to transfer to an appropriate adult or pediatric trauma center;

(3) Timely transfer of trauma patients to appropriate adult or pediatric trauma centers based on a patient's medical needs. Trauma patient transfer protocols shall specify all of the following:

(a) Confirmation of the ability of the receiving trauma center to provide prompt adult or pediatric trauma care appropriate to a patient's medical needs;

(b) Procedures for selecting an appropriate alternative adult or pediatric trauma center to receive a patient when it is not feasible or safe to transport the patient to a particular trauma center;

(c) Advance notification and appropriate medical consultation with the trauma center to which a trauma patient is being, or will be, transferred;

(d) Procedures for selecting an appropriate method of transportation and the hospital responsible for arranging or providing the transportation;

(e) Confirmation of the ability of the persons and vehicle that will transport a trauma patient to provide appropriate adult or pediatric trauma care;

provisions conforming to the requirements for trauma care protocols set forth in division (B) of this section.

(D) A hospital shall make trauma care protocols it adopts under division (B) of this section and trauma patient transfer agreements it adopts under division (C) of this section available for public inspection during normal working hours. A hospital shall furnish a copy of such documents upon request and may charge a reasonable and necessary fee for doing so, provided that upon request it shall furnish a copy of such documents to the director of health free of charge.

(E) A hospital that ceases to operate as an adult or pediatric trauma center under provisional status is not in violation of divisions (B) and (C) of this section during the time it develops different trauma care protocols and enters into different patient transfer agreements pursuant to division (D)(2)(c) of section 3727.101 of the Revised Code.

Existing section 3727.101 (with suggested changes in red)

(A) If a hospital is seeking initial verification as an adult or pediatric trauma center, verification at a different level, or reverification after having ceased to be verified for one year or longer, the hospital shall submit an application to the American college of surgeons for a consultation visit. If a hospital is seeking reverification after having ceased to be verified for less than one year, the hospital shall submit an application for either a consultation visit or a reverification visit, except when operating pursuant to division (C)(1)(b) of this section.

The hospital shall undergo the visit and obtain a written report of the results of the visit. If the report is not obtained by the date that occurs one year after the application for the visit is submitted, the hospital shall submit a new application.

(B) Not later than one year after obtaining a report under division (A) of this section, a hospital may apply to the American college of surgeons for verification or reverification as an adult or pediatric trauma center if, based on the report, all of the following occur:

(1) The hospital's chief medical officer and chief executive officer certify in writing to the hospital's governing board that the hospital is committed and able to provide adult or pediatric trauma care consistent with the level of verification or reverification being sought.

(2) The hospital's governing board adopts a resolution stating that the hospital is committed and able to provide adult or pediatric trauma care consistent with the level of verification or reverification being sought.

(3) The hospital's governing board approves a written plan and timetable for obtaining the level of verification or reverification being sought, including provisions for correcting at the earliest practicable date any deficiencies identified in the report obtained pursuant to division (A) of this section.

(f) Assured communication with, and appropriate medical direction of, the persons transporting a trauma patient to a trauma center;

(g) Identification and timely transfer of appropriate medical records of the trauma patient being transferred;

(h) The hospital responsible for care of a patient in transit;

(i) The responsibilities of the physician attending a patient and, if different, the physician who authorizes a transfer of the patient;

(j) Procedures for determining, in consultation with an appropriate adult or pediatric trauma center and the persons who will transport a trauma patient, when transportation of the patient to a trauma center may be delayed for either of the following reasons:

(i) Immediate transfer of the patient is unsafe due to adverse weather or ground conditions.

(ii) No trauma center is able to provide appropriate adult or pediatric trauma care to the patient without undue delay.

(4) Peer review and quality assurance procedures for adult and pediatric trauma care provided in or by the hospital.

(C)(1) On and after November 3, 2002, each hospital shall enter into all of the following written agreements unless otherwise provided in division (C)(2) of this section:

(a) An agreement with one or more adult trauma centers in each level of categorization as a trauma center higher than the hospital that governs the transfer of adult trauma patients from the hospital to those trauma centers;

(b) An agreement with one or more pediatric trauma centers in each level of categorization as a trauma center higher than the hospital that governs the transfer of pediatric trauma patients from the hospital to those trauma centers.

(2) A level I or level II adult trauma center is not required to enter into an adult trauma patient transfer agreement with another hospital. A level I or level II pediatric trauma center is not required to enter into a pediatric trauma patient transfer agreement with another hospital. A hospital is not required to enter into an adult trauma patient transfer agreement with a level III or level IV adult trauma center, or enter into a pediatric trauma patient transfer agreement with a level III or level IV pediatric trauma center, if no trauma center of that type is reasonably available to receive trauma patients transferred from the hospital.

(3) A trauma patient transfer agreement entered into by a hospital under division (C)(1) of this section shall comply with applicable federal and state laws and contain

(C)(1) A hospital may operate as an adult or pediatric trauma center under provisional status, as follows:

- (a) On submission of an application under division (B) of this section;
- (b) Until it receives the final result of its reverification if the application was submitted within one year before it ceased to be verified.

(2) A hospital operating as an adult or pediatric trauma care center under provisional status is subject to both of the following:

- (a) The hospital shall limit its provisional status activities to those activities authorized by the level of verification or reverification being sought.
- (b) The hospital shall make a reasonable, good faith effort to comply with all requirements established by the American college of surgeons that must be met for the level of verification or reverification being sought.

(D)(1) A hospital shall cease to operate as an adult or pediatric trauma center under provisional status if any of the following applies:

- (a) The application for verification or reverification is denied, suspended, terminated, or withdrawn.
- (b) In the case of a hospital seeking initial verification, verification at a different level, or reverification after having ceased to be verified for one year or longer, the hospital has not obtained verification or reverification by the date that occurs eighteen months after commencing to operate under provisional status.
- (c) In the case of a hospital seeking reverification after having ceased to be verified for less than one year, the hospital has not obtained reverification by the date that occurs one year after commencing to operate under provisional status.

(2) A hospital that ceases to operate as an adult or pediatric trauma center under provisional status pursuant to division (D)(1) of this section shall do all of the following:

- (a) Except as otherwise provided by federal law, at the earliest practicable date transfer to one or more appropriate trauma centers all trauma patients in the hospital to whom the hospital is not permitted to provide trauma care.
- (b) Promptly comply with section 3727.10 of the Revised Code according to its current status.
- (c) Not later than one hundred eighty days after ceasing to operate under provisional status, comply with section 3727.09 of the Revised Code according to its current status.

(3) A hospital that ceases to operate as an adult or pediatric trauma center under provisional status may not operate as an adult or pediatric trauma center under provisional status until two years have elapsed since it ceased to operate under that status.

(E) With respect to the availability of documents and other information prepared pursuant to this section, the director and an adult or pediatric trauma center operating under provisional status is are subject to both of the following:

(1) The trauma center shall make available for public inspection during normal working hours a copy of the certification, resolution, and application prepared pursuant to division (B) of this section. On request, the trauma center shall provide a copy of the documents. A reasonable fee may be charged to cover the necessary expenses incurred in furnishing the copies, except that no fee shall be charged if the copies are being furnished to the director of health.

(2) On request, the trauma center shall furnish to the director of health a copy of the report of the consultative or reverification visit obtained from the American college of surgeons pursuant to division (A) of this section and a copy of the plan and timetable approved pursuant to division (B)(3) of this section for obtaining verification or reverification. The documents provided may omit patient-identifying information. Submission of the documents to the director does not waive any privilege or right of confidentiality that otherwise applies to the documents and the information in them.

The ~~documents~~ report, plan and timetable and the information in them are ~~not public records~~ confidential and shall not be disclosed to any person except employees of the department of health who are expressly authorized by the director of health to examine the ~~copies~~ report, plan and timetable, and information in them. The ~~documents~~ report, plan and timetable and information in them are not subject to discovery or introduction into evidence in a civil action, ~~except an action brought by the director against the trauma center or a person that authorized, approved, or created the original documents and the information in them.~~

No health care professional or hospital furnishing report, plan and timetable, information, data, or records to the director with respect to any patient examined or treated by the health care professional or confined in the hospital shall, by reason of the furnishing, be deemed liable in damages to any person, or be held to answer for betrayal of a professional confidence within the meaning and intent of section 4731.22 of the Revised Code.

(F) Notwithstanding any provision of this section regarding the receipt of a report of the results of a consultation visit or reverification visit from the American college of surgeons, if a hospital submitted an application for a consultation visit or

reverification visit as an adult or pediatric trauma center on or before May 20, 2002, the hospital may operate as an adult or pediatric trauma center under provisional status. The hospital shall do all of the following:

- (1) Comply with divisions (B)(1) and (2) of this section as though the report has been received;
- (2) Approve through its governing board a written plan and timetable for obtaining the level of verification or reverification being sought, including provisions for correcting at the earliest practicable date any deficiencies identified in the exit interview following the consultation or reverification visit and any subsequent report received;
- (3) Comply with all other provisions of this section applicable to the operation of a trauma center under provisional status, including the requirements of division (D) of this section regarding the ceasing of operation under provisional status.

STATE OF OHIO
EMS BOARD
REGIONAL PHYSICIANS ADVISORY BOARD
EMERGENCY MEDICAL SERVICES
GUIDELINES AND PROCEDURES MANUAL

INTRODUCTION

Ohio emergency medical services (EMS) providers strive every day to deliver the highest standard of emergency medical services to the people of Ohio. On behalf of the State Board of Emergency Medical Services, the Regional Physician Advisory Board was charged with drafting proposed guidelines that EMS agencies could use in setting that standard.

Please note that the proposed guidelines are not mandatory for Ohio EMS agencies. The guidelines and procedures manual is meant to assist in the development of local protocols. It is the Board's hope that individual regions or agencies will review these guidelines with their medical directors and legal counsel when drafting their own individualized protocols. The guidelines were updated in 2012 and will be periodically reviewed by the Regional Physician Advisory Board in order to maintain the most current information available.

Reviewed & Approved by:
Regional Physician Advisory Board Chairs
Medical Oversight Committee
State EMS Board

February 6, 2012

TABLE OF CONTENTS

I. ADULT PROTOCOL

Abdominal Pain.....	5
Altered Level of Consciousness	8
Arrhythmias.....	11
Bradycardia.....	15
Stable Narrow Complex Tachycardia.....	16
Unstable Narrow Complex Tachycardia.....	17
Stable Wide Complex Tachycardia.....	18
Unstable Wide Complex Tachycardia.....	19
Burns	20
Cardiac Arrest.....	24
AED	29
Ventricular Fibrillation/Pulseless Ventricular Tachycardia.....	30
Pulseless Electrical Activity (PEA)/Asystole.....	31
Near Drowning	32
Cardiac Chest Pain.....	34
Childbirth/Obstetrical Emergencies	38
Delivery Complications.....	40
Obstetrical Emergencies.....	43
Diabetic Emergencies	45
Eye Injuries.....	47
Hypothermia / Frostbite	50
Extreme Heat.....	55
Poisoning	57
Psychiatric Emergencies.....	60
Respiratory Distress	61
Seizures	71
Shock	74
Anaphylaxis.....	76
Stroke.....	78
Trauma Emergencies	81
Trauma Arrest	87
Glasgow Coma Scale	85
Revised Trauma Score	85

II. ADMINISTRATIVE PROTOCOLS

Aeromedical Transport	1
Communications	2
Dead on Arrival	4
Patient Refusal	7
Non-Transports.....	11
Heavy Patients	13
Functional Needs Patients.....	14
On-Scene EMT Intervenor.....	15
Physician at the Scene	16
Restraint Policy.....	17
Transport to Free Standing Emergency/Urgent Care Clinics.....	19
Interfacility Transport	20
Termination of Resuscitation Efforts.....	21

III. SPECIAL PROCEDURES

Central Line Monitoring.....	1
Chest Decompression	2
Chest Tube Monitoring.....	4
Continuous Positive Airway Pressure (CPAP).....	5
Cricothyrotomy - Needle/Surgical	7
Endotracheal Intubation.....	10
Nasotracheal Intubation.....	11
External Pacemaker	16
IV Procedures	17
Intraosseous Infusion	20
Maintenance of Blood Administration.....	22
Nitronox®	24
Pulse Oximetry	26
Patient Assessment	30

IV. MEDICATION APPENDIX: REFERENCE DOCUMENT

REGIONAL PHYSICIAN'S ADVISORY BOARD
EMERGENCY MEDICAL SERVICES BOARD
PREHOSPITAL PATIENT CARE GUIDELINES AND PROCEDURES

All algorithms are color coded to denote procedures that may be performed by each level of certification. To perform procedures color-coded red, Medical Control must be contacted for permission.

Higher levels of certification will perform lower level evaluations and procedures when interpreting the algorithms.

KEY TO ALGORITHMS

EMERGENCY MEDICAL
TECHNICIAN (EMT)

ADVANCED EMERGENCY
MEDICAL TECHNICIAN (AEMT)

PARAMEDIC (P)

ON-LINE
MEDICAL CONTROL

ABDOMINAL PAIN

GENERAL CONSIDERATIONS

- A. It is important to remember that abdominal pain can be caused by a large number of different disease processes. The organ systems that may be involved in abdominal pain include esophagus, stomach, intestinal tract, liver, pancreas, spleen, kidneys, male and female genital organs, bladder, as well as referred pain from the chest that can involve the heart, lungs or pleura. Abdominal pain may also be caused by muscular and skeletal problems.
- B. There are a limited number of problems that present with abdominal pain that are life-threatening or may become life-threatening.
1. Myocardial Infarction
 2. Perforated stomach, gallbladder, or bowel
 3. Gastrointestinal bleeding with pain - usually due to an ulcer
 4. Hemorrhagic pancreatitis
 5. Appendicitis
 6. Diabetic ketoacidosis
 7. Ruptured esophagus (this usually presents with chest pain)
 8. Dissecting or ruptured abdominal aortic aneurysm
 9. Certain toxic mushrooms ingestion and other toxic ingestion
 10. Ectopic pregnancy
- C. Abdominal pain emergencies are likely to lead to death due to blood or fluid loss with resultant shock. There may also be severe electrolyte abnormalities that can cause arrhythmias.

Myocardial Infarction may present as abdominal pain especially in the diabetic and elderly.

EMT

- A. Secure airway
1. Administer oxygen as needed to treat shock and/or respiratory distress
 2. Apply pulse oximeter and treat per pulse oximeter procedure, if available.
- B. Evaluate patient's general appearance, relevant history of condition and determine:
- | | |
|-----------------------|--|
| <u>O</u> nset | <u>A</u> llergies |
| <u>P</u> rovokes | <u>M</u> edication |
| <u>Q</u> uality | <u>P</u> ast Medical History - especially, recent surgery, any abnormal ingestion, previous trauma, related medical diseases |
| <u>R</u> adiates | |
| <u>S</u> everity | |
| <u>T</u> ime | <u>L</u> ast Meal |
| <u>I</u> nterventions | <u>E</u> vents leading to present illness |

Abdominal Pain (cont'd)

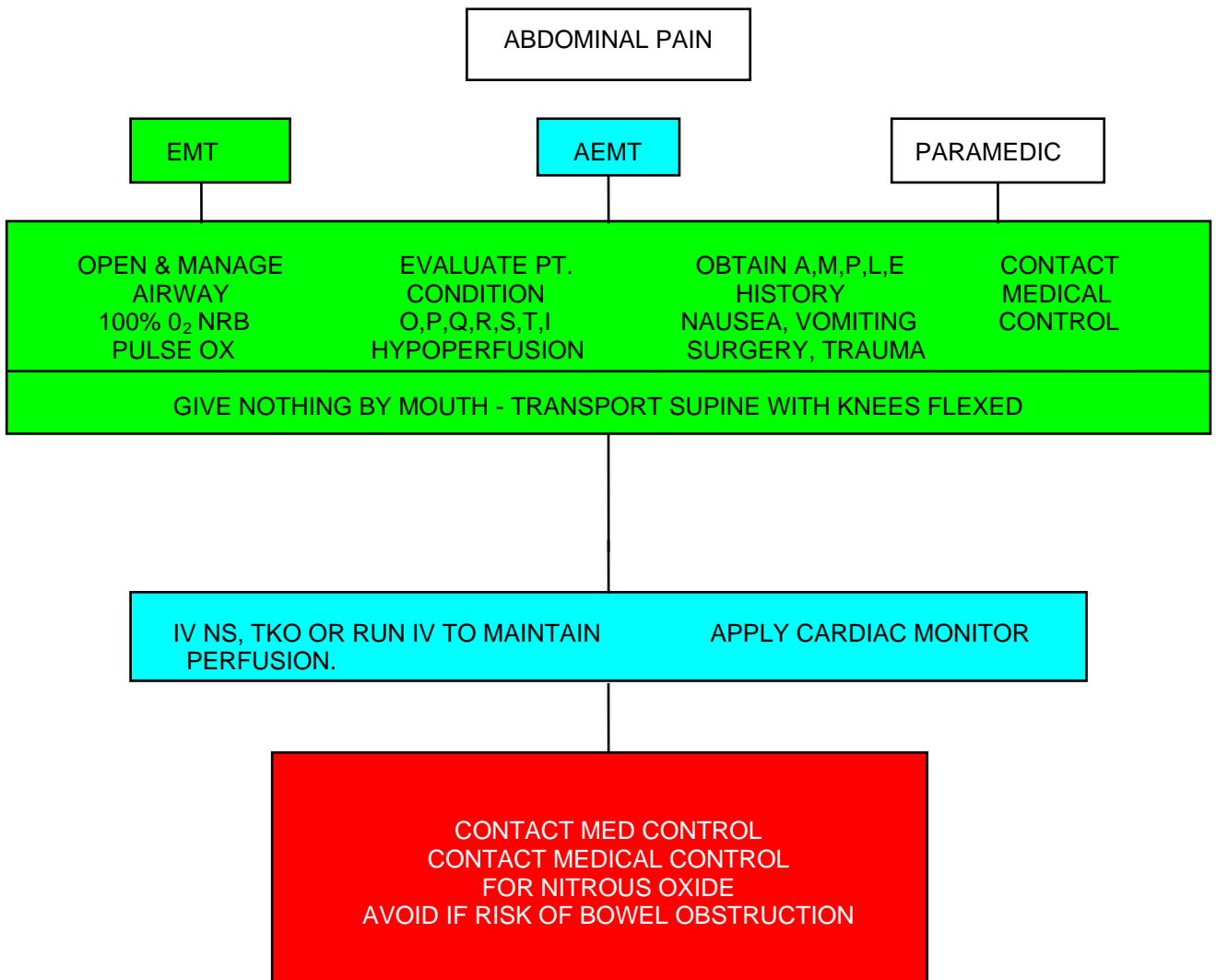
- C. Assess additional associated signs and symptoms:
 - 1. Nausea / vomiting blood or coffee grounds
 - 2. Constipation / diarrhea - black, tarry or bloody bowel movements
 - 3. Problems with urination
 - 4. Menstrual abnormality
 - 5. Fever
 - 6. Tenderness, rigidity, and presence or absence of bowel sounds.
 - 7. Cardiac associated symptoms: Dyspnea, diaphoresis, shortness of breath (SOB)
- D. Transport in position of comfort, preferable supine with knees flexed, unless there is respiratory distress
- E. Give nothing by mouth

AEMT

- A. If there is concern about the possibility of blood or fluid loss, start an IV of saline, and run at a keep open rate or saline lock. If hypotensive, administer IV fluids at a rate to maintain perfusion.
- B. Apply a cardiac monitor during transport if appropriate.

PARAMEDIC

- A. Obtain orthostatic vital signs and if hypotensive, administer IV fluids at a rate to maintain perfusion.
- B. Apply a cardiac monitor during transport if appropriate.



ALTERED LEVEL OF CONSCIOUSNESS

EMT

- A. Secure airway, and consider cervical spine injury
 - 1. Administer 100% oxygen by NRB mask
 - 2. Apply pulse oximeter and/or capnography device and use measurements to guide treatment
 - 3. Be prepared to hyperventilate and/or assist ventilations with an oral or nasal airway and bag valve mask (BVM) or positive pressure ventilation (PPV)
- B. Evaluate patient's general appearance, relevant history of condition and determine:

Onset
Provokes
Quality
Radiates
Severity
Time
Interventions

Allergies
Medication
Past Medical History - especially, diabetic, seizures, stroke, head injury, drug abuse
Last Meal
Events leading to present illness

Assess the unresponsive patient using the Glasgow Coma Scale (GCS). Patients with GCSs of 8 or less have poor prognosis and need advanced life support (ALS) as soon as possible.

In possible stroke patients who are alert, assessment of language, motor responses and sensation must be completed to establish baselines for future changes.

- C. Obtain a blood glucose measurement if the equipment is available. Consider administration of glucose with intact gag reflex.
- D. Transport IMMEDIATELY unless an ALS unit is enroute and has an ETA of less than 5 minutes to the scene.

AEMT

- A. Assist EMS professionals, obtain patient condition and circumstance
- B. If the patient does not have a secure, protected airway, intubate per Intubation Procedure
- C. Apply monitor and check rhythm
- D. Start IV saline, TKO, while enroute to hospital
- E. Consider determination of blood sugar level, if available.
 - 1. If blood sugar less than 80, administer IV bolus, 50 ml of 50% dextrose. May be repeated in 10 minutes if blood sugar remains below 80.
 - 2. If blood sugar greater than 400 and signs of hypoperfusion are present, administer IV fluid bolus of at least 250 ml of saline. May be repeated if no response in 10 minutes.
 - 3. If unable to check blood sugar and LOC is decreased administer IV bolus, 50 ml of 50% dextrose

ALTERED LOC (cont'd)

F. If respirations are impaired, or there is a high index of suspicion of narcotic overdose and patient does not respond to dextrose or fluid bolus, administer naloxone (Narcan®) 2 mg by IV push, nebulizer, IM or SQ. If patient improves somewhat with Narcan® but is not fully awake, repeat dose

CONSIDER PATIENT RESTRAINT BEFORE ADMINISTRATION OF NARCAN®
SEE RESTRAINT POLICY

H. Re-evaluate patient condition, contact Medical Control, and transport to hospital
Check blood sugar or draw blood chemistry tube.

F. If blood sugar greater than 400 and signs of hypoperfusion are present, administer IV fluid bolus of at least 250 ml of saline. May be repeated if no response in 10 minutes.

DO NOT DELAY TRANSPORT

PARAMEDIC

A. Assume charge of situation and confer with EMS professionals about condition of patient and situation

B. If patient does not have a secure, protected airway, intubate per Intubation Procedure

C. Apply monitor and check rhythm

D. Start IV saline TKO.

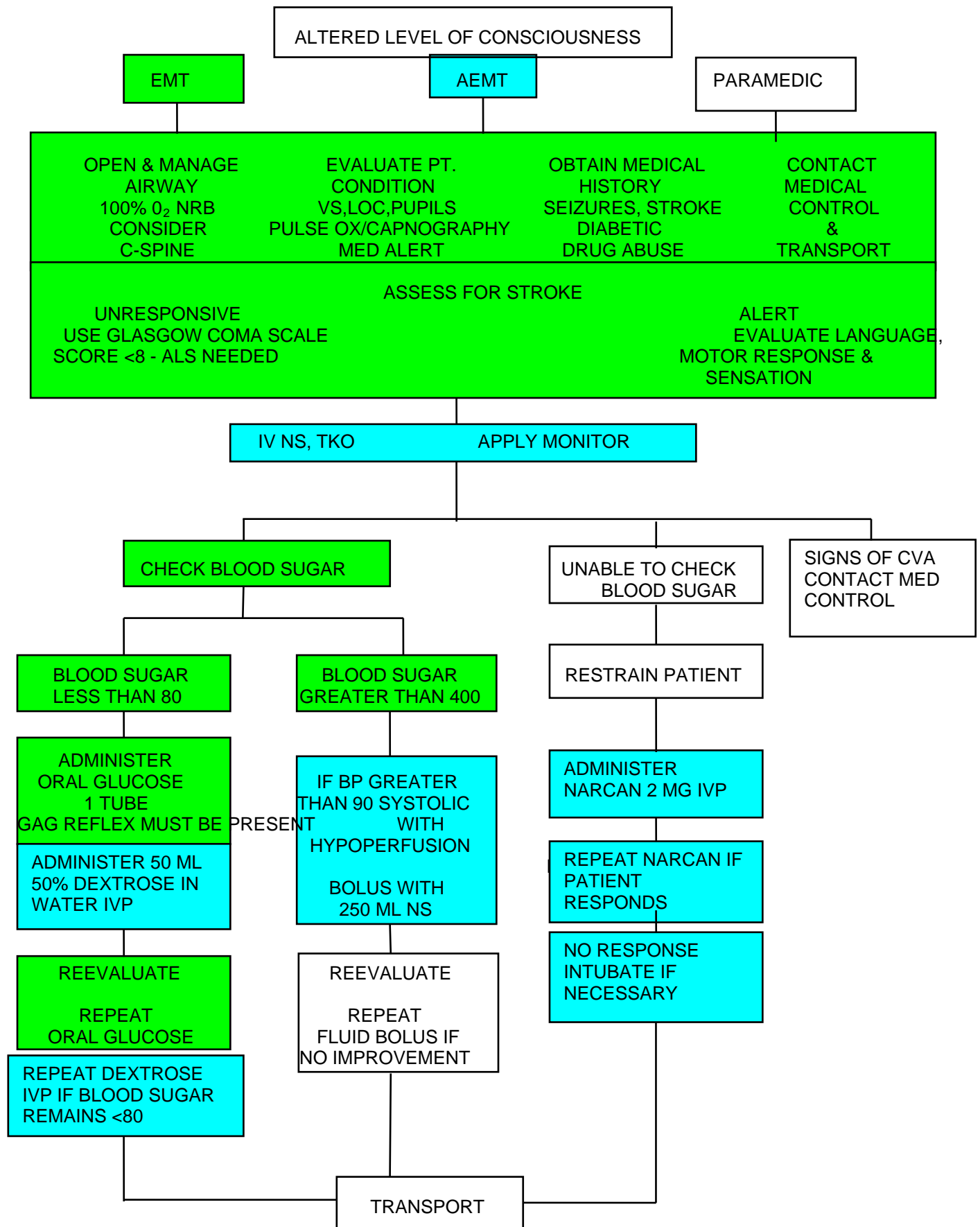
E. If signs of CVA, contact Med Control.

F. Consider determination of blood sugar level, if available.

1. If blood sugar less than 80, administer IV bolus, 50ml of 50% dextrose. May be repeated in 10 minutes if blood sugar remains below 80.
 2. If blood sugar greater than 400 and signs of hypoperfusion are present, administer IV fluid bolus of at least 250 ml of saline. May be repeated if no response in 10 minutes.
 3. If unable to check blood sugar and LOC is decreased administer IV bolus, 50 ml of 50% dextrose
- G. If respirations are impaired, or there is a high index of suspicion of narcotic overdose and patient does not respond to dextrose or fluid bolus, administer naloxone (Narcan®) 2 mg by IV push, nebulizer, IM or SQ. If patient improves somewhat with Narcan® but is not fully awake, repeat dose

CONSIDER PATIENT RESTRAINT BEFORE ADMINISTRATION OF NARCAN®
SEE RESTRAINT POLICY

H. Re-evaluate patient condition, contact Medical Control, and transport to hospital



ARRHYTHMIAS

GENERAL CONSIDERATIONS

- A. In the treatment of cardiac arrhythmias, current American Heart Association guidelines were referenced for guideline development
- B. Always provide oxygen support, make the patient comfortable, and provide reassurance
- C. Transport is essential when Advanced Cardiac Life Support is not available within 10 minutes of receipt of the call

EMT / AEMT

- A. Open and manage the airway and provide 100% oxygen by non-rebreather (NRB) mask. Apply pulse oximeter.
- B. Make patient comfortable and provide reassurance
- C. Evaluate patient's general appearance, relevant history of condition and determine:
 - Onset
 - Provokes
 - Quality
 - Radiates
 - Severity
 - Time
 - Interventions
 - Allergies
 - Medication
 - Past Medical History - especially CARDIAC
 - Last Meal
 - Events leading to present illness
- D. If patient is experiencing an unusual and/or irregular heart rate or pulse, if available, application of the cardiac monitor may be applied by the AEMT with assistance from the EMT if necessary. The AEMT may obtain a monitor strip for evaluation by the physician at the emergency department. This should only be done during transport, and you must advise the patient you are doing this for the physician and cannot provide the patient with your interpretation of the strip.
- E. Establish communications with medical control and advise them of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Apply cardiac monitor and determine arrhythmia
- C. Start IV/IO normal saline (NS)

ARRHYTHMIAS (cont'd)

D. Treat arrhythmia as follows:

1. Bradycardia

If heart rate is < 60 beats per minute, assess patient's perfusion. Signs/symptoms of poor perfusion include:

- Hypotension
- Acutely altered mental status
- Signs of shock
- Ischemic chest discomfort
- Acute heart failure
- If patient is taking calcium channel blockers or is a possible beta blocker overdose, consider calling medical control for appropriate antidote.

a. Good perfusion

- i. Transport
- ii. If second degree heart block type II or third degree heart block, prepare patient for external pacing by applying external pacer pads. If the patient develops signs of poor perfusion, initiate external pacing.

b. Poor perfusion:

- i. Consider sedation Valium®/Versed® 3-5 mg IV
- ii. External pacemaker set at 80 beats per minute and start at 20 milliamps. Increase by 20 milliamps every ten seconds until mechanical capture is obtained;

NOTE: Atropine may be administered while preparing for pacing

- iii. Atropine 0.5 mg IVP, subsequent doses 0.5 mg every 3-5 minutes up to 3 mg (0.04 mg/kg), or until heart rate is 60 and an adequate systolic blood pressure (SBP) is obtained (SBP greater than 90 with adequate level of consciousness).
- iv. If perfusion is poor after maximum dose of atropine, initiate dopamine IV infusion of 2-10 mcg/kg/minute or epinephrine IV infusion of 2-10 mcg/minute titrated to a systolic BP of 90 or until the patient's level of consciousness improves.

2. Narrow complex tachycardias:

If heart rate is < 150 beats per minute, assess patient's perfusion. Signs/symptoms of poor perfusion include:

- Hypotension
- Acutely altered mental status
- Signs of shock
- Ischemic chest discomfort
- Acute heart failure

a. Good Perfusion

- i. Vagal maneuver or carotid massage
- ii. Adenosine (Adenocard®) 6 mg rapid IV push followed immediately by a 20 ml bolus of saline
- iii. If no response in 1-2 minutes, adenosine 12 mg rapid IV push followed immediately by a 20 ml bolus of saline.
- iv. If the patient does not respond to adenosine, consider contacting medical control for orders for additional medications.
- v. If patient remains stable, observe and transport.

****Note:** If at any time the patient becomes unstable with poor perfusion, go directly to synchronous cardioversion.

b. Poor perfusion:

****Note:** Based on assessment findings, the Paramedic may choose to administer adenosine before attempting synchronized cardioversion if there is a regular narrow complex. If patient is unstable with poor perfusion, the Paramedic may omit adenosine administration and proceed directly to synchronized cardioversion immediately.

- i. Adenosine 6 mg rapid IV push followed immediately by a 20 ml NS bolus IV.
- ii. If no response in 1-2 minutes, adenosine 12 mg rapid IV push followed immediately by a 20 ml NS bolus IV.
- iii. Consider sedation Valium®/Versed® 5mg IV
- iv. Initial synchronized cardioversion:
 - (a) 50-100 J (monophasic or biphasic) for narrow regular complexes
 - (b) 200 J monophasic or 120-200 J biphasic for narrow irregular complexes

3. Wide complex tachycardias (with a pulse):

Assess patient's perfusion. Signs/symptoms of poor perfusion include

- Hypotension
- Acutely altered mental status
- Signs of shock
- Ischemic chest discomfort
- Acute heart failure

a. Good Perfusion

- i. Administer an antiarrhythmic.

Antiarrhythmics that are indicated for a wide complex tachycardia are amiodarone, sotalol, or procainamide. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization. Please follow these guidelines for the administration.

- Amiodarone 150 mg IVP over 2- 3 minutes
 - If the patient's condition is unchanged ten minutes after the first dose, a second dose of amiodarone and a maintenance infusion of 1 mg/minute may be administered by medical direction order.
 - If at any time the patient becomes unstable, prepare for immediate cardioversion.
- Sotalol 100 mg (1.5 mg/kg) IV over 5 minutes
 - Avoid administration for a prolonged QT interval
- Procainamide IV infusion of 20-50 mg/minute
 - Maximum dose is 17 mg/kg
 - Discontinue infusion if the arrhythmia becomes suppressed, hypotension or signs and symptoms of CHF develop, development of a prolonged QRS complex greater than 50%, or the maximum dose of 17 mg/kg has been administered.
 - Consider contacting medical control for orders to begin a maintenance IV infusion of 1-4 mg/minute.

****NOTE:** If at any time the patient becomes unstable with poor perfusion, go directly to synchronous cardioversion.

***NOTE:** Do not administer more than one antiarrhythmic simultaneously to a patient. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization.

- ii. Consider sedation Valium®/Versed® 5mg IV
- iii. Initial synchronized cardioversion:
 - (a) 100 J (monophasic or biphasic) for wide regular complexes

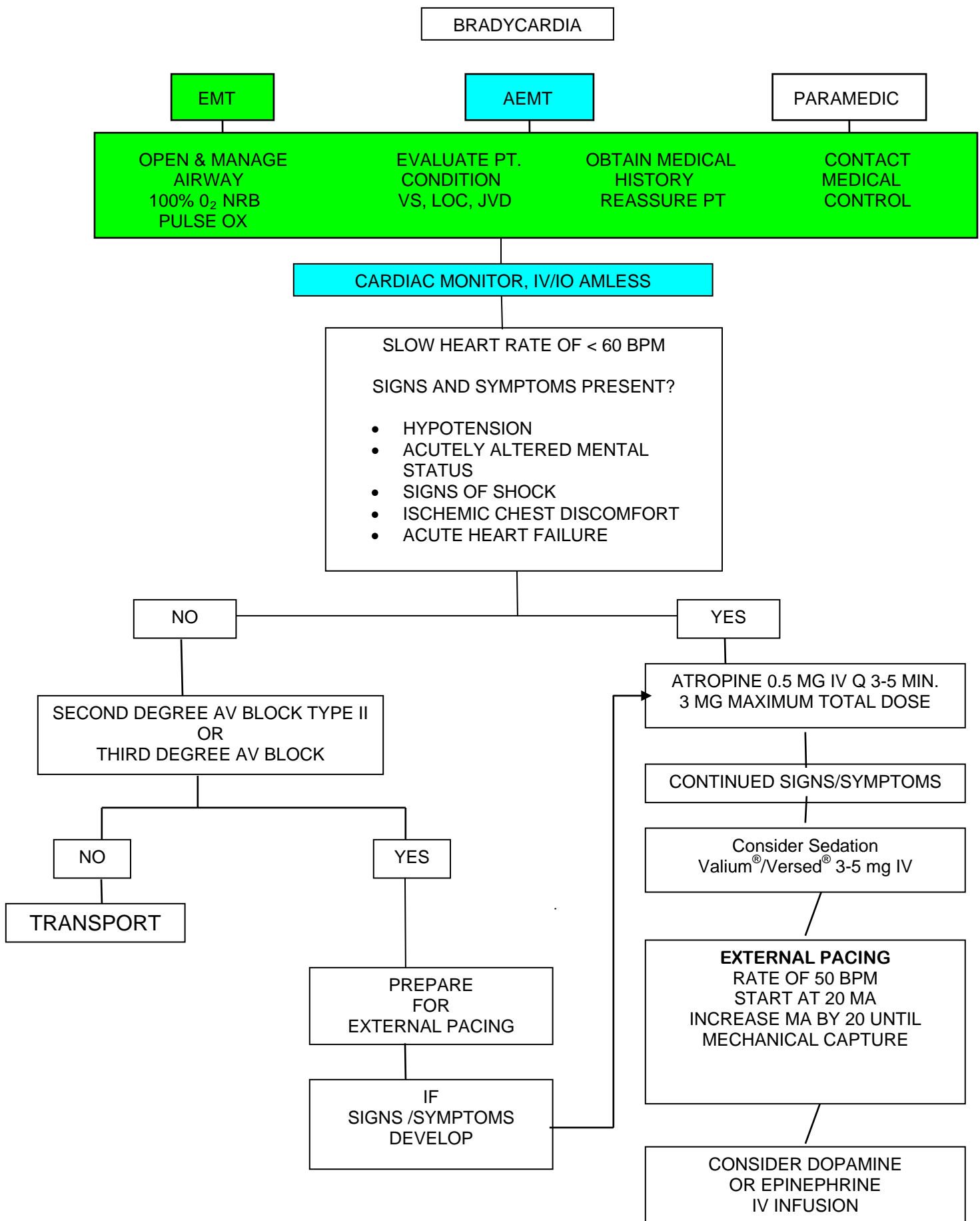
*** Wide irregular complexes are typically not associated with a stable patient with normal perfusion. Contact medical control for advise on these rare cases.

b. Poor perfusion (with a pulse):

- i. Prepare for immediate synchronized cardioversion
- ii. Consider sedation Valium®/Versed® 5mg IV
- iii. Synchronous cardioversion:
 - (a) 100 J (monophasic or biphasic) for wide regular complexes
 - (b) Defibrillation with high-energy UNSYNCHRONIZED shocks for wide irregular complexes
- iv. Administer an antiarrhythmic. Antiarrhythmics that are indicated for a wide complex tachycardia are amiodarone, sotalol, or procainamide. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization. Please follow these guidelines for the administration.
 - Amiodarone 150mg IVP over 2- 3 minutes
 - If the patient's condition is unchanged ten minutes after the first dose, a second dose of amiodarone and a maintenance infusion of 1 mg/minute may be administered by medical direction order.
 - If at any time the patient becomes unstable, prepare for immediate cardioversion.
 - Sotalol 100 mg (1.5 mg/kg) IV over 5 minutes
 - Avoid administration for a prolonged QT interval
 - Procainamide IV infusion of 20-50 mg/minute
 - Maximum dose is 17 mg/kg
 - Discontinue infusion if the arrhythmia becomes suppressed, hypotension or signs and symptoms of CHF develop, development of a prolonged QRS complex greater than 50%, or the maximum dose of 17 mg/kg has been administered.
 - Consider contacting medical control for orders to begin a maintenance IV infusion of 1-4 mg/minute

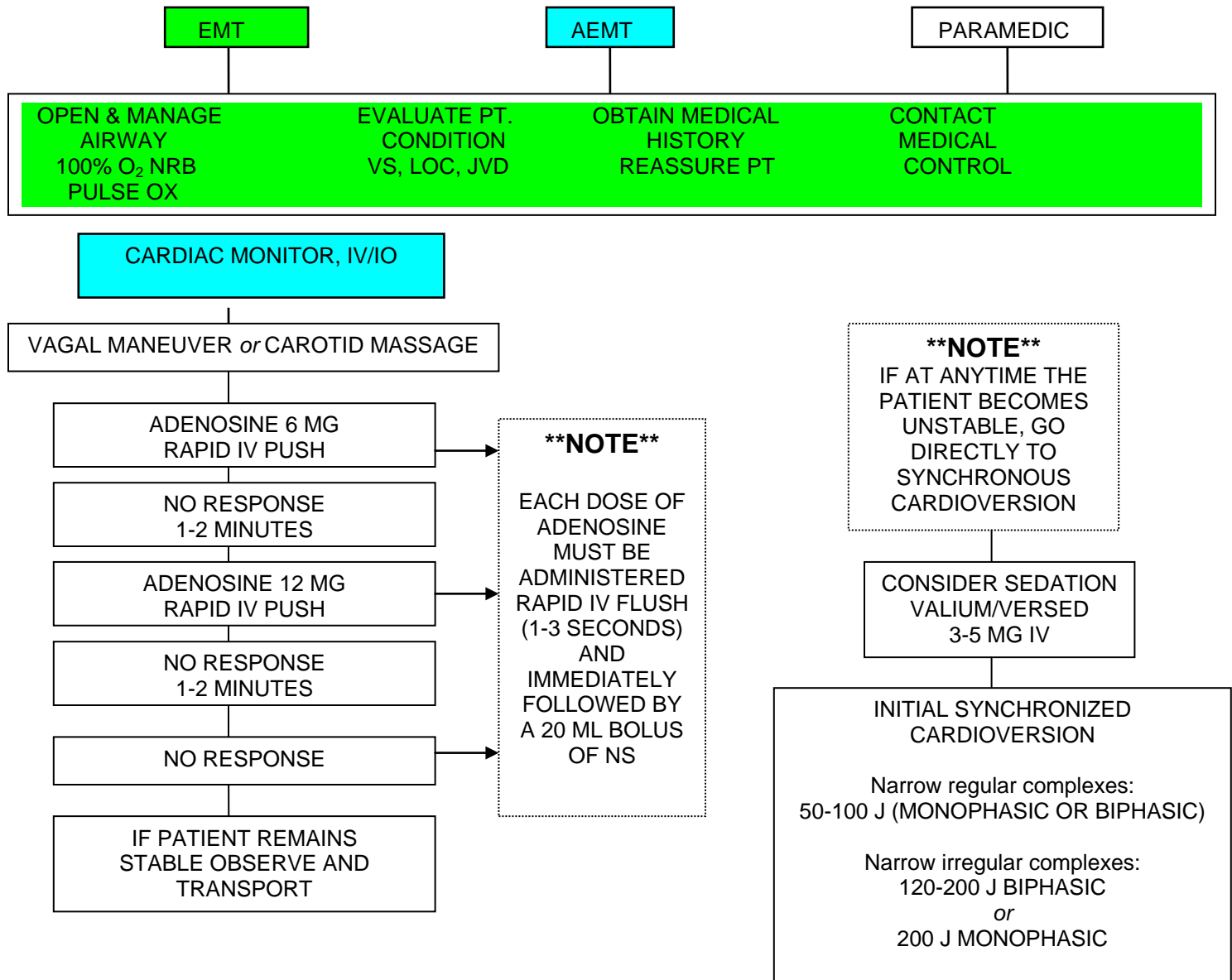
****NOTE:** Do not administer more than one antiarrhythmic simultaneously to a patient. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization.

- v. Repeat synchronized cardioversion.



STABLE NARROW COMPLEX TACHYCARDIA
(Heart Rate Greater Than 150)

PATIENTS WITH A PULSE, GOOD PERFUSION AND ALERT AND ORIENTED ARE CONSIDERED STABLE.



UNSTABLE NARROW COMPLEX TACHYCARDIAS
(Heart Rate Greater Than 150)

**PATIENTS WITH POOR PERFUSION, CHEST PAIN, SHORTNESS OF BREATH
AND/OR ALTERED LEVEL OF CONSCIOUSNESS ARE CONSIDERED UNSTABLE.**

EMT

AEMT

PARAMEDIC

OPEN & MANAGE
AIRWAY
100% O₂ NRB
PULSE OX

EVALUATE PT.
CONDITION
VS, LOC, JVD

OBTAIN MEDICAL
HISTORY
REASSURE PT

CONTACT
MEDICAL
CONTROL

IV SALINE APPLY CARDIAC MONITOR

MAY GO DIRECTLY TO CARDIOVERSION

ADENOSINE 6 MG
RAPID IV PUSH

NO RESPONSE
1-2 MINUTES

ADENOSINE 12 MG
RAPID IV PUSH

NO RESPONSE
1-2 MINUTES

CONSIDER SEDATION
VALIUM / VERSED
3-5 MG IV

INITIAL SYNCHRONIZED
CARDIOVERSION
Narrow regular complexes:
50-100 J (MONOPHASIC OR
BIPHASIC)

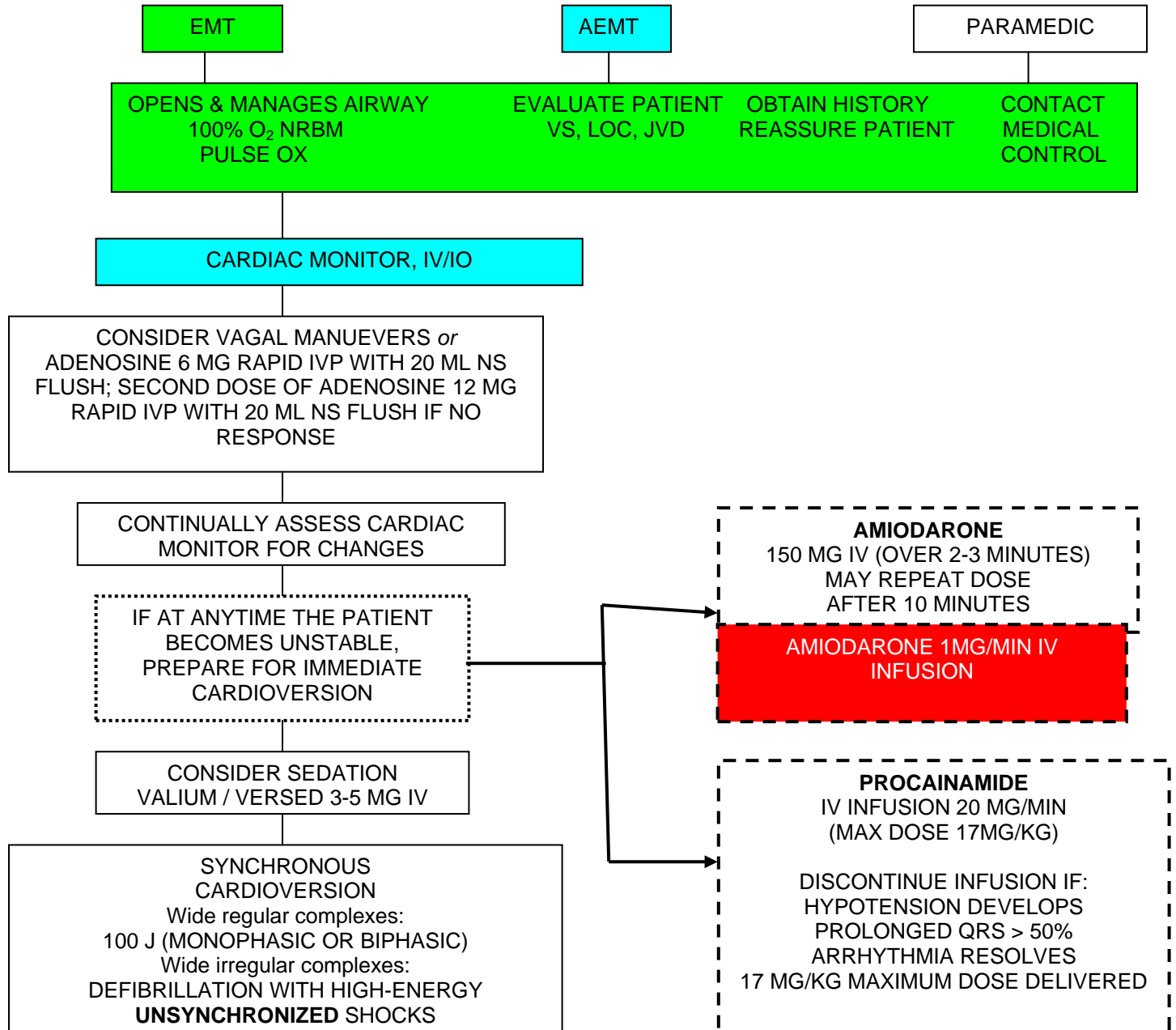
Narrow irregular complexes:
120-200 J BIPHASIC OR 200 J
MONOPHASIC

****NOTE****

EACH DOSE
OF ADENOSINE
MUST BE
ADMINISTERED
RAPID IV PUSH
(1-3 SECONDS)
AND
IMMEDIATELY
FOLLOWED BY
A 20 ML BOLUS
OF SALINE

STABLE WIDE COMPLEX TACHYCARDIA

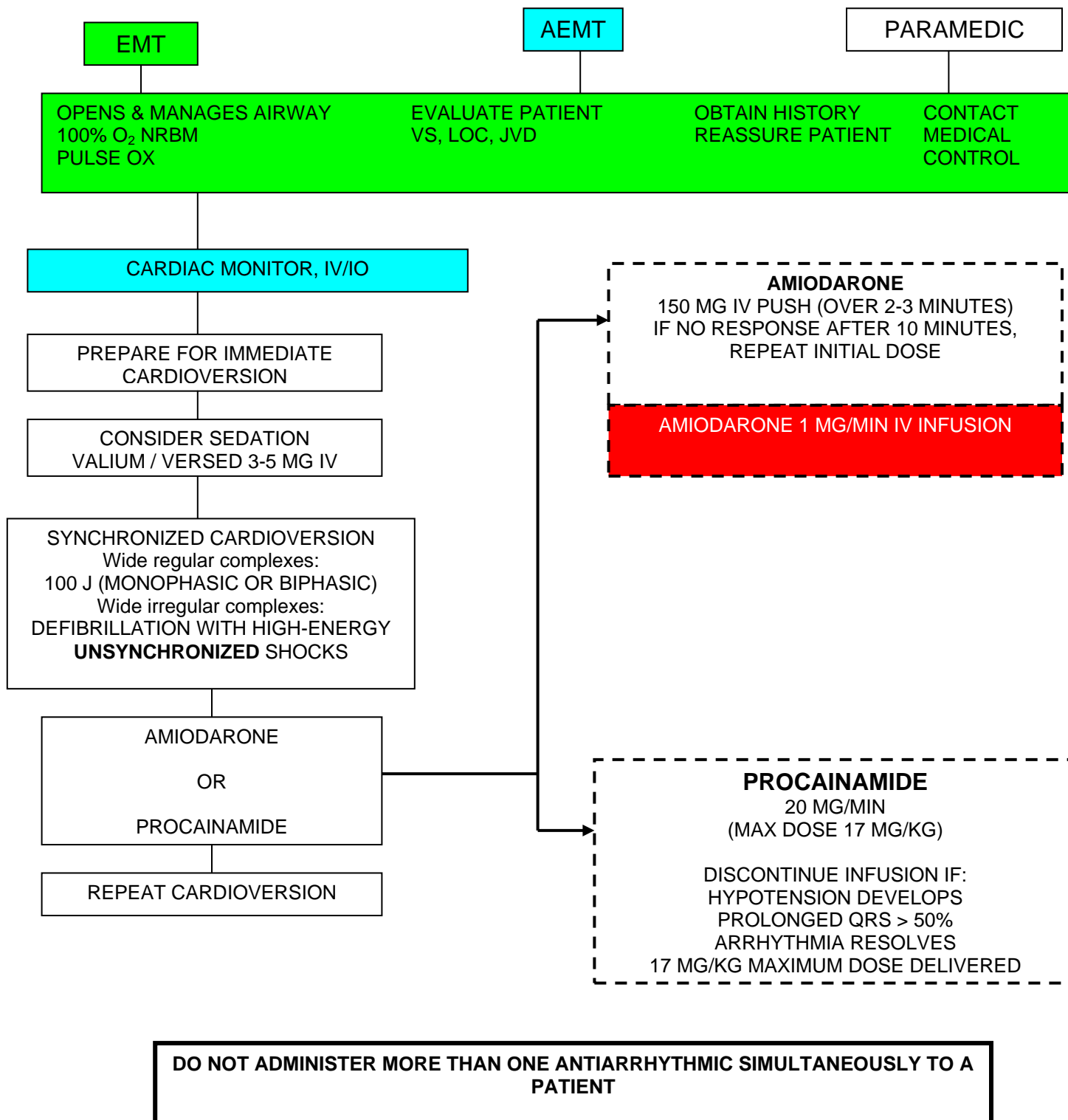
PATIENTS WITH A GOOD PULSE, GOOD PERFUSION, WHO ARE ALERT AND ORIENTED ARE CONSIDERED STABLE



DO NOT ADMINISTER MORE THAN ONE ANTIARRHYTHMIC SIMULTANEOUSLY TO A PATIENT

UNSTABLE WIDE COMPLEX TACHYCARDIA

PATIENTS WITH HYPOTENSION, ACUTELY ALTERED MENTAL STATUS, SIGNS OF SHOCK, ISCHEMIC CHEST DISCOMFORT, OR ACUTE HEART FAILURE ARE CONSIDERED UNSTABLE



BURNS

GENERAL

- A. The first priority is to assure scene safety and then remove the patient from heat and flame, electrical or chemical exposure
- B. Airway, breathing, and circulation must be stabilized before attending to the burn
- C. Patient with extensive burns must be monitored for hypothermia and the use of ice and/or prolonged cold compresses should be avoided. When in doubt, always cover with dry dressing
- D. In caring for the burn, the EMS professional should:
 - 1. Stop the burning
 - 2. Reduce the pain
 - 3. Prevent contamination
- E. Patients with critical burns must be transported per local protocol.
- F. When dealing with contaminated environments, EMS professionals must have appropriate protective clothing. If not available, contact appropriate HazMat service for such equipment.
- G. Gross decontamination must be done at the scene. Advise receiving facility if complete decontamination was not done at the scene, and be prepared to transport to decontamination area.

EMT

- A. Open and manage airway and provide oxygen as appropriate.
- B. Determine type of burn and treat as follows:
 - 1. Thermal (dry and moist):
 - a. Stop burning process: i.e. remove patient from heat source, cool skin, remove clothing
 - b. If patient starts to shiver or skin is cool, stop cooling process
 - c. Estimate extent (%) and depth of burn (see chart). Determine seriousness (see chart) of burn. Contact Medical Control and transport accordingly.
 - d. Cover burn areas with sterile dressing
 - 2. Radiation Burns:
 - a. Treat as thermal burns except when burn is contaminated with radioactive source, then treat as chemical burn
 - b. Wear appropriate protective clothing when dealing with contamination
 - c. Contact HAZMAT TEAM for assistance in contamination cases

BURNS (cont'd)

3. Chemical Burns:
 - a. EMS professionals must wear appropriate protective clothing and respirators
 - b. Remove patient from contaminated area and move the patient to the decontamination site (NOT TO THE SQUAD)
 - c. Determine chemicals involved; contact appropriate agency for chemical information
 - d. Remove patient's clothing and flush skin
 - e. Leave contaminated clothes at scene. Cover patient over and under before loading into squad.
 - f. Patient should be transported by personnel not involved in decontamination process
 - g. Determine severity (see chart), contact Medical Control and transport accordingly
 - h. Relay type of substance involved to Medical Control.
4. Electrical Burns
 - a. Shut down electrical source; do not attempt to remove patient until electricity is CONFIRMED to be shut off.
 - b. Assess for visible entrance and exit wounds and treat as thermal burns
 - c. Assess for internal injury, i.e., vascular damage, tissue damage, fractures, and treat accordingly
 - d. Determine severity of burn, contact Medical Control and transport accordingly
5. Inhalation Burns:
 - a. Always suspect inhalation burns when the patient is found in closed smoky environment and/or exhibits any of the following: burns to face/neck, singed nasal hairs, cough and/or stridor, soot in sputum,
 - b. Provide oxygen therapy, contact Medical Control and transport

AEMT

- A. Assist EMS professional with airway. Intubate if necessary per the Intubation procedure guidelines
- B. Assist in determining type of burn and its treatment
- C. For hypovolemia, start IV per shock protocol

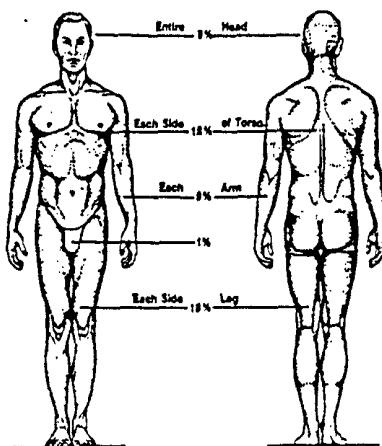
DO NOT DELAY TRANSPORT FOR IV

BURNS (cont'd)

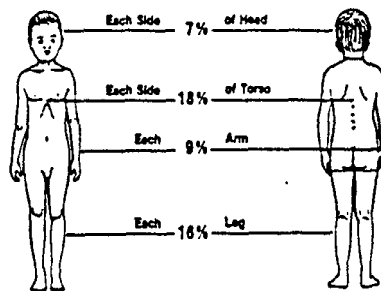
PARAMEDIC

- A. Assume charge - confer with EMS professionals about patient condition and circumstances
- B. Apply cardiac monitor and treat arrhythmia, especially with electrical burns
- C. Provide endotracheal intubation per procedure guidelines.
- D. Consider pain relief per local protocol.

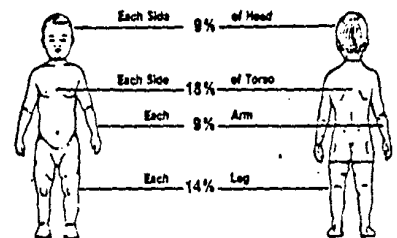
RULE OF NINES



Percentage of Adult Body Surface



Percentage of Child Body Surface



Percentage of Infant Body Surface

1% is equal to the surface of the palm of the patient's hand. If unsure of %, describe injured area.

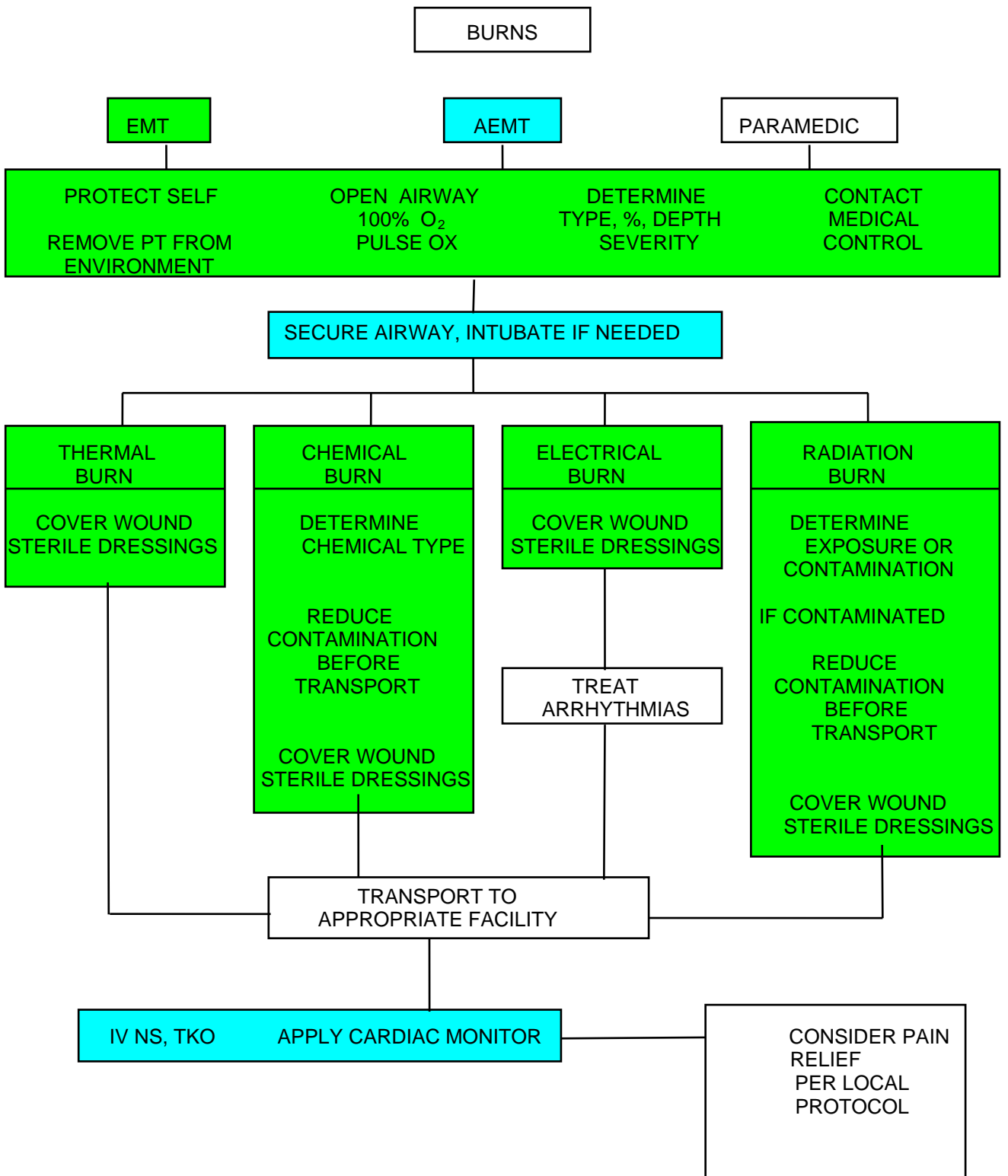
SERIOUSNESS OF BURNS

MINOR
1st degree < 70%
2nd degree < 10%
+3rd degree < 2%

+ Only if hands, face, feet or genitalia are NOT involved.

MODERATE
1st degree > 70%
+2nd degree 10-30%

CRITICAL
2nd degree > 30%
3rd degree > 2%
Any burns with trauma.
Any burns with head, face, feet, genitalia involved.



CARDIAC ARREST

GENERAL INSTRUCTIONS

- A. Quality CPR should be initiated immediately and should not be interrupted for more than 15 seconds until spontaneous pulse is established
Compression Ratio for Adult - 30:2
Consider administration of two minutes of quality CPR prior to defibrillation.
- B. Quantitative waveform capnography is recommended for monitoring the quality of CPR (with the goal of maintaining end tidal CO₂ (P_{ETCO2}) less than 10 mmHg), detection of the return of spontaneous circulation, and the confirmation of tracheal tube placement.
- C. If IV/IO cannot be established, epinephrine, and atropine may be administered through the endotracheal tube
- D. When a defibrillator (automated or manual) is immediately available, a single shock should be delivered, if indicated after assessment and a shockable rhythm identified
- E. If there is no response to an adequate trial of ALS on scene, termination of resuscitation should be considered (see Termination protocol)
- F. Each IV/IO push medication should be followed by a 20 ml NS or LR flush
- G. The ideal defibrillation dose using a biphasic defibrillator is the dose at which the device waveform has been shown to be effective in terminating VF. The initial selected dose for attempted defibrillation using a biphasic manual defibrillator is 150 J to 200 J for a biphasic truncated exponential waveform or 120 J for a rectilinear biphasic waveform. The second dose should be the same or higher. If the rescuer does not know the type of biphasic waveform in use, a default dose of 200 J is acceptable.
- H. The induction of post-arrest hypothermia following a successful resuscitation may be considered if the patient can be transported to a facility that can continue this therapeutic measure.
- I. The acquisition and/or transmission of a 12-lead EKG, completed in accordance with the Ohio EMS scope of practice, following a successful resuscitation should be considered. If the 12-lead EKG demonstrates an acute ST segment myocardial infarction (STEMI), medical direction should be contacted immediately to facilitate the patient's transport to directly to a facility with percutaneous cardiac intervention capability (PCI) if possible.

EMT

- A. If an Automated External Defibrillator (AED) is available:
 - 1. Assess patient for respiratory and cardiac arrest
 - 2. Immediately provide quality CPR
 - 3. Apply AED and activate device. Start verbal documentation which must include:
 - EMS unit delivering care and ID of EMT
 - Initial call information (i.e. man down, drowning, etc.)
 - Initial patient assessment, findings, and impression
 - Care given to this point
 - Ongoing outcomes of care delivered to patient

Cardiac arrest (cont'd)

- a. "No Shock Advised"
 - i. Resume quality CPR
 - ii. Ventilate with 100% oxygen by two-person BVM or oxygen-powered, manually-triggered ventilation device; and oral or nasal airway adjunct. Ventilation should be delivered over two seconds.
 - iii. Contact medical control and advise of cardiac arrest
 - iv. Transport IMMEDIATELY unless an advanced life support unit is enroute and has ETA less than 5 minutes
- b. "Shock Advised"
 - i. Deliver single shock
 - ii. Resume quality CPR for two minutes. Manage airway and oxygenate.
 - iii. Contact medical control and advise of cardiac arrest
 - iv. After two minutes of quality CPR, analyze the rhythm with the AED and deliver a single shock, if indicated
 - Defibrillate 120-200 J biphasic or 360 J monophasic
 - v. Continue quality CPR and transport patient to ambulance

"TURN AED OFF DURING MOVEMENT OF PATIENT"
--

- vi. Before transport – analyze the rhythm with the AED and deliver single shock, if indicated
 - Defibrillate 120-200 J biphasic or 360 J monophasic
- vii. Transport IMMEDIATELY, unless an advanced life support unit is enroute and has ETA less than 5 minutes

AEMT

- A. Assume charge and confer with EMS professional as to patient condition and circumstances

ALLOWS AED TO COMPLETE "SHOCK" SEQUENCE IF IN PROGRESS

- B. Apply cardiac monitor and check rhythm
- C. If monitor shows ventricular fibrillation or pulseless ventricular tachycardia:
 1. Defibrillate 120-200 J biphasic or 360 J monophasic

Cardiac arrest (cont'd)

2. Deliver two minutes of quality CPR.
 3. Check rhythm
 4. Defibrillate 120-200 J biphasic or 360 J monophasic
 5. Resume quality CPR, manage the patient's airway and provide 100% oxygen, start NS IV/IO, contact medical control and advise of patient condition
 6. Continue quality CPR
 7. Assess rhythm and pulse
 8. No change – defibrillate 120-200 J biphasic or 360J monophasic
 9. Assess rhythm and pulse, no change
 10. Resume quality CPR
 11. No change – defibrillate 120-200 J biphasic or 360 J monophasic
- D. After an advanced airway is placed, rescuers no longer deliver “cycles” of CPR. Give continuous chest compressions without pauses for breaths. Give 8 to 10 breaths/minute. Check rhythm every two minutes.

PARAMEDIC

- A. Assume charge and confer with EMS professional as to patient condition and circumstances

**ALLOWS AED TO COMPLETE “SHOCK” SEQUENCE IF IN PROGRESS
ALLOWS AEMT TO COMPLETE MANUAL DEFIBRILLATION CYCLE IN PROGRESS**

- B. Apply cardiac monitor and check rhythm
- C. If monitor shows ventricular fibrillation or pulseless ventricular tachycardia:
1. Defibrillate 120-200 J biphasic or 360 J monophasic
 2. Deliver two minutes of quality CPR.
 3. Check rhythm
 4. Defibrillate 120-200 J biphasic or 360 J monophasic
 5. Resume quality CPR, manage patient's airway and provide 100% oxygen, start NS IV/IO, contact medical control, and advise of patient condition
 6. Administer epinephrine 1 mg 1:10,000 IV/IO every 3-5 min or a single dose of vasopressin 40 units IV/IO to replace the first two doses of epinephrine.

Cardiac arrest (cont'd)

7. Resume quality CPR
 8. Assess rhythm and pulse
 9. If no change, defibrillate 120-200 J biphasic or 360 J monophasic
 10. Assess rhythm and pulse. If no change, continues quality CPR
 11. Administer antiarrhythmic
 - Amiodarone 300 mg IV/IO (second dose 150 mg IV/IO)
 - If amiodarone is not available, lidocaine 1-1.5 mg/kg IV/IO [(second dose 0.5 - 0.75 mg/kg IV/IO) Max 3 mg/kg]
 - Magnesium 1-2 g IV/IO (only for torsades de pointes)
 12. Continue CPR
 13. Assess rhythm and pulse
 14. If no change, defibrillate 120-200 J biphasic or 360 J monophasic
- D. After an advanced airway is placed, rescuers no longer deliver “cycles” of CPR. Give continuous chest compressions without pauses for breaths. Give 8 to 10 breaths/minute. Check rhythm every two minutes.
- E. Consider reversible causes:
- Hypovolemia
 - Hypoxia
 - Hydrogen ion (acidosis)
 - Hypokalemia/Hyperkalemia
 - Hypothermia
 - Tension pneumothorax
 - Tamponade (cardiac)
 - Toxins
 - Thrombosis (pulmonary)
 - Thrombosis (coronary)

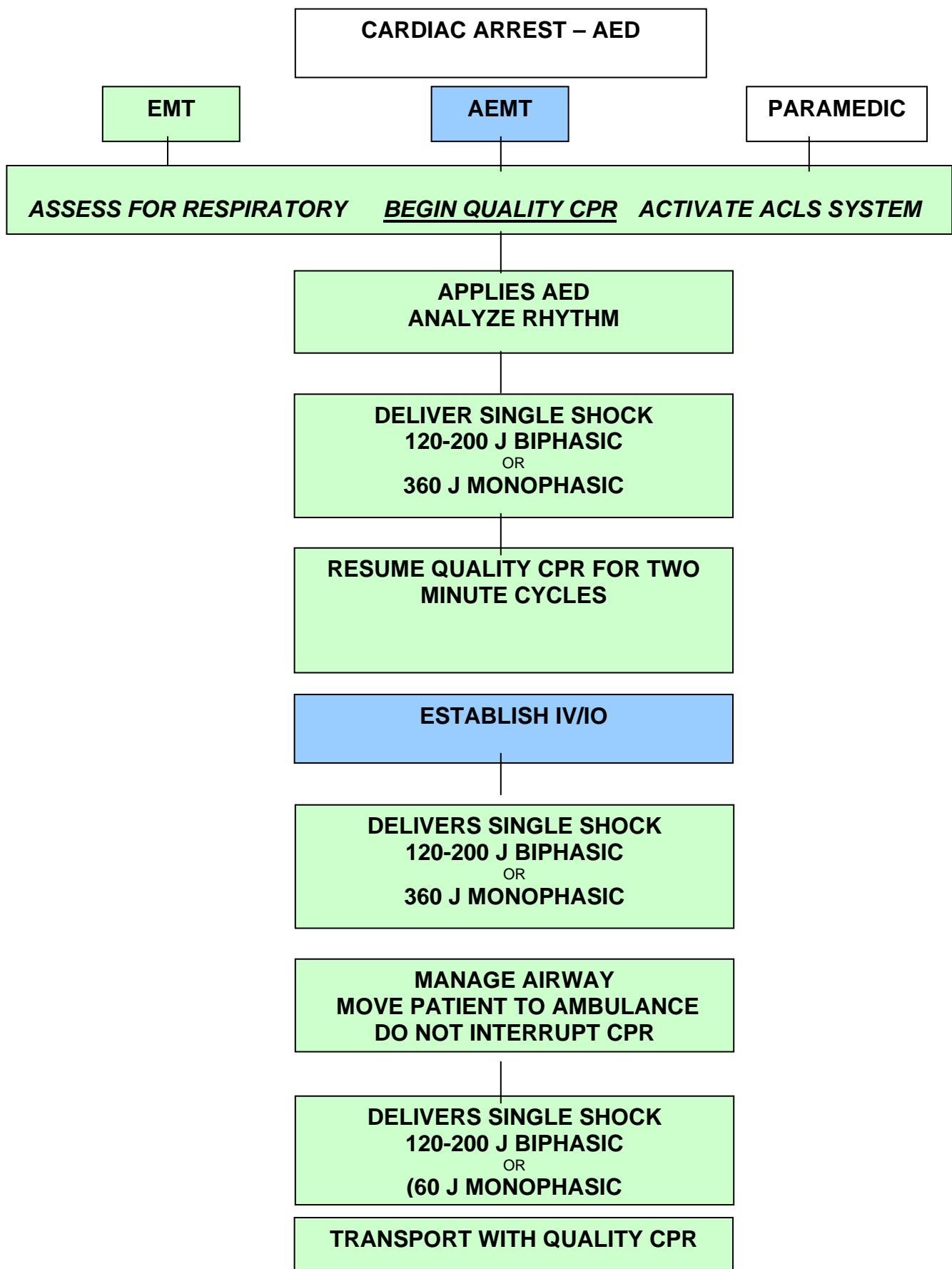
NOTE: Value of sodium bicarbonate has not been demonstrated during cardiac arrest, and it is not recommended for the routine cardiac arrest sequence. Consideration of its use is appropriate with during special resuscitation situations only, specifically when preexisting metabolic acidosis, hyperkalemia, or tricyclic antidepressant overdose is suspected.

Pulseless Electrical Activity (PEA)/Asystole

- a. Check pulse, immediately initiate quality CPR, and minimize any interruption in CPR
- b. Apply the cardiac monitor/defibrillator and reassess rhythm every 2 minutes
- c. Obtain IV/IO access
- d. Administer epinephrine 1:10,000 1 mg IVP every 3 to 5 minutes or vasopressin 40 units IVP to replace the first two doses of epinephrine
- e. Consider placement of an advanced airway

Cardiac arrest (cont'd)

- f. Epinephrine 1:1,000 2 mg to 2.5 mg diluted with NS 10 ml may be administered via an ETT if IV/IO access has not be obtained or is delayed
- g. Consider treatable causes:
 - Hypovolemia
 - Hypoxia
 - Hydrogen ion (acidosis)
 - Hypokalemia/Hyperkalemia
 - Hypothermia
 - Tension pneumothorax
 - Tamponade (cardiac)
 - Toxins
 - Thrombosis (pulmonary)
 - Thrombosis (coronary)



CARDIAC ARREST VENTRICULAR FIBRILLATION/ PULSELESS VENTRICULAR TACHYCARDIA

EMT

AEMT

PARAMEDIC

ASSESS PATIENT FOR RESPIRATORY
AND CARDIAC ARREST

BEGIN QUALITY CPR
(2 MINUTE CYCLES)

ACTIVATE ACLS SYSTEM
CONTACT MED CONTROL

CARDIAC MONITOR/DEFIBRILLATOR OR AED
ASSESS/ANALYZE RHYTHM

DELIVER SINGLE SHOCK
120-200 J BIPHASIC *or*
360 J MONOPHASIC

QUALITY CPR FOR TWO MINUTES

DELIVER SINGLE SHOCK
120-200 J BIPHASIC *or*
360 J MONOPHASIC

ESTABLISH IV/IO
MANAGE AIRWAY WITH 100% OXYGEN

EPINEPHRINE 1:10,000 1 MG IV/IO q 3 – 5 MINUTES
(ET DOSE – 2 mg 1:1,000 IN 10ml NS)
or
VASOPRESSIN 40 UNITS IV/IO AS A SINGLE DOSE
CONTINUE QUALITY CPR

DEFIBRILLATE 120-200 J BIPHASIC *or*
360 J MONOPHASIC

AMIODARONE
CONTINUE QUALITY CPR

DEFIBRILLATE 120-200 J BIPHASIC *or*
360 J MONOPHASIC

CONTINUE QUALITY CPR, DEFIBRILLATION
120-200 J BIPHASIC *or* 360 J MONOPHASIC,
MEDICATION ADMINISTRATION

CONSIDER SODIUM BICARB ONLY FOR PREEXISTING
METABOLIC ACIDOSIS, TRICYCLIC OVERDOSE,
HYPERKALEMIA

TRANSPORT WITH QUALITY CPR IN PROGRESS

AFTER AN ADVANCED AIRWAY IS PLACED
RESCUERS NO LONGER DELIVER “CYCLES”
OF CPR. GIVE CONTINUOUS CHEST
COMPRESSIONS WITHOUT PAUSES FOR
BREATHS. GIVE 8 TO 10 BREATHS/MINUTE.
CHECK RHYTHM EVERY TWO MINUTES.

MOVE PATIENT TO AMBULANCE WITH
CONTINUOUS QUALITY CPR IN PROGRESS

DELIVER SINGLE SHOCK
120-200 J BIPHASIC *or*
360 J MONOPHASIC

TRANSPORT

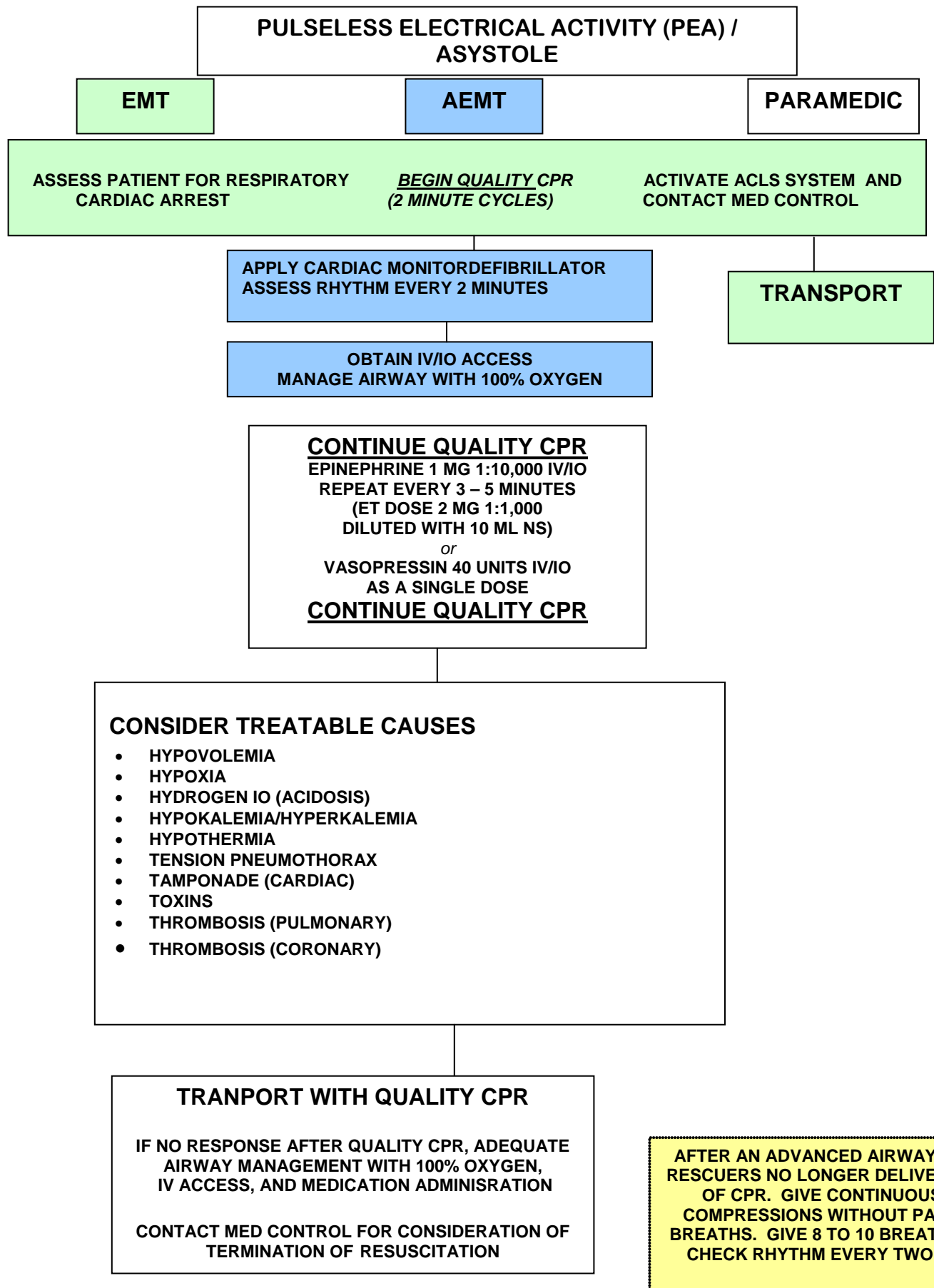
AMIODARONE
300 MG IV/IO

AFTER 10 MIN: PATIENT REMAINS IN VT/VF OR
CONVERTS TO PERFUSING RHYTHM:
AMIODARONE 150 MG IV/IO

BIPHASIC EQUIVALENT BY WAVEFORM

- * TRUNCATED EXPONENTIAL = 150 J - 200 J
- * RECTILINEAR = 120 J
- * BIPHASIC WAVEFORM UNKNOWN = 200J

DO NOT ADMINISTER MORE THAN ONE ANTIARRHYTHMIC TO A PATIENT



SPECIAL RESUSCITATION SITUATIONS

Special resuscitation situations are cardiopulmonary arrest or other life-threatening emergency that require modification or extension of conventional life support techniques.

NEAR DROWNING

GENERAL INFORMATION

- A. The key to success is the provision of early, effective pulmonary support
- B. It is essential that the EMS professional exercise caution and take steps to insure their own safety while retrieving the victim from the water
- C. Drowning is classified as trauma in Ohio. Victims of drowning or near drowning that could require admission to a hospital should be transferred to the appropriate trauma center.
- D. Maintenance of hypothermia in cold-water drowning may be recommended by local medical direction if the patient can be transported to a facility that is capable of continuing this therapeutic measure. A drowning that occurs in a body of water that is located outdoors or is not artificially heated should be classified as a cold-water drowning.

EMT

- A. Open airway and start rescue breathing as soon as possible, even if the victim has not been removed from the water
- B. Ventilate with 100% oxygen by two-person BVM or oxygen-powered, manually-triggered or automatic transport ventilation device with oral/nasal airway. Oxygen should be warmed to 42°C, if available. Ventilation should be delivered over two seconds and cricoid pressure should be considered to help reduce gastric distension
- C. Always consider the possibility of a cervical spine injury
- D. It is not recommended to drain fluid from lungs unless ventilations are impaired. If ventilation impairment should occur, suction airway for not more than 15 seconds
- E. Start quality CPR as soon as victim is removed from the water and onto a hard surface
- F. Patient may show signs of hypothermia. Handle patient VERY gently; rough handling or movement can cause cardiac arrhythmia. Warm patient by removing wet clothes and cover with blankets
- G. Transport IMMEDIATELY

AEMT

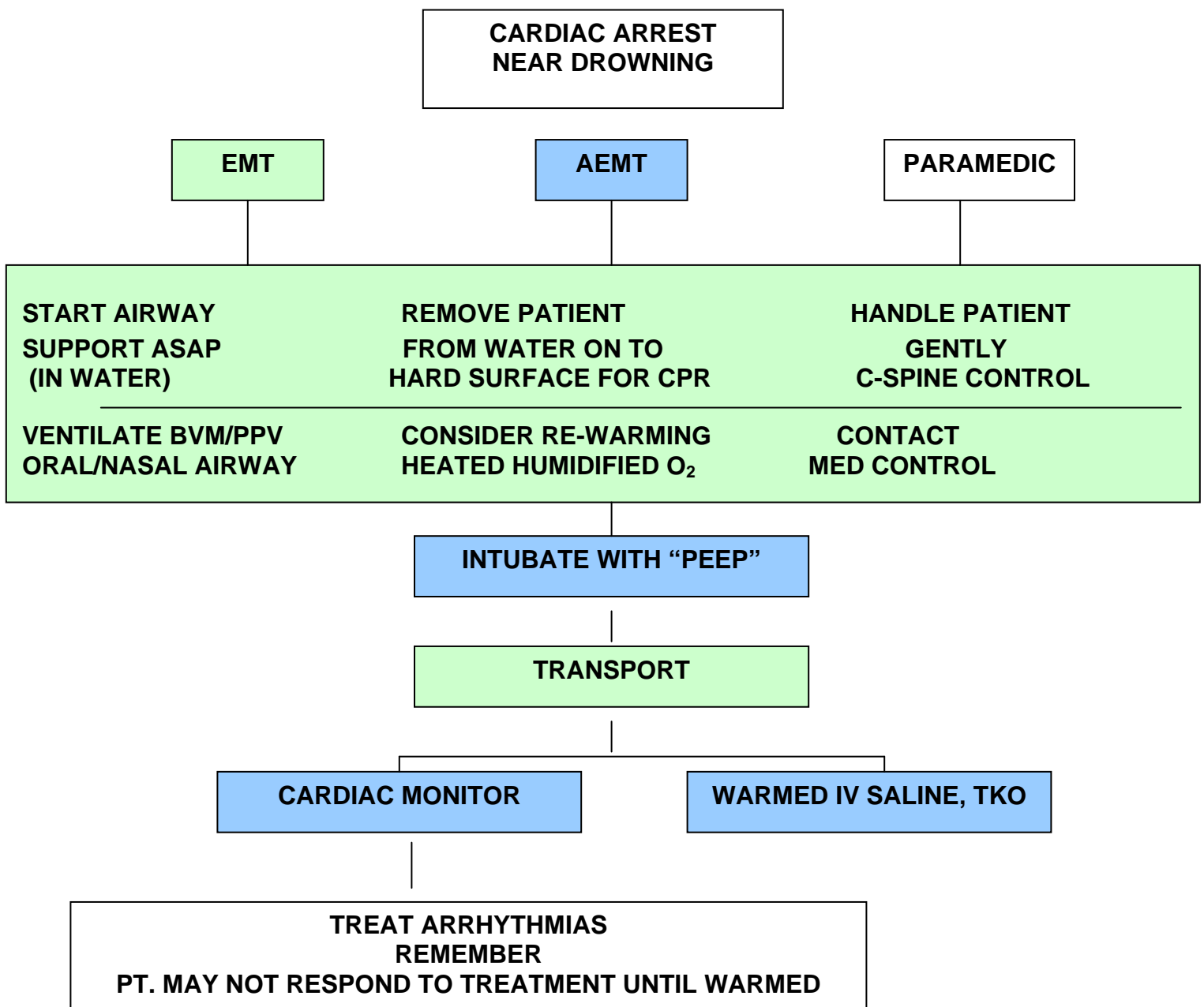
- A. Assume charge and confer with the EMS professional as to patient condition and circumstance
- B. Apply cardiac monitor and assess rhythm. Follow cardiac arrest protocol.

Special resuscitation (cont'd)

- C. Start IV of saline, warmed to 46° C if possible.
- D. Check pulse, intubate patient, suction airway and provide ventilation with positive end-expiratory pressure (PEEP). Continue quality CPR.

PARAMEDIC

- A. Assume charge and confer with the EMS professional as to patient condition and circumstance
- B. If EMS professional is in a cycle of defibrillation, allow to complete cycle before continuing
- C. Apply cardiac monitor and assess rhythm. Follow hypothermia cardiac arrest protocol



CARDIAC CHEST PAIN

EMT

- A. Open and manage the airway and provide oxygen by nasal cannula 4 l/minute and increase as needed for respiratory distress. Apply pulse oximeter and treat per procedure. Be prepared to provide CPR and defibrillation.
- B. Make patient comfortable and provide reassurance.
- C. Evaluate patient's general appearance, relevant history of current condition and determine:

Onset
Provokes
Quality
Radiates
Severity
Time
Interventions

Allergies
Medication
Past Medical History - especially cardiac, stroke, recent surgeries, bleeding problems CNS problems and/or pregnancy
Last Meal
Events leading up to present illness

- D. Assess the patient to determine if pain is cardiac in origin. For patients with pain of cardiac origin with one or more of the following, fibrinolysis may be contraindicated and medical control should be contacted:
 - Systolic BP > 180-200 mm Hg or diastolic BP > 100-110 mm Hg
 - Right versus left arm systolic BP difference > 15 mmHg
 - History of structural central nervous system disease
 - Significant closed head/facial trauma within the previous 3 weeks
 - Stroke > 3 hours or < 3 months
 - Recent (within 2-4 weeks) major trauma, surgery (including laser eye surgery), gastrointestinal/genitourinary bleed
 - Any history of intracranial hemorrhage
 - Bleeding, clotting problem, or blood thinners
 - Pregnant female
 - Serious systemic disease (e.g. advanced cancer, severe liver or kidney disease)

Additional criteria which classify a patient as high risk and considered for transfer to a PCI facility are:

- Heart rate \geq 100 beats per minute and systolic BP < 100 mm Hg
- Pulmonary edema (rales)
- Signs of shock (cool, clammy)
- Contraindications to fibrinolytic therapy
- Required CPR

THIS ASSESSMENT SHOULD BE DONE DURING TRANSPORT

- E. May give 2 baby ASA per EMS stock drug procedure. Note true ASA allergies as opposed to adverse side effects such as peptic distress.
- F. If patient is conscious and alert with previous history of angina pain and is taking nitroglycerin or Nitrostat[®], administer 0.4 mg tablet or spray of nitroglycerin sublingually. Assure medication is prescribed for patient, is not out-of-date and contact medical control.

CARDIAC CHEST PAIN (cont'd)

- G. Monitor patient's condition, especially blood pressure. Dosage may be repeated in 5 minutes if pain does not subside, blood pressure does not drop below 100 systolic and there is no change in level of consciousness.
- H. If patient is experiencing an unusual and/or irregular heart rate or pulse, if available, the AEMT or Paramedic may apply a cardiac monitor run a strip for evaluation by the physician at the emergency department. This should only be done during transport, and you must advise the patient you do not have the ability to interpret the strip; however, the emergency physician will.
- I. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY.
- J. If 12-lead EKG is applied and medical control or a Paramedic interprets this data as an acute ST segment myocardial infarction (STEMI), medical direction should be contacted immediately and the patient should be transported directly to a percutaneous cardiac intervention capability (PCI) center if possible.

AEMT

- A. Assist EMT, obtain patient condition and circumstance.
- B. Apply monitor and check rhythm.
- C. Start IV, saline, TKO, while enroute to hospital. DO NOT DELAY TRANSPORT
- D. If patient is conscious and alert, administer 0.4 mg tablet or spray of nitroglycerin sublingually after establishment of an IV. Monitor patient's condition. Dosage may be repeated in 5 minutes intervals if pain does not subside and SBP is above 90mm Hg.
- E. If patient is alert, complaining of severe pain, systolic BP is above 90mm Hg and pain is not relieved by nitroglycerin, contact Medical Control, if required, and request nitrous oxide or morphine sulfate.
 - i. Morphine dosage: Small frequent titrated IV dose 5 mg every 5 minutes as needed until desired effect is achieved.
 - ii. Use caution when morphine is administered to patient with COPD or volume depletion.
 - iii. With morphine and nitrous oxide, monitor respiration and blood pressure every five minutes.

CARDIAC CHEST PAIN (cont'd)

PARAMEDIC

A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.

B. With chest pain, even if it clearly cannot be determined to be cardiac in origin, the Paramedic should:

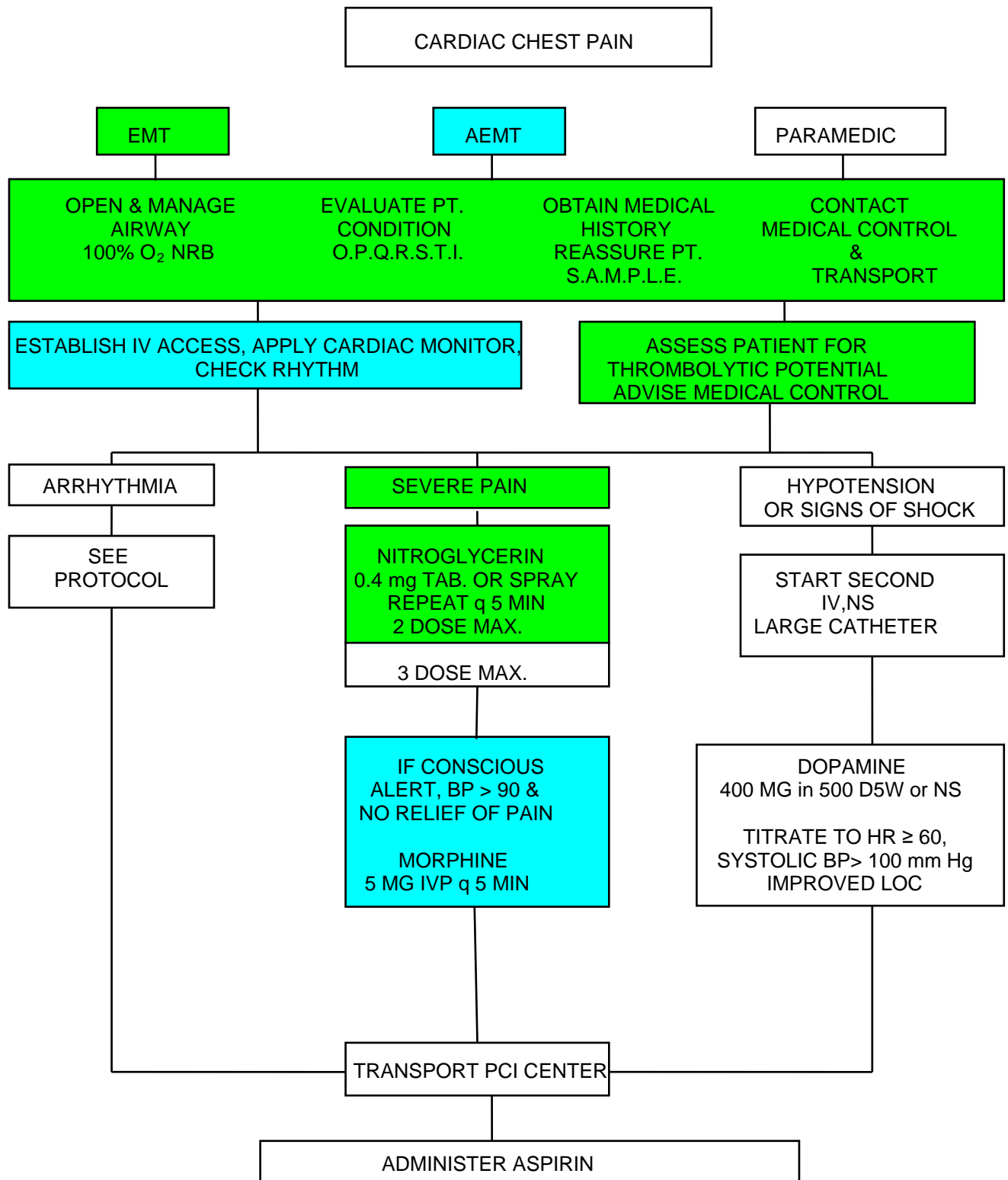
1. Support the airway and provide oxygen.
2. Hypotension with signs of shock and patient is suspected of being in cardiogenic shock (BP less than 70-90 mm Hg systolic with poor perfusion):
 - a. Establish IV saline in large vein. Administer normal saline bolus until systolic BP >90 or signs of poor perfusion resolve. Auscultate for rales, observe patient for SOB, or tachypnea. Slow fluids to TKO if these occur.
 - b. Elevate feet
 - c. Establish second IV in large major vessel for dopamine administration, 400mg dopamine in 500 ml D5W to yield a solution of 800 mcg/ml;

Start infusion at 5 mcg/kg/min (9 gtts/min) and titrate the infusion until heart rate is ≥ 60 or improved BP and LOC.

IF IV INFILTRATES OR IV ATTEMPT UNSUCCESSFUL,
INFORM ED PERSONNEL AS SOON AS POSSIBLE.

3. Relieve pain
 - a. If patient is conscious and alert, administer 0.4 mg tablet or spray of nitroglycerin sublingually after establishment of an IV. Monitor patient's condition. Dosage may be repeated in 5 minutes intervals if pain does not subside and SBP is above 90 mm Hg.
 - b. If patient is alert, complaining of severe pain, systolic BP is above 90 mm Hg and pain is not relieved by nitroglycerin, contact medical control, if required, and request morphine sulfate.
 - i. Morphine dosage: Small frequent titrated IV dose 5 mg every 5 minutes as needed until desired effect is achieved.
 - ii. Do not use morphine on COPD or volume depletion.
 - iii. With morphine, monitor respiration and blood pressure every five minutes.
4. Correct cardiac arrhythmia - Arrhythmia protocol.
5. Start IV, saline, TKO, while enroute to hospital. DO NOT DELAY TRANSPORT.
6. When patient fits thrombolytic profile, administer aspirin.

BE SURE TO CHECK FOR TRUE ASPIRIN ALLERGY vs PEPTIC DISTRESS



CHILDBIRTH/OBSTETRICAL EMERGENCIES

GENERAL INSTRUCTIONS

- A. Unless delivery is imminent, transport to a hospital with obstetrical capabilities
- B. Imminent delivery is when the baby's head is visible in the vaginal opening during a contraction (crowning)
- C. A visual inspection of the perineal area should only be done when contractions are less than 5 minutes apart and/or there is bleeding or fluid discharge
- D. The EMS professional should not place a gloved hand inside the vagina except in the case of breech delivery with entrapped head or a prolapsed umbilical cord.
- E. During delivery, gentle pressure with a flat hand on the baby's head should be applied to prevent an explosive delivery
- F. A mother in active labor should be placed on the cot or floor to prevent the newborn from falling after delivery

EMT

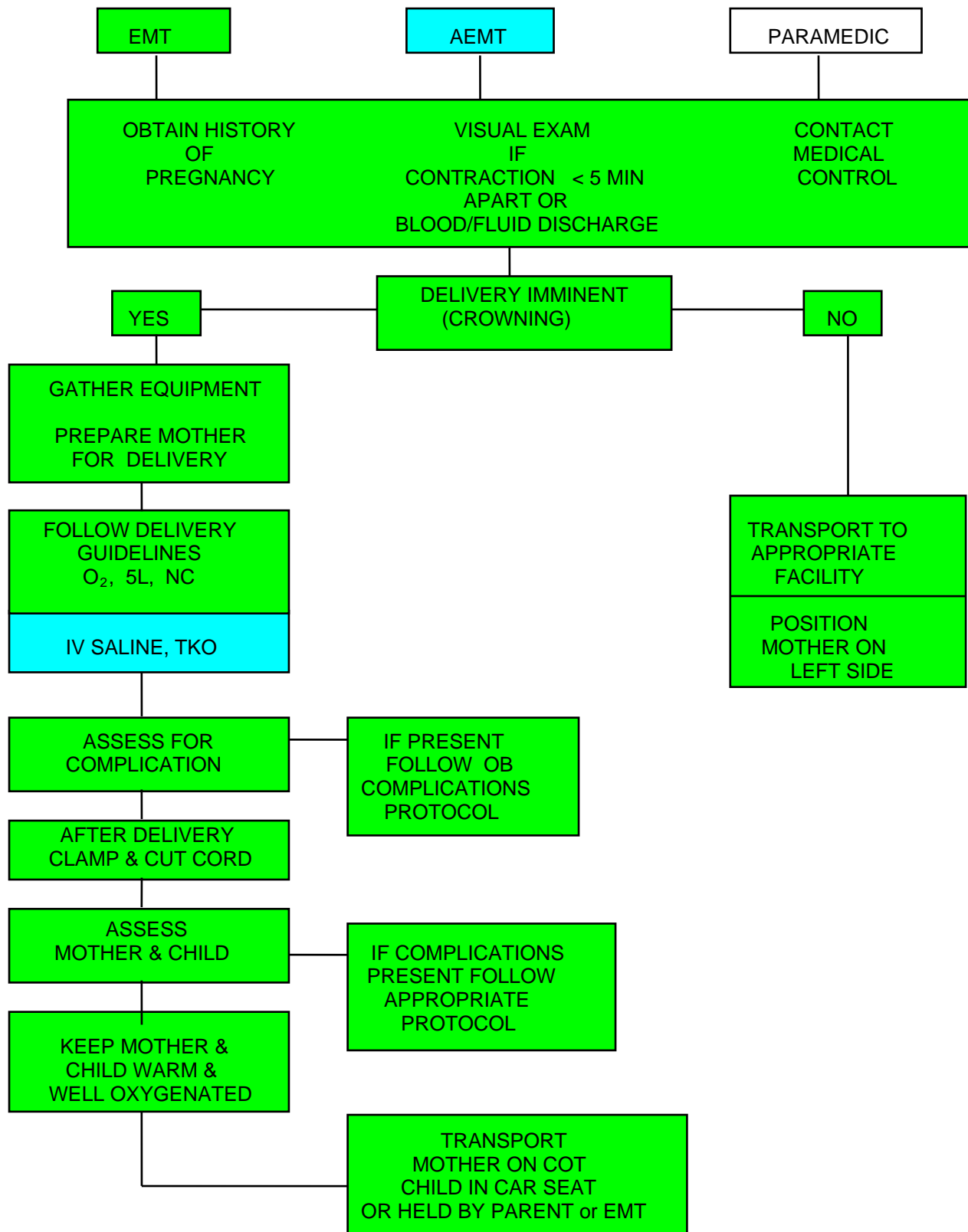
- A. Obtain history of patient condition and pregnancy: Contraction duration and interval, due date, number of pregnancies and number of live children, prenatal care and possible complications.
- B. Determine transport or delivery. Transport unless crowning is present during a contraction; contact Medical Control
- C. Always try to transport mother to her hospital designated for delivery.

Transport mother on left side with head slightly elevated to relieve pressure on mother's vena cava created by baby. Pressure could cause a decrease in mother's and baby's heart rate.
- D. If delivery is imminent, prepare equipment and follow guidelines for delivery.
 - 1. Equipment: OB Kit, oxygen and BVM, towels and blankets, cot, large dressings
- D. After delivery, transport mother on cot and baby in car seat if available, or have parent or EMS professional hold the baby during transport
- F. Keep mother and child warm and monitor airways and signs of shock

AEMT / PARAMEDIC

- A. Assist EMS professional, obtain patient condition and circumstance
- B. Start IV saline if hypovolemic shock or excessive bleeding is present

EMERGENCY CHILDBIRTH
NORMAL DELIVERY



DELIVERY COMPLICATIONS

CONTACT MEDICAL CONTROL AS SOON AS ANY COMPLICATION IS DISCOVERED

A. Cord Around Baby's Neck:

1. As baby's head passes out the vaginal opening, feel for the cord. Initially try to slip cord over baby's head; if too tight, clamp cord in two places and cut between clamps.

B. Breech Delivery:

1. Footling breech, which is one or both feet delivered first
2. Frank breech, which is the buttocks first presentation
 - a. When the feet or buttocks first become visible, there is normally time to transport patient to nearest facility.
 - b. If upper thighs or the buttock have come out of the vagina, delivery is imminent.
 - c. If the child's body has delivered and the head appears caught in the vagina, the EMS professional must support the child's body and insert two fingers into the vagina along the child's neck until the chin is located. At this point, the two fingers should be placed between the chin and the vaginal canal and then advanced past the mouth and nose.
 - d. After achieving this position a passage for air must be created by pushing the vaginal canal away from the child's face. This air passage must be maintained until the child is completely delivered.

C. Excessive Bleeding Pre-delivery:

1. If bleeding is excessive during this time and delivery is imminent, in addition to normal delivery procedures, the EMS professional should use the hypovolemic shock protocol.
2. If delivery is not imminent, patient should be transported on her left side and shock protocol followed.

D. Excessive Bleeding Post-delivery:

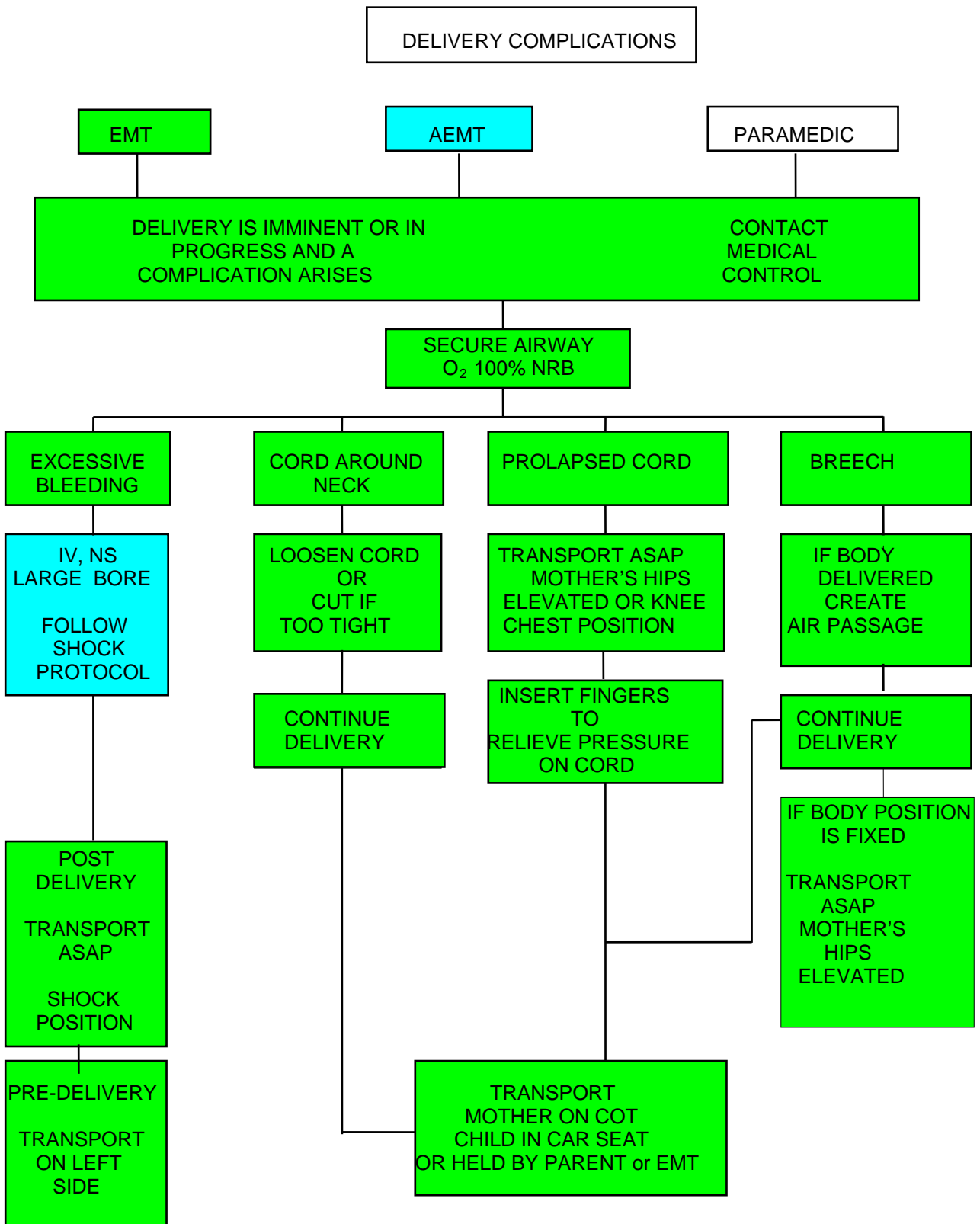
1. If bleeding appears to be excessive, start IV of saline.
2. If placenta has been delivered, massage uterus and put baby to mother's breast.
3. Follow hypovolemia shock protocol.

E. Prolapsed Cord:

1. When the umbilical cord passes through the vagina and is exposed, the EMS professional should check cord for a pulse.
2. The patient should be transported with hips elevated or in the knee chest position and a moist dressing around cord.
3. If umbilical cord is seen or felt in the vagina, insert two fingers to elevate presenting part away from cord, distribute pressure evenly when occiput presents
4. DO NOT attempt to push the cord back

DELIVERY COMPLICATIONS (cont'd)

5. High flow oxygen and transport IMMEDIATELY



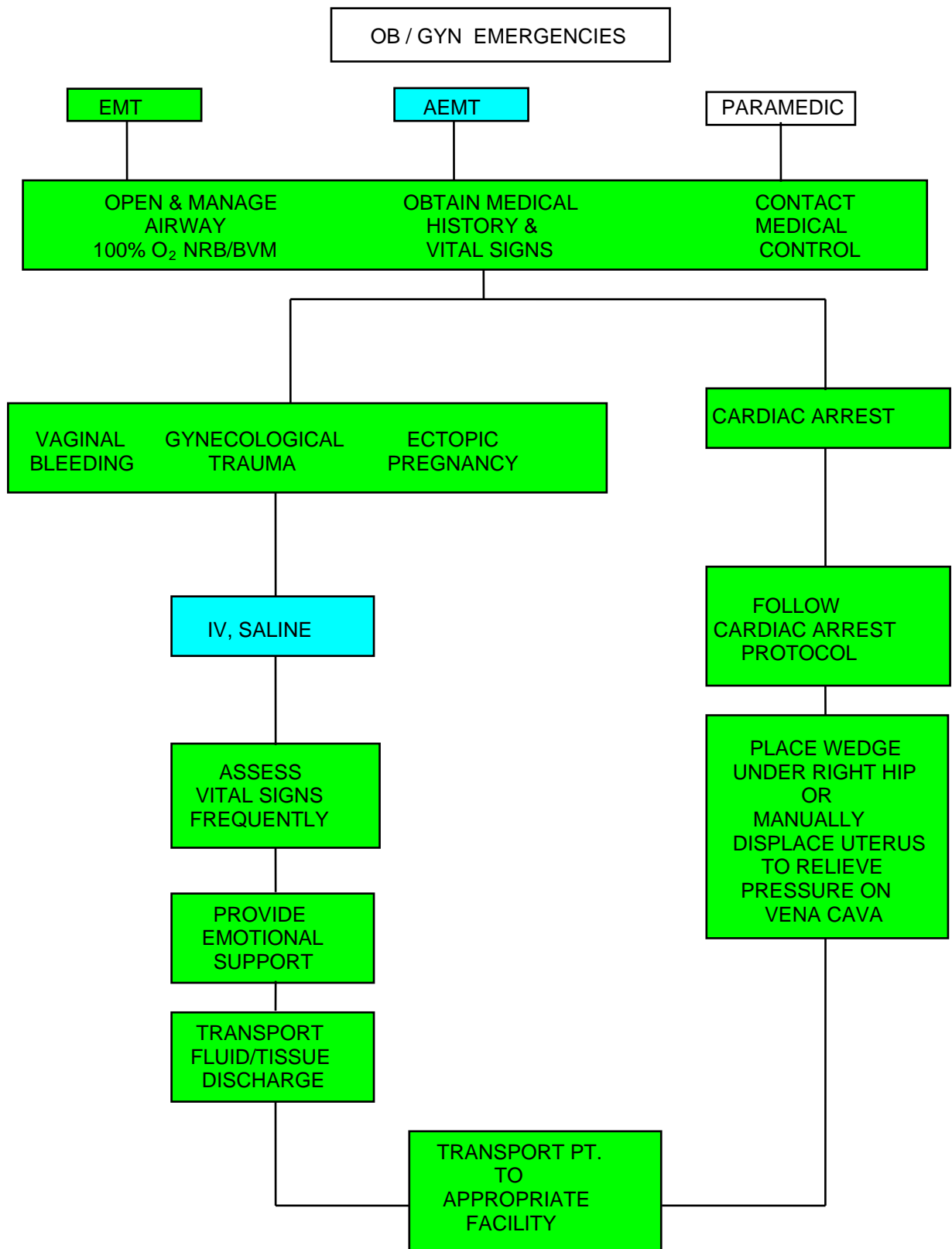
OBSTETRICAL EMERGENCIES

- A. Miscarriage: Premature termination of a pregnancy
 - 1. Assess for shock and treat per shock protocol.
 - 2. Give psychological support to patient and/or family
 - 3. Be sure to take all expelled tissue with you to the hospital

- B. Ectopic Pregnancy: When growth and development of a fertilized egg occurs outside the uterus
 - 1. Patient may experience severe abdominal pain.
 - 2. May have intra-abdominal and/or vaginal bleeding and discharge.
 - 3. Patient may not know she is pregnant
 - 4. Treat for hypovolemic shock
 - 5. Transport supine with knees flexed
 - 6. Take any expelled tissue with you to the hospital

- C. Cardiac Arrest: Cardiac resuscitation of the expectant mother is unique due to the changes in the maternal cardiovascular and respiratory physiology
 - 1. Precipitating events for cardiac arrest include pulmonary embolism, trauma, hemorrhage or congenital or acquired cardiac disease.
 - 2. Standard resuscitative protocol should be carried out.
 - 3. When the mother is supine, the fetus may compress the iliac vessels, the inferior vena cava, and the abdominal aorta. To minimize effects of the fetus pressure on venous return:
 - a. Place a wedge (pillow) under the right abdominal flank and hip, or
 - b. Apply continuous manual displacement of the uterus to the left

- D. Third Trimester Bleeding.
 - 1. Abruptio placenta - premature separation of placenta from uterine wall and is characterized by abdominal pain and vaginal bleeding
 - a. Bleeding may be dark
 - b. Uterus tender
 - 2. Placenta previa - placenta partially or completely covers the cervical (birth) canal and is characterized by painless vaginal bleeding
 - a. Bleeding may be bright red
 - b. Uterus may be non-tender
 - 3. Never do vaginal exam



DIABETIC EMERGENCIES

EMT

- A. Secure and maintain airway. Support with 100% O₂ by NRB mask.
- B. Obtain relevant medical history: OPQRST
 - 1. Has patient eaten today?
 - 2. Has patient taken insulin?
 - 3. Onset
 - 4. Medication - Type and time taken
- C. Determine blood sugar level
 - 1. Blood sugar less than 80, administer oral glucose to conscious and alert patients only
 - 2. Unable to obtain blood sugar, transport and contact medical control for guidance
- B. Establish communications with medical control and advise of patient condition. Consider transport time if <5 minutes.

AEMT

- A. Assist EMS professional, obtain patient condition and circumstance
- B. Apply monitor and check rhythm
- C. Start IV saline, TKO, while enroute to hospital.
- D. Determine blood sugar level
 - 1. Blood sugar less than 80, administer 50 ml D50 IV push immediately or glucagon 1 mg IM.
 - 2. Blood sugar greater than 400, and hypoperfusion is present, infuse patient with 250 ml bolus of saline
 - 3. Unable to obtain blood sugar, transport and contact medical control for guidance

DO NOT DELAY TRANSPORT

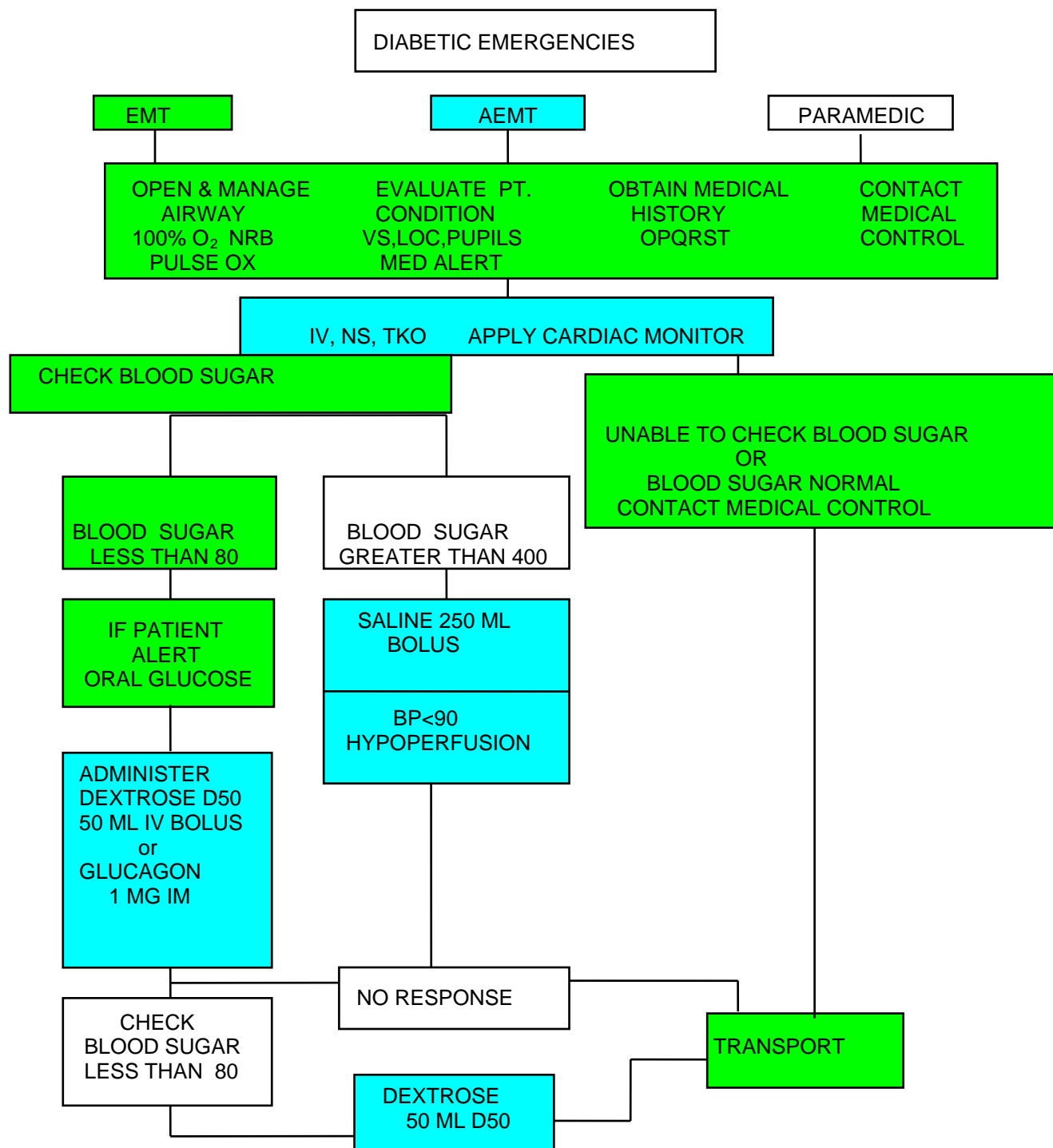
PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Apply monitor and check rhythm
- C. Start IV saline, TKO.
- D. Determine blood sugar level

DIABETIC EMERGENCIES (cont'd)

1. Blood sugar less than 80, administer 50 ml D50 IV push immediately or glucagon 1 mg IM.
2. Blood sugar greater than 400, and hypoperfusion is present, infuse patient with 250 ml bolus of saline
3. Unable to obtain blood sugar, transport and contact Medical Control for guidance

E. If patient has an altered level of consciousness, follow Altered LOC Protocol



EYE INJURY

GENERAL CONSIDERATIONS

TRAUMA

- A. Do not allow eye injury to distract you from the basics of trauma care
- B. Do not remove any foreign body imbedded in the eye or orbit. Stabilize any large protruding foreign bodies.
- C. With blunt trauma to the eye, if time permits, examine the globe briefly for gross laceration as the lid may be swollen tightly shut later. Scleral rupture may lie beneath an intact conjunctiva.
 - 1. Exert no pressure on the globe when doing the exam or when covering for transport
 - 2. A light sterile wet dressing may be used to cover the eye for transport - avoid pressure directly to the eye by covering with a protective shield, (metal patch, drinking cup)

Do not delay transport by covering the eye if the patient has other life-threatening injuries.
- D. Covering both eyes when only one eye is injured may help to minimize trauma to the injured eye, but in some cases the patient is too anxious to tolerate this
- E. Transport patient sitting upright unless other life threats prohibit this from being done.

CHEMICAL BURNS

- A. When possible determine type of chemical involved first. The eye should be irrigated with copious amounts of water or saline using IV tubing wide open for a minimum of 15 minutes started as soon as possible. Any delay may result in serious damage to the eye.
- B. A topical ophthalmic anesthetic should be placed in the eye prior to irrigation. Always check to determine if the patient has any allergy to anesthetic agents
- C. Always obtain name and, if possible, a sample of the contaminant or ask that they be brought to the hospital as soon as possible

CONTACT LENSES

- A. If possible, contact lenses should be removed from the eye; be sure to transport them to the hospital with the patient. If the lenses cannot be removed, notify the ED personnel as soon as possible.
- B. If the patient is conscious and alert, it is much safer and easier to have the patient remove their lenses

ACUTE, UNILATERAL VISION LOSS

- A. When a patient suddenly loses vision in one eye with no pain, there may be a central retinal artery occlusion. Urgent transport and treatment is necessary.
- B. Patient should be transported flat.

EYE INJURIES (cont'd)

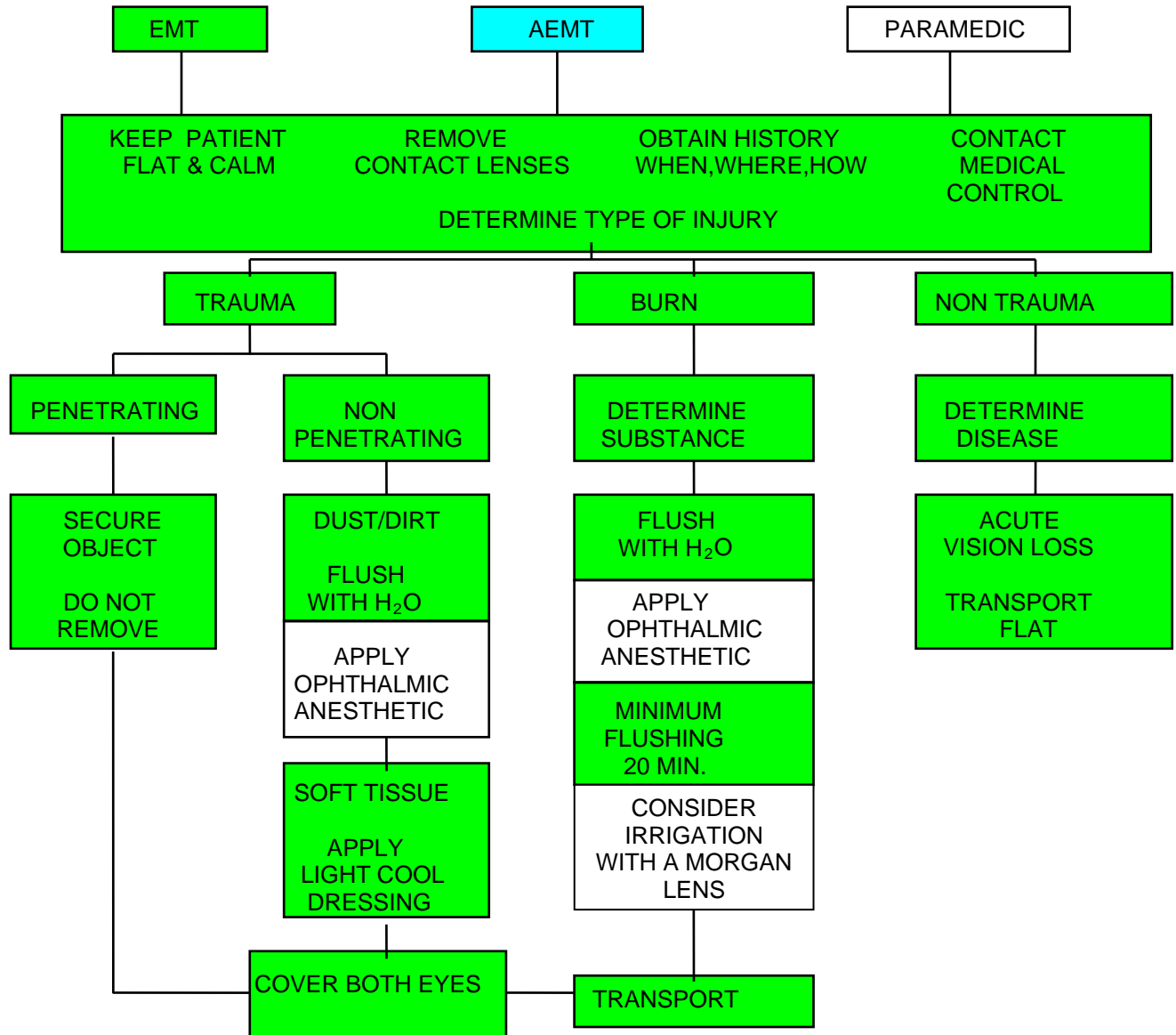
EMT / AEMT

- A. Keep patient calm and lying flat, unless otherwise indicated
- B. Obtain history of injury: Type, Where, When, How.
- C. Establish communications with Medical Control and advise of patient condition. Transport immediately, unless an advanced life support unit is enroute and has an ETA of less than 5 minutes.

PARAMEDIC

- A. Assume charge of situation and confer with EMS professional about condition of patient and situation.
- B. In cases where eyes may need irrigation, administer two (2) drops of topical ophthalmic anesthetic (i.e. tetracaine) in eyes and irrigate with copious amounts of water or saline using IV tubing wide open or a Morgan lens.

EYE INJURIES



HYPOTHERMIA / FROSTBITE

GENERAL CONSIDERATIONS

- A. This guideline was written to assist those instances of hypothermic injury involving long evacuation and transport time. When possible, all treatment should be left for a hospital setting.
- B. Generalized Hypothermia:
1. The most common mechanism of death in hypothermia is ventricular fibrillation (VF). If the hypothermia victim is in ventricular fibrillation, CPR should be initiated. If VF is not present, then all treatment and transport decisions should be tempered by the fact that VF can be caused by rough handling, noxious stimuli or even minor mechanical disturbances, this means that respiratory support with 100% oxygen should be done gently, including intubation, avoiding hyperventilation.
 2. In the absence of monitor-confirmed V fib, the decision to initiate CPR must consider the following:
 - a. Hypothermia may produce profound bradycardia and the pulse should be taken for at least 60 seconds before concluding that the patient is pulseless.
 - b. Hypothermia can exert a protective effect on body tissues. The hypothermia victim's own cardiac activity, even when profoundly bradycardic may be preferred to CPR perfusion, especially in light of the fact that CPR may well precipitate VF.
 3. The heart is most likely to fibrillate between 85-88° F. (29°-31° C.) Defibrillate VF / VT up to a total of three shocks (200 J, 300 J, 360 J).
 4. Since fibrillation is so difficult to convert without rewarming, measures to rewarm should be instituted in any hypothermia victim with VF. The decision to rewarm should be made in consultation with Medical Control and should consider the following factors:
 - a. Method of rewarming available
 - b. Time / distance from hospital
 - c. Squad capability of treating VF (ALS or BLS)
 5. Shivering stops below 90° F. (32° C).
 6. Consider hypoglycemia in the hypothermic patient.
 7. Wet clothing robs heat from the body more than it insulates and should be removed, protecting victim from wind.
 8. Never give hot liquids by mouth.
 9. Generalized hypothermia can occur whenever the ambient temperature is less than body temperature and the body is not capable of maintaining that temperature. For example, an elderly debilitated patient sitting over night in a room which is at 66° F. may become hypothermic from that exposure alone. Suspect hypothermia in the injured, elderly, or debilitated patient.
- C. Local Hypothermia (frostbite):
1. Thawing should be done under controlled conditions. It is extremely painful.

HYPOTHERMIA/FROSTBITE (cont'd)

2. Complete rewarming requires active heating for prolonged period. Partial rewarming is worse than none. Therefore, rewarming should rarely be done in the field.

EMT

- A. Secure airway, and consider cervical spine injury
 1. Administer warmed 100% oxygen, if available, by NRB mask and or BVM.
- B. Move patient to warm environment, remove any wet clothing and cover with blankets.
- C. Evaluate patient's general appearance, relevant history of condition and determine:

<u>O</u> nset	<u>A</u> llergies
<u>P</u> rovokes	<u>M</u> edication
<u>Q</u> uality	<u>P</u> ast Medical History - especially, length of exposure,
<u>R</u> adiates	unconsciousness, was the patient wet,
<u>S</u> everity	drugs/alcohol ingestion, did injured
<u>T</u> ime	areas thaw and freeze.
<u>I</u> nterventions	<u>L</u> ast Meal
	<u>E</u> vents leading to present illness
- D. Assess vital signs, mental status, temperature of patient and environment and evidence of local injury.
- E. Generalized Hypothermia with Arrest
 1. CPR and Transport unless AED or ALS is available in less than 5 minutes.
 2. If an Automated External Defibrillator (AED) is available:
 - a. Assess patient for respiratory and cardiac arrest.
 - b. Apply AED and activate device. Start verbal documentation which must include:
 - * EMS delivering care, unit number and ID of EMT
 - * Initial call information (i.e. man down, drowning, etc.)
 - * Initial patient assessment, findings and impression
 - * Care given to this point
 - * Ongoing outcomes of care delivered to patient
 - i. "No Shock Advised"
 - (a) Provide quality CPR as recommended by the American Heart Association.
 - (b) Establish communications with medical control and advise of cardiac arrest.
 - (c) Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.)
 - ii. "Shock Advised"
 - (a) Defibrillate 120 J-200 J biphasic or 360 J monophasic

HYPOTHERMIA/FROSTBITE (cont'd)

- (b) Provide quality CPR for two minutes
- (c) Analyze rhythm and defibrillate again if shock advised

F. Generalized Hypothermia Without Arrest

1. Do not initiate CPR if there is any pulse present, no matter how bradycardic.
2. Use oxygen, high flow. Do not hyperventilate. Do not use adjunctive airway equipment unless absolutely necessary. If necessary, use least intrusive measures which will adequately assure airway and ventilation.
3. Avoid rough handling, unnecessary stimulation.
4. If rewarming is undertaken, rewarm rapidly by applying warm packs or hot water bottles to trunk, neck and groin only.
5. Do not allow conscious patients to ambulate, exercise or move about.

G. Local Hypothermia (frostbite):

1. Protect the injured areas from pressure, trauma, friction. Remove all covering from injured parts. Do not rub. Do not break blisters.
2. Do not thaw injured part with local heat in excess of 100-110° F. (water that is comfortably hot to the touch without burning).
3. Do not allow limb to thaw if there is a chance that limb may refreeze before evacuation is complete.
4. Maintain core temperature by keeping patient warm with blankets, warm fluids, etc.
5. Transport and contact medical control of situation

AEMT

A. Confer with EMS professionals and confirm assessment.

B. During Transport :

1. Apply cardiac monitor, check rhythm and treat according to cardiac protocol. Provide quality CPR if pulseless and defibrillate per cardiac arrest protocol.
2. Intubation, oxygenate with 100% O₂, warm/humidified if available.
3. IV / warm NS, if available. If hypotension, 200-300 NS ml push. Contact medical control.
4. Evaluate blood sugar for possible dextrose administration.

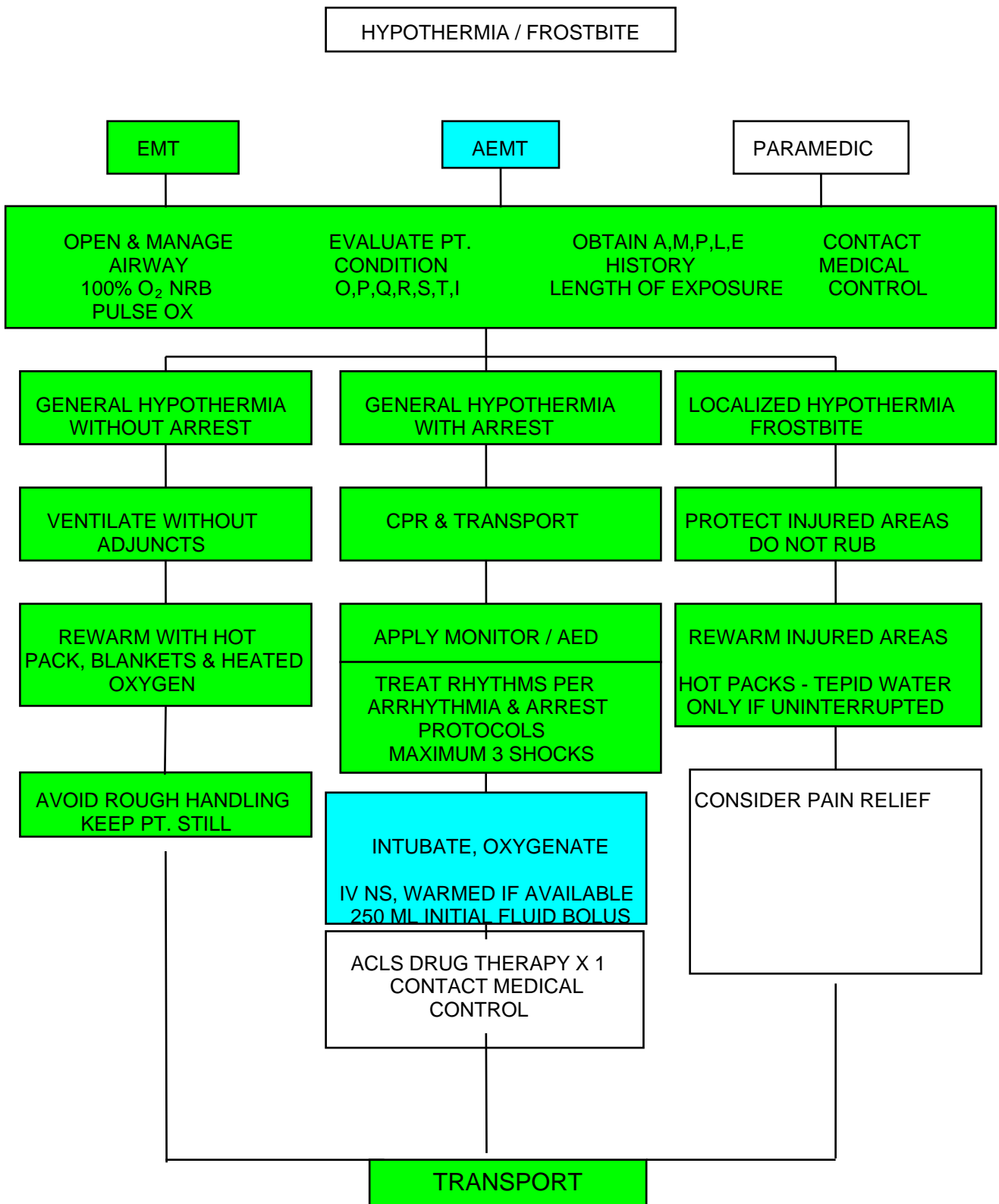
PARAMEDIC

A. Confer with EMS professionals and confirm assessment.

HYPOTHERMIA/FROSTBITE (cont'd)

B. During Transport :

1. Apply cardiac monitor, check rhythm and treat according to cardiac protocol.
2. Intubation, oxygenate with 100% O₂, warm/humidified if available.
3. IV / warm NS, if available. If hypotension, 250 ml NS IVP.
4. Evaluate blood sugar for possible dextrose administration
5. One round of ACLS medication
6. When rewarming patients consider pain relief.



HEAT EXPOSURE

GENERAL CONSIDERATIONS

- A. Recognize that the very old, very young and patients with a history of spinal injury are the ones most likely to suffer related illness. Other contributory factors may include heart medications, diuretics, cold medications and/or psychiatric medications.
- B. Heat exposure can occur either due to increased environmental temperatures or prolonged exercise or a combination of both. Environments with temperature above 90°F and humidity over 60% present the most risk.
- C. Types of heat related illness:
 - 1. Heat Stroke-The most serious type of exposure illness, usually due to prolonged exposure to heat, inadequate fluid replacement and deficient thermoregulatory function.
The patient will often experience inadequate perspiration with body temperatures reaching 105°F or greater. The skin is usually hot and dry and there may be an altered LOC and/or coma.
Seizures may also occur.
Cardiovascular collapse is the usual cause of death.
 - 2. Heat Exhaustion – a more moderate form of heat exposure associated with dehydration combined with overexertion. The skin is cooler and the core temperature is below 105°F. The patient may experience syncope with orthostatic hypotension.
 - 3. Heat Cramps – The mildest form of heat exposure caused by dehydration, overexertion and electrolyte abnormalities. The skin is moist with muscle cramps, usually affecting large muscle groups.
- D. When altered mental status is present consider other causes such as hypoglycemia, stroke and/or shock.

EMT

- A. Secure airway, and consider cervical spine injury.
 - 1. Administer oxygen, maintaining a 95% SpO₂ or BVM.
- B. Move patient to cool environment, remove any tight clothing.
- C. Evaluate patient's general appearance, relevant history of condition and determine:

Onset
Provokes
Quality
Radiates
Severity
Time
Interventions

Allergies
Medication
Past Medical History – especially, length of exposure, unconsciousness,
Drugs/alcohol ingestion

Last Meal
Events leading to present illness

HEAT EXPOSURE (cont'd)

- D. Assess vital signs every 15 minutes, mental status, temperature of patient and environment.
- E. Determine type of exposure:
 - 1. Heat stroke (hot and insufficient sweating)
 - a. Patient alert and oriented, may give fluid orally if there is no nausea and/or vomiting.
 - b. Patient with altered LOC, transport and:
 - i. cool with mist or cool wet sheet with fan, air conditioning and/or open windows.
 - ii. apply cold packs to axilla, groin, and neck. (Avoid shivering)
 - 2. Heat Exhaustion (pale, moist, may be orthostatic)
 - a. Patient alert and oriented, may give fluid orally if there is no nausea and/or vomiting.
 - b. Patient with altered LOC, transport and:
 - i. apply cold packs to axilla, groin and neck. (Avoid shivering)
 - 3. Heat Cramps
 - a. Patient alert and oriented, may give fluid orally if there is no nausea and/or vomiting.

AEMT

- A. Confer with EMS professionals and confirm assessment.
- B. During transport:
 - 1. Apply cardiac monitor, check rhythm and treat according to cardiac protocol.
 - 2. IV NS if hypoperfusion is present, 250 ml NS IVP. Contact medical control.

PARAMEDIC

- A. Confer with EMS professionals and confirm assessment.
- B. During transport:
 - 1. Apply cardiac monitor, check rhythm and treat according to protocol.
 - 2. Intubation, oxygenate with 100% O₂, if indicated.
 - 3. IV NS if hypoperfusion is present, 250 ml NS IVP. Contact medical control.
 - 4. Treat seizures per seizure protocol.

POISONING

GENERAL CONSIDERATIONS

EMS professionals should consider the possibility of accidental or self-poisoning under the following conditions:

- A. History of observed or admitted accidental or intentional ingestion
- B. Coma
- C. History of known suicide gesture
- D. Suggestive intoxicated behavior (hyperactive, hypoactive, unstable walk, lethargic)

EMT

- A. Establish airway
- B. Obtain relevant history
 - 1. What, when, why taken (if known)
 - 2. Quantity taken (if known)
 - 3. Victim's age and weight
- C. Take whatever container the substance came from to the hospital along with readily obtainable samples of medication unless this results in an unreasonable delay of transport
- D. Evaluate the patient's:
 - 1. Breath sounds (rales)
 - 2. Level of consciousness
 - 3. Pupil size
 - 4. Evidence of head injury
- E. Depending on route poison entered body apply the following:
 - 1. Ingested Poisons - Transport (contact Medical Control for prolonged transports, >30 minutes or for recommendation for charcoal administration)
 - 2. Inhaled Poisons
 - a. Remove from toxic area
 - b. Secure airway, support with 100% oxygen
 - c. Assist in ventilation if necessary
 - 3. Absorbed Poisons
 - a. Remove victim's clothing
 - b. Identify substance
 - c. Flush skin with water before and during transport if possible - at least 10-15 minutes
 - d. If eyes are involved flush with water or saline for 10-15 minutes
 - 4. Injected Poisons
 - a. Secure and maintain airway
 - b. Find substance and introduction system, if possible

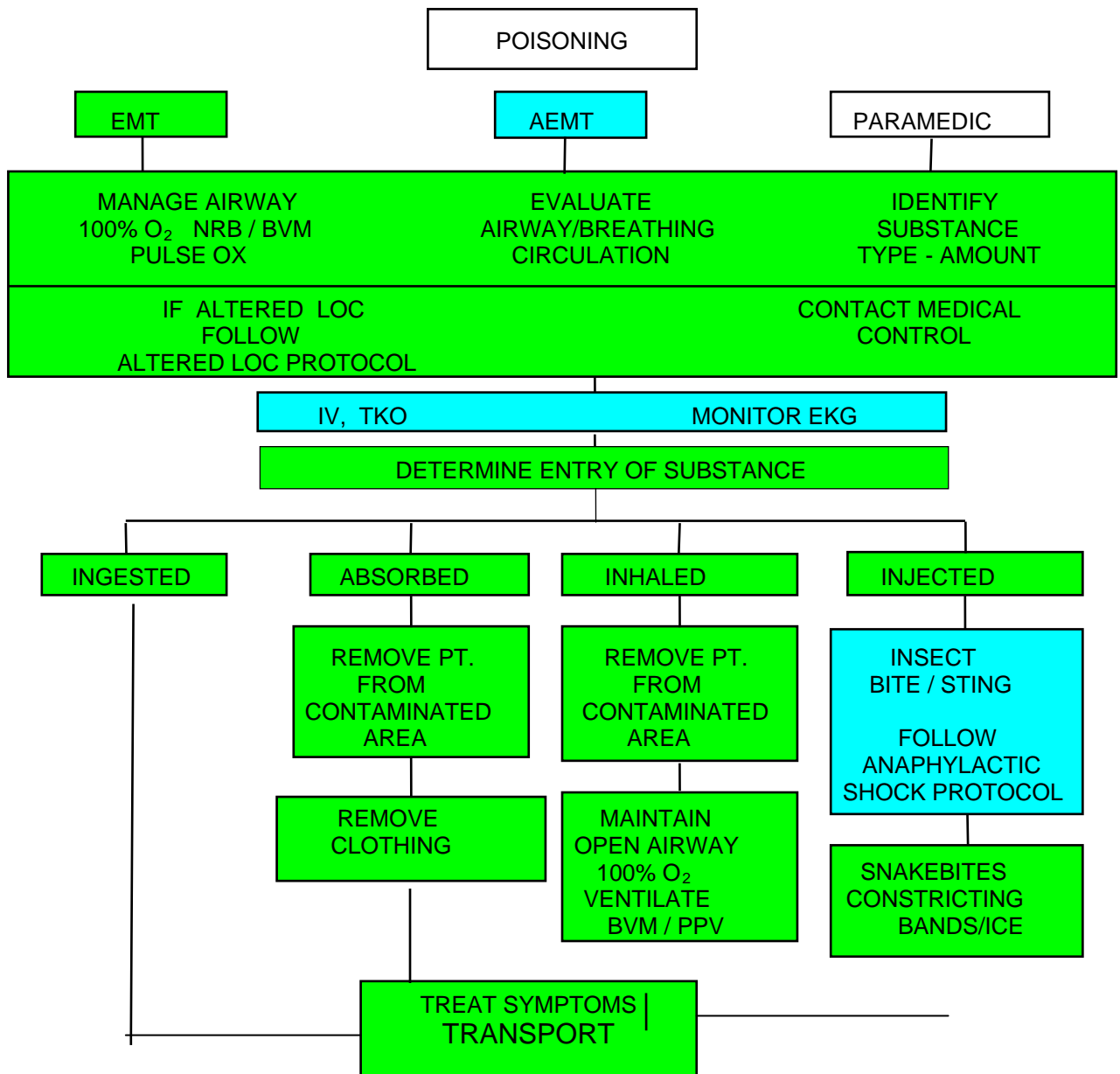
POISONING (cont'd)

AEMT

- A. Assist EMS professionals, obtain patient condition and circumstance
- B. Apply monitor and check rhythm
- C. Start IV saline, TKO, while enroute to hospital. DO NOT DELAY TRANSPORT

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. If patient has an altered level of consciousness, follow the Altered Level of Consciousness Protocol
- C. Start IV saline, TKO
- D. Contact Medical Control for prolonged transports, >30 minutes or for recommendation for charcoal administration.



PSYCHIATRIC EMERGENCIES

EMT / AEMT / PARAMEDIC

- A. Obtain relevant history:
 - 1. Previous psychiatric hospitalization, when and where
 - 2. Where does patient receive psychiatric care?
 - 3. What drugs does patient take (including alcohol)?
- B. Calm the patient
- C. Evaluate the patient's:
 - 1. Vital signs
 - 2. General appearance
- D. Contact Medical Control and advise of patient condition
- E. Transport patients to appropriate facility.
- F. Contact local law enforcement for assistance with violent, homicidal, or suicidal patients

NOTE: Restraints may be used to protect the patient, technicians, and bystanders.
See restraint policy.

- G. ALL patients who are not making rational decisions should be transported for medical evaluation.*

Threat of suicide, overdose of medication, drugs, or alcohol, and/or threats to the health and well being of others are NOT considered rational.

*Refer to Refusal Protocol

RESPIRATORY DISTRESS

EMT

- A. Open airway and check for breathing
1. Airway obstructed:
 - a. Manual clearing
 - b. Abdominal or chest thrust
 - c. Suction orally or endotracheally through an established airway or a stoma
 - d. If airway cannot be cleared in 60 seconds:
 - i. Transport immediately to nearest hospital
 - ii. Do not take history
 - iii. Do not make further physical assessment
 2. Airway is open, breathing absent, pulse present:
 - a. Ventilate patient 100% oxygen by two person bag valve mask or oxygen powered, manually triggered or automatic transport ventilation device with nasal or oral airway once every five seconds
 - b. Ventilation should be delivered over two seconds and cricoid pressure should be considered to help reduce gastric distention
 3. Airway is open and patient is in distress:
 - a. Administer 100% O₂ by NRB mask and consider continuous positive airway pressure (CPAP-see Special Procedures)
 - b. Be prepared to assist ventilations;
 - c. Evaluate breath sounds:
 - i. Clear breath sounds: Treat cause - (MI, pulmonary embolism, metabolic disturbance, hyperventilation). Transport.
 - ii. Wheezes present:
 - (a) Minor allergic reaction: Support with oxygen, observe patient carefully. Transport
 - (b) Severe allergic reaction (allergy, asthma)
 - (i) Secure airway and support with oxygen
 - (ii) Ask patient or bystanders if epinephrine 1:1,000 by auto-injector has been prescribed for these situations and do they have the medication with them
 - (iii) IF MEDICATION IS NOT AVAILABLE - Transport immediately, unless ALS unit is enroute and has an ETA of less than 5 minutes (consider transport time)

RESPIRATORY DISTRESS (cont'd)

- (iv) IF MEDICATION IS AVAILABLE:
 - (aa) Assure medication is prescribed for patient
 - (bb) Check medication - cloudiness, expiration date, administration method
 - (cc) Contact Medical Control, if possible
 - (dd) Administer medication in mid-thigh and hold injector firmly against leg for at least ten seconds to assure all medication is injected
 - (ee) Record patient reaction to medication and relay to Medical Control - be sure to have vital signs
 - (ff) Transport immediately
- (c) Patient with COPD (emphysema, asthma, bronchitis)
 - (i) Minor distress;
 - (aa) Put patient in position of comfort, support with LOW flow oxygen
 - (ii) Severe distress;
 - (aa) Set patient up, assist ventilations with HIGH flow O₂, consider CPAP
 - (bb) Ask patient or bystanders if a bronchodilator by inhaler has been prescribed for these situations and do they have the medication with them
 - (cc) IF MEDICATION IS NOT AVAILABLE - Transport immediately, unless ALS unit is enroute and has an ETA of less than 5 minutes (consider transport time)
 - (dd) IF MEDICATION IS AVAILABLE:
 - (i) Assure medication is prescribed for patient
 - (ii) Check medication - expiration date, administration method
 - (iii) Contact Medical Control, if possible
 - (iv) Administer medication by having the patient exhale, then activate spray during inhalation, and have patient hold breath for ten seconds so medication can be absorbed. Use a spacer if available. If the patient has a nebulizer, the EMT may assist the patient with the patient's self-administration of nebulized medications.
 - (v) Record patient reaction to medication and relay to Medical Control - be sure to have vital signs
 - (vi) Transport immediately

RESPIRATORY DISTRESS (cont'd)

- D. Contact Medical Control, advise of patient condition, and TRANSPORT

AEMT

- and heart, apply ice pack to slow swelling and spread of poison

RESPIRATORY DISTRESS (cont'd)

- (d) Apply monitor and check rhythm
 - (e) Start IV saline, TKO, while enroute to hospital DO NOT DELAY TRANSPORT
 - (f) Administer Benadryl[®] (diphenhydramine) 1 mg/kg (maximum dose of 50 mg) IVP or IM.
- ii. Patient with asthma:
- (a) Minor distress:
 - (i) Put patient in position of comfort, support with oxygen
 - (ii) Consider Proventil[®] (albuterol) breathing treatment: 2.5 mg of Proventil[®] (albuterol) in 3 ml NS aerosol unit with oxygen flow at 8 liters per minute
 - (b) Severe distress:
 - (i) Sit patient up, assist ventilations with high flow oxygen, consider continuous positive airway pressure (CPAP-see Special Procedures)
 - (ii) Proventil[®] (albuterol) breathing treatment: 2.5 mg in 3 ml NS of Proventil[®] in aerosol unit with oxygen flow at 8 liters per minute
 - (iii) Contact Medical Control for possible administration of epinephrine or glucagon.
 - (c) Start IV saline
- iii. Patient with COPD:
- (a) Minor distress:
 - (i) Put patient in position of comfort, support with low flow oxygen
 - (ii) Proventil[®] (albuterol) breathing treatment: 2.5 mg of Proventil (albuterol) in 3 ml aerosol unit with oxygen flow at 8 lpm.
 - (b) Severe distress:
 - (i) Sit patient up, assist ventilations with high flow oxygen, consider continuous positive airway pressure (CPAP-see Special Procedures)
 - (ii) Proventil[®] (albuterol) breathing treatment: 2.5mg of Proventil[®] (albuterol) in 3 ml NS aerosol unit with oxygen flow at 8 lpm.
 - (iii) Start IV saline

RESPIRATORY DISTRESS (cont'd)

4. Rales present:

i. Pulmonary edema:

- (a) Look for and note cyanosis, hypotension, coughing, wheezing, labored breathing, diaphoreses, pitting edema, tachypnea, apprehension, and inability to talk
- (b) Patient has normal blood pressure or is hypertensive:
 - (i) Administer sublingual nitroglycerin 0.4 mg three times at five minute intervals (tablet or spray)

Maintain BP above 100 systolic
 - (ii) Consider morphine sulfate for analgesia as well as hemodynamic response. Morphine sulfate is of considerable usefulness in both AMI and acute pulmonary edema
 - (aa) Dosage: Small frequent titrated IV doses 5 mg every 5 minutes needed until desired effect is achieved
 - (bb) Do not use on COPD or volume depletion
 - (cc) Monitor vital signs, especially respirations and blood pressure, every 5 minutes
 - (iii). Transport patient

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Reassess breath sounds and treat as follows:
 - 1. Airway open, breath sounds absent
 - a. Endotracheal intubation per protocol.
 - b. Provide 100% O₂ by BVM or PPV
 - c. Treat cause and transport
 - 2. Airway obstructed:
 - a. Try to visualize obstruction with laryngoscope if basic procedures are unsuccessful
 - I. Remove foreign body using Magill Forceps if possible
 - b. If airway cannot be cleared, perform a cricothyrotomy
 - 3. Spontaneous breathing with breath sounds:
 - a. Clear breath sounds:
 - i. Treat cause - (MI, pulmonary embolism, metabolic disturbance, hyperventilation)
 - b. Wheezes present:

RESPIRATORY DISTRESS (cont'd)

- i. Severe systemic allergic reaction
 - (a) Start IV saline
 - (b) Give epinephrine 1:1,000 0.3 mg by intramuscular injection
 - (c) Consider seeking Medical Control
 - (d) If patient is hypotensive and IV has been established, epinephrine 1:10,000 0.5 mg IVP, SLOWLY
 - (e) If caused by sting or bite, apply constricting band between bite and heart, apply ice pack to slow swelling and spread of poison
 - (f) In patients with hypertension, CVA, CAD, pregnancy, consider glucagon 1 mg IM or IV instead of epinephrine.
 - (g) Benadryl® (diphenhydramine) administered 1 mg/kg (50 mg max) IM or IV.
- NOTE: This is especially indicated when drug reactions are suspected and systolic blood pressure is above 90.
- (h) Proventil® (albuterol) breathing treatment: 2.5 mg of Proventil® in 3 ml NS aerosol unit with oxygen flow at 8 liters per minute
- ii. Patient with asthma:
 - (a) Minor distress:
 - (i) Put patient in position of comfort, support with oxygen
 - (ii) Consider Proventil® (albuterol) breathing treatment: 2.5 mg of Proventil® (albuterol) in 3 ml NS aerosol unit with oxygen flow at 8 liters per minute
 - (b) Severe distress:
 - (i) Sit patient up, assist ventilations with high flow oxygen, consider continuous positive airway pressure (CPAP-See Special Procedures)
 - (ii) Proventil® (albuterol) breathing treatment: 2.5 mg of Proventil® in 3 ml NS aerosol unit with oxygen flow at 8 liters per minute
 - (iii) Contact Medical Control for possible administration of epinephrine or glucagon.
 - (c) Start IV saline
- iii. Patient with COPD:
 - (a) Minor distress:
 - (i) Put patient in position of comfort, support with low flow oxygen
 - (ii) Proventil® (albuterol) breathing treatment: 2.5 mg of Proventil® (albuterol) in 3 ml NS aerosol unit with oxygen flow at 8 l/min.

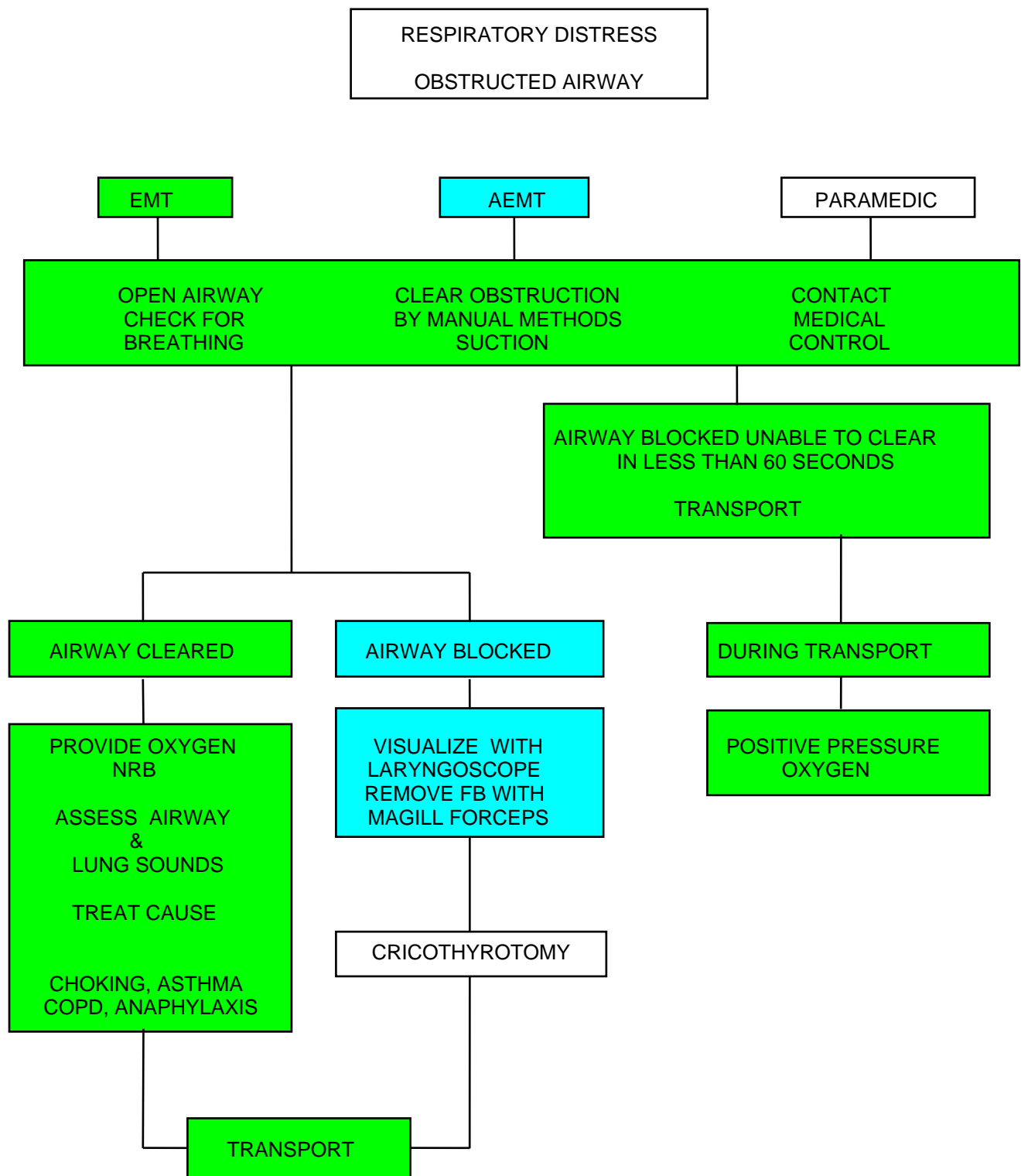
RESPIRATORY DISTRESS (cont'd)

- (b) Severe distress:
 - (i) Sit patient up, assist ventilations with HIGH flow oxygen, consider CPAP
 - (ii) Proventil® (albuterol) breathing treatment: 2.5 mg of Proventil® (albuterol) in 3ml NS aerosol unit with oxygen flow at 8 l/min.
 - (iii) Start IV saline
- c. Rales present:
 - i. Pulmonary edema:
 - (a) Look for and note cyanosis, hypotension, coughing, wheezing, labored breathing, diaphoreses, pitting edema, tachypnea, apprehension, and inability to talk
 - (b) Patient has normal blood pressure or is hypertensive:
 - (i) Administer sublingual nitroglycerin 0.4mg three times at five minute intervals (tablet or spray)

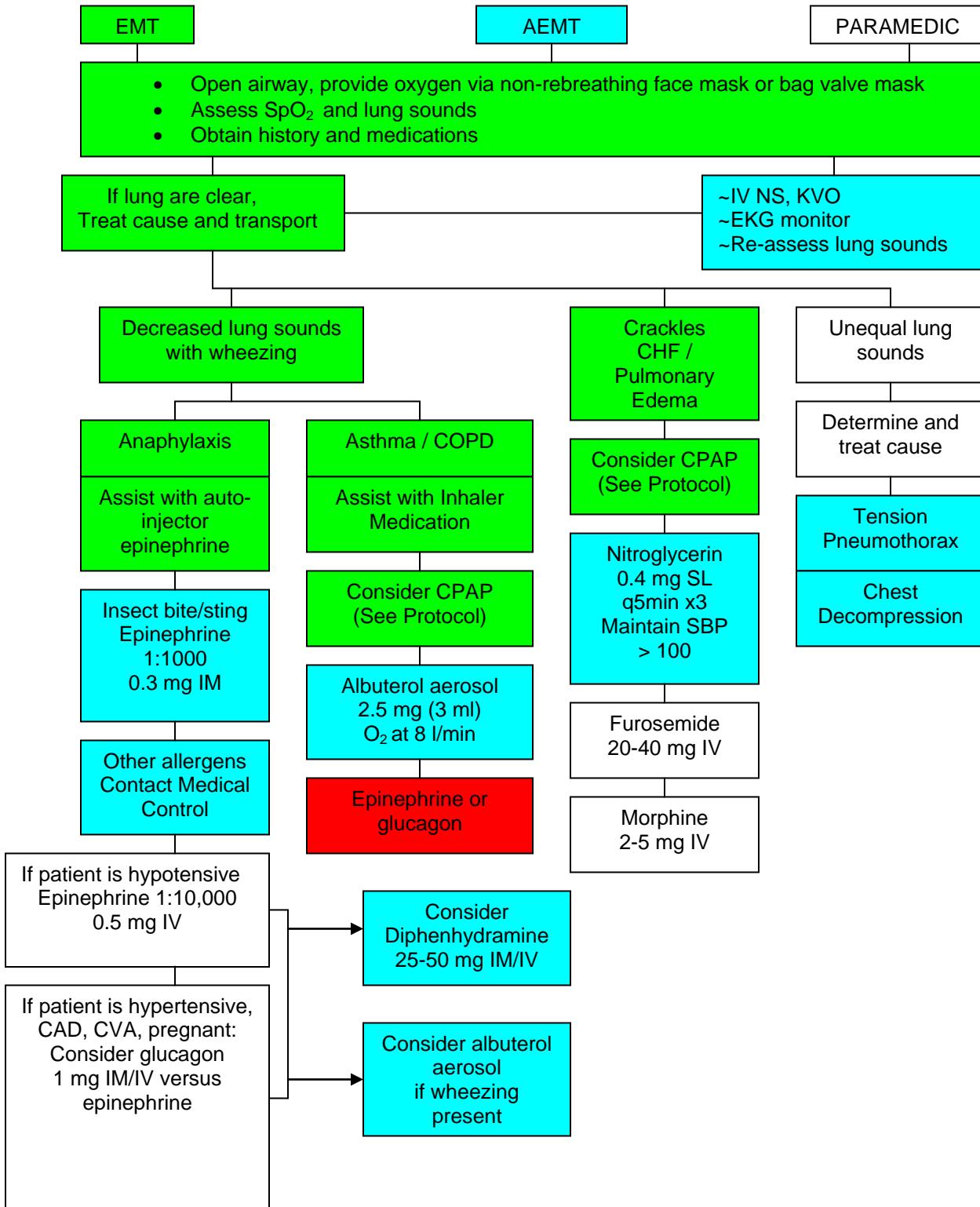
Maintain BP above 100 systolic
 - (ii) Establish IV and administer Lasix® 1 mg/kg IV over one to two minutes.
 - (iii) Transport patient.
 - (iv) Consider morphine sulfate for analgesia as well as hemodynamic response. Morphine sulfate is of considerable usefulness in both AMI and acute pulmonary edema
 - (aa) Dosage: Small frequent titrated IV doses 5 mg every 5 minutes needed until desired effect is achieved
 - (bb) Do not use on COPD or volume depletion
 - (ml) Monitor vital signs, especially respirations and blood pressure, every 5 minutes
 - d. Breath sound asymmetrical or absent:
 - i. Spontaneous Pneumothorax:
 - (a) Transport in position of comfort.
 - ii. Sucking chest wound:
 - (a) Seal open wound, 3 sides, monitor for tension situation
 - iii. Tension pneumothorax
 - (a) Pleural decompression
 - iv. Lower airway obstruction

RESPIRATORY DISTRESS (cont'd)

- (a) Place in position of comfort
- (b) 100% humidified O₂ by NRB



RESPIRATORY DISTRESS SPONTANEOUS BREATHING



SEIZURES

GENERAL CONSIDERATIONS

- A. The seizure has usually stopped by the time the EMS professionals arrive (postictal state)
- B. The basic rule with seizures is to "protect and support" the patient. If trauma, consider cervical immobilization.
- C. Aspiration precautions include:
 - 1. Coma position: a side lying position with the head lowered 15 to 30 degrees
 - 2. Suction readily available
 - 3. If possible, mouth cleared of foreign bodies (food, gum, dentures)

EMT

- A. Place patient away from objects on which they might injure themselves; protect but do not restrain them
- B. Clear and maintain airway, consider cervical spine injury
- C. Administer 100% oxygen with NRB mask
- D. Obtain history from bystanders:
 - 1. Seizure history
 - 2. Description of onset of seizure
 - 3. Medications
 - 4. Other known medical history (especially head trauma, diabetes, drugs, alcohol, stroke, heart disease)
- E. Evaluate:
 - 1. Evidence of head trauma
 - 2. Substance abuse
- F. Bring medication with patient if available
- G. Establish communications with medical control and advise of patient condition. Transport immediately, unless an Advanced Life Support unit is enroute and has an ETA of less than 5 minutes.

AEMT

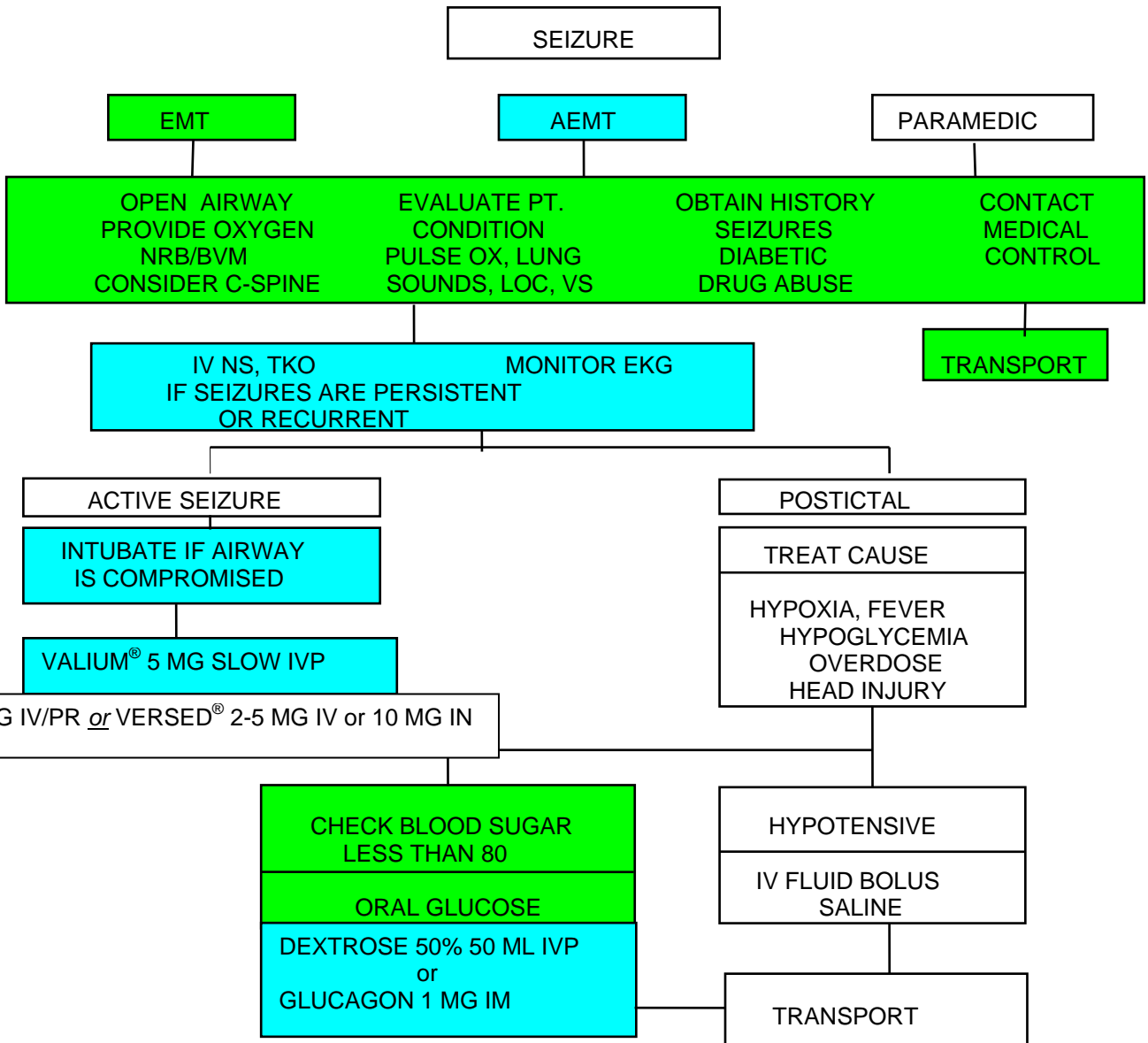
- A. Assist EMS professionals, obtain patient condition and circumstance
- B. Apply monitor and check rhythm
- C. Establish IV access with NS TKO while enroute to hospital if seizures are persistent or recurrent.
DO NOT DELAY TRANSPORT

SEIZURES (cont'd)

- D. Determine blood sugar level
 - 1. Blood sugar < 80, administer 50 ml of 50% dextrose IV push immediately or 1 mg glucagon IM.
- E. In repeated seizure activity administer Valium® (diazepam) IV
 - 1. Initial bolus of 5 mg and titrate to patient's condition up to a 10 mg maximum
- F. After Valium® monitor airway; be prepared to intubate and assist ventilation with BVM or PPV

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Make sure patient has good airway, if status epilepticus, nasotracheal intubation may be necessary
- C. Establish IV access with NS TKO if seizures are persistent or recurrent.
- D. Determine blood sugar level
 - 1. Blood sugar < 80, administer 50 ml of 50% dextrose IV push immediately or 1 mg glucagon IM.
- E. In repeated seizure activity administer Valium® (diazepam) IV/PR or consider Versed® (midazolam) IV/IM
 - 1. Initial dose of Valium® 5 mg IVP and titrate to patient's condition up to a 10 mg maximum
 - 2. Initial dose of Versed® 2-5 mg IVP with repeated doses every 2 minutes as needed or Versed® 10 mg intranasal
- F. After Versed® or Valium® monitor airway; be prepared to intubate and assist ventilation with BVM or PPV
In status epilepticus, nasotracheal intubation may be necessary



SHOCK

GENERAL CONSIDERATIONS

- A. Shock is the failure of the body to circulate blood and oxygen properly and perfuse body tissue
- B. Shock can be due to:
 - 1. Hypovolemic - fluid loss
 - 2. Cardiogenic - pump failure
 - 3. Neurogenic - vasodilation
 - 4. Anaphylactic - allergic reaction
 - 5. Septic - infection, vasodilatation
 - 6. Respiratory - lack of oxygen
- C. Priorities of care in shock situations are:
 - 1. Provide an adequate airway and oxygenation
 - 2. Recognize the type of shock present and its treatment
 - 3. Replace body fluids

EMT

- A. Establish airway; administer 100% oxygen by NRB mask. Assist ventilation as required with oral or nasal airway and BVM. Obtain pulse ox reading and treat accordingly.
- B. Obtain relevant medical history: CAUSE
- C. Place patient in proper shock position:
 - 1. Hypotension - lying flat with feet elevated
 - 2. Respiratory difficulty - head elevated
- D. Maintain body temperature:
 - 1. Patient cold - Warm them up
 - 2. Patient hot - Cool them down
- E. Treat the cause
- F. Evaluate the patient's:
 - 1. Respiratory status
 - 2. Circulatory status - pulse, B/P
 - 3. Level of consciousness
 - 4. Evidence of trauma to abdomen, chest, head
- G. Establish communications with medical control and advise of patient condition. Transport immediately, unless an advanced life support unit is enroute and has an ETA of less than 5 minutes.

SHOCK (cont'd)

AEMT

- A. Assist EMS professionals; obtain patient condition and circumstance
- B. Hypovolemic, Neurogenic, or Septic Shock:
 - 1. During transport to the hospital, start IV saline. DO NOT DELAY TRANSPORT
- C. Anaphylaxis from any cause (insect bite or sting, food, medication, unknown agent):
 - 1. Breathing difficulty with low blood pressure:
 - a. Start IV of normal saline and initiate a bolus until the hypotension resolves
 - b. Give epinephrine 1:1,000 0.3 mg intramuscularly
 - 3. Hives, itching, and/or swelling with a normal blood pressure: Contact Medical Control for as soon as possible.
- D. Apply monitor and check rhythm

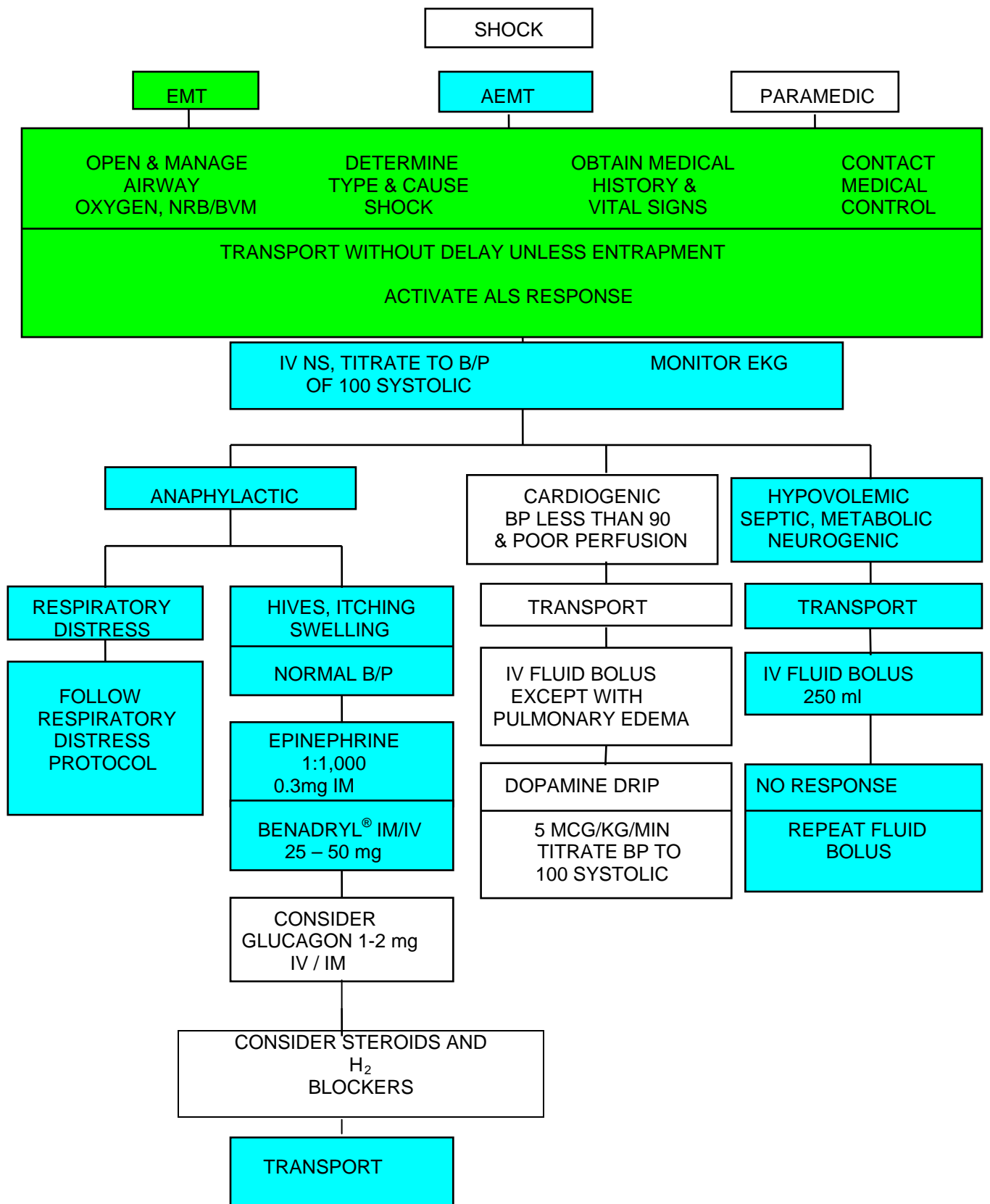
PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Apply monitor and follow protocol for arrhythmias
- C. Identify type of shock and treat as follows:
 - 1. Hypovolemic, Neurogenic, Septic:
 - a. Start IV of normal saline. Infuse until systolic blood pressure is above 100.
 - b. If transport will be prolonged, or if entrapment exists, contact Medical Control
 - c. If hypovolemic shock persists despite above measures start second saline IV
 - 2. Cardiogenic:
 - a. Treat cause by following the appropriate arrhythmia, chest pain, or cardiac arrest protocols.
 - b. If patient has BP of less than 70-90 mm Hg systolic with poor perfusion:
 - i. Establish second IV in large peripheral vessel for dopamine administration:
 - (a) Dopamine 400 mg in 500 ml D5W or NS
 - (b) Start infusion at 5 mcg/kg/min and titrate the infusion until adequate heart rate, blood pressure, and level of consciousness are achieved.

NOTE: If IV infiltrates, report to the ED physician as soon as possible

SHOCK (cont'd)

- ii. Establish second IV normal saline TKO in large peripheral vein if time permits
- 3. Anaphylactic:
 - a. Respiratory distress, follow Respiratory Distress Protocol
 - b. Hives, itching, and/or swelling normal B/P: Contact Medical Control for possible administration of epinephrine and/or Benadryl®
 - c. If patient is on beta blocking medication, hypertensive, has known coronary artery disease and/or is pregnant, consider administering glucagon 1-2 mg IV or IM.



ACUTE STROKE

GENERAL CONSIDERATIONS

- A. Patients who experience transient ischemic attack (TIA) develop most of the same signs and symptoms as those who are experiencing a stroke. The signs and symptoms of TIA s can last from minutes up to one day. Thus the patient may initially present with typical signs and symptoms of a stroke, but those findings may progressively resolve. The patient needs to be transported, without delay, to the most appropriate hospital for further evaluation.
- B. Some patients who have had a stroke may be unable to communicate but can understand what is being said around them.
- C. Place the patient's affected or paralyzed extremity in a secure and safe position during patient movement and transport.
- D. Hypertension in stroke patients routinely should not be treated in the prehospital setting.

Any treatment of hypertension should be completed with on-line medical direction.

Nitroglycerin should not be used unless signs and symptoms consistent with AMI are present.
- E. New therapies for stroke are now available. However, successful use is only possible during a short time window after the start of symptoms. Early notification of the receiving hospital and minimizing scene time are important parts of a strategy to treat patients quickly.
- F. Time of onset of signs and symptoms must always be obtained, documented and relayed to the receiving facility.

Time of symptom onset needs to be accurately determined for consideration of thrombolytic therapy.

In patients whose symptoms were present upon awakening, their symptom onset is estimated from the last time that the patient's neurological status was known to be normal, or the time just prior to going to sleep.
- G. A simple method of physical exam for the stroke patient is:
 - 1. ask the patient to say " the sky is blue in Ohio",
 - 2. ask the patient to smile or show their teeth,
 - 3. ask the patient to hold their arms straight up in front with palms up, have the patient close their eyes and watch arm drift. (palms turns down)
 - a. if only one palm turns down the test is positive
 - b. if both arms drift down, the result are unclear
- H. Assessment should also include Glasgow Coma Score. Patients with scores of 8 or less have poor prognosis and need ALS as soon as possible.
- I. Patients for whom the onset of stroke symptoms can be confirmed within three hours or less of initiation of the emergency response system should be transported directly to a primary stroke center if possible or as a second option, to a hospital with a functioning CT scanner and emergent radiology services available.

ACUTE STROKE (cont'd)

EMT

- A. Open and manage the airway and provide oxygen by nasal cannula 4 l/min and increase as needed with respiratory distress.

Apply pulse oximeter and treat per procedure. Maintain 95% SpO₂.

Be prepared to hyperventilate and/or assist ventilations with oral or nasal airway and BVM or PPV

- B. Evaluate patient's general appearance, relevant history of condition and determine:

Onset
Provokes
Quality
Radiates
Severity
Time
Interventions

Allergies
Medication (i.e. Blood thinners; Coumadin[®], warfarin, heparin)
Past Medical History - especially, diabetic, seizures, stroke, TIA, head injury, drug abuse, hypertension, arrhythmias.
Last Meal
Events leading to present illness

- C. Determine blood sugar level.

1. For a blood sugar < 80, administer 1 tube of oral glucose. May be repeated in 10 minutes if blood sugar remains below 80.

PATIENT MUST HAVE A GAG REFLEX.

2. Blood sugar ≥ 80, begin IMMEDIATE TRANSPORT.

- D. If unable to check blood sugar, with signs of stroke, establish communications with Medical Control and advise of patient condition.

Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.

AEMT

- A. Assist EMS professionals, obtain patient condition and circumstance

- B. Apply monitor and check rhythm

- C. Start saline lock or IV saline TKO, while enroute to hospital
DO NOT DELAY TRANSPORT

- D. Determine blood sugar level.

1. If blood sugar less < 80, administer IV bolus, 50 ml of 50% dextrose or glucagon 1 mg IM/IV may be repeated in 10 minutes if blood sugar remains below 80.

DO NOT DELAY TRANSPORT

ACUTE STROKE (cont'd)

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. If patient does not have a secure, protected airway, intubate per Intubation Procedure
- C. Apply monitor and check rhythm
- D. Establish saline lock or IV saline TKO.
- E. Determine blood sugar level.
 - 1. If blood sugar < 80, administer IV bolus, 50 ml of 50% dextrose or glucagon 1mg IM/IV may be repeated in 10 minutes if blood sugar remains below 80.
- H. Re-evaluate patient condition, contact medical control, and transport to hospital

TRAUMA EMERGENCIES

GENERAL CONSIDERATIONS

- A. Assure scene is safe, determine mechanism of injury determine number of patients and request additional help if needed.
 - B. Rapid assessment and recognition of major trauma/multiple system trauma is essential to the subsequent treatment
 - C. Once the patient is determined to be an actual or potential major trauma/multiple system patient, personnel on scene and/or medical control must quickly determine the appropriate course of action including:
 - 1. Requesting aeromedical evacuation from scene (See Aeromedical Evacuation Procedure)
 - 2. Ground transportation directly to an appropriate facility. (When requesting bypass of nearest facility, this action must be approved by Medical Control)
 - D. In cases where the victim must be transported by ground units, because of transport times every effort should be made to limit on-scene time to 10 minutes or less
- THIS CANNOT BE STRESSED ENOUGH!!!**
- E. If patient is entrapped or inaccessible, contact Medical Control and advise of condition and circumstances
 - F. If time permits, each patient should be evaluated by the Glasgow Coma Scale and the score relayed to Medical Control

EMT

- A. Trauma Assessment
 - 1. Initial assessment - establish life threats, chief complaints, assess airway and initiate appropriate therapies, assess circulation and control major bleeding, establish a general impression of patient condition and prioritize patient for transport
 - 2. Urgent patient
 - a. Rapid trauma assessment - quick head to toe survey utilizing DECAP BTLS. Obtain baseline vital signs and SAMPLE history.
 - b. TRANSPORT IMMEDIATELY
 - c. Detailed physical exam and ongoing assessment - during transport, evaluate patient head to toe and assess effectiveness of treatments to this point.
 - 3. Non-urgent patient - single or non-life threatening injury
 - a. Focused physical exam of injured area and management of the situation.
 - b. Detailed physical exam and ongoing assessment - evaluate patient head to toe and assess effectiveness of treatments to this point.

TRAUMA EMERGENCIES (cont'd)

- c. Transport patient

B. Urgent trauma treatment

1. Establish airway, breathing and circulation; maintain cervical spine immobilization
2. Administer 100% oxygen and apply Oximeter
3. Control hemorrhage
4. TRANSPORT immediately unless ALS arrival on-scene is less than 5 minutes.
5. During transportation
 - a. Splint individual fracture
 - b. Evaluate the patient's:
 - i. Pulses distal to the fracture site
 - ii. Distal skin color, temperature, neurological status
 - c. Obtain relevant history:
 - i. Where, When, How
 - ii. Mechanism of injury
6. Establish communications with Medical Control and advise of patient condition and need for Trauma Team.

C. Non-urgent trauma treatment

1. Establish airway, breathing and circulation; maintain cervical spine immobilization
2. Administer 100% oxygen and apply pulse oximeter
3. Control hemorrhage
4. Splint all fracture(s) (IN NON-LIFE THREATENING SITUATION ONLY)
 - a. Evaluate patient's:
 - i. Pulses distal to the fracture site
 - ii. Distal skin color, temperature, neurological status
5. Obtain relevant history:
 - a. Where, When, How
 - b. Mechanism of injury

- H. Establish communications with Medical Control and advise of patient condition.

AEMT

- A. Assist EMS professionals; obtain patient condition and circumstance

TRAUMA EMERGENCIES (cont'd)

- B. Secure the airway and administer 100% oxygen. If the patient is apneic, intubate with cervical spine control
- C. Start IV saline to maintain perfusion and systolic BP \geq 90.
ESTABLISHING AN IV MUST NOT DELAY TRANSPORTATION
- D. Apply cardiac monitor and check rhythm
- E. If the patient is conscious and alert and complaining of severe pain, administer morphine sulfate as follows:
 - 1. Small frequent doses of 5 mg every 5 minutes and titrate to patient condition
 - 2. DO NOT USE ON HEAD TRAUMA, CHEST INJURY, RESPIRATORY DISTRESS DUE TO TRAUMA, OR ON ANY PATIENT WITH VOLUME DEPLETION OF ANY CAUSE.
 - 3. Consider morphine or other analgesic per local protocols

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Treat for shock per Shock Protocol
- C. If the patient is conscious and alert and complaining of severe pain, administer morphine sulfate as follows:
 - 1. Small frequent doses of 5 mg every 5 minutes and titrate to patient condition
 - 4. DO NOT USE ON HEAD TRAUMA, CHEST INJURY, RESPIRATORY DISTRESS DUE TO TRAUMA, OR ON ANY PATIENT WITH VOLUME DEPLETION OF ANY CAUSE.
 - 5. Consider morphine or other analgesic per local protocols

SPECIFIC INJURIES

- A. Chest Wounds:
 - 1. For sucking chest wounds or an open pneumothorax, always cover the wound with a non-porous dressing and seal 3 sides.
 - 2. Stabilize flail chest with trauma dressing
- B. Evisceration:
 - 1. Cover organs with sterile dressing moistened with saline
 - 2. Lay the patient flat and elevate the knees
- C. Complete Amputations:
 - 1. Control bleeding by the most appropriate method; remember tourniquet is a last resort

TRAUMA EMERGENCIES (cont'd)

2. Always take time to find the avulsed part, but do not delay patient transport, and transport it to the hospital as follows:

- a. Put part in a cool, dry sterile dressing

D. Pneumothorax / Hemothorax / Tension Pneumothorax:

1. Transport patient in position of comfort and watch for signs of a tension pneumothorax

2. Symptoms of tension pneumothorax:

- a. Chest pain or evidence of trauma
 - b. Tachypnea
 - c. Tachycardia
 - d. JVD
 - e. May initially exhibit hypertension progressing to hypotension
 - f. Hyperresonance on affected side
 - g. Diminished or absent breath sounds of affected side
 - h. Audible wheeze
 - a. Tracheal deviation away from affected side (latent sign)

NOTE: Significant tension pneumothorax may present exhibiting any or all of the above symptoms

3. Pleural decompression per procedure

E. Head Injury:

1. Evaluate patient condition:

- a. Level of Consciousness
 - b. Pupillary size and reaction
 - c. Glasgow Coma Scale results

2. Transport with head elevated 8 to 10 inches by tilting backboard, and C-spine immobilized

3. Maintain airway, support with 100% oxygen by NRB mask and/or BVM

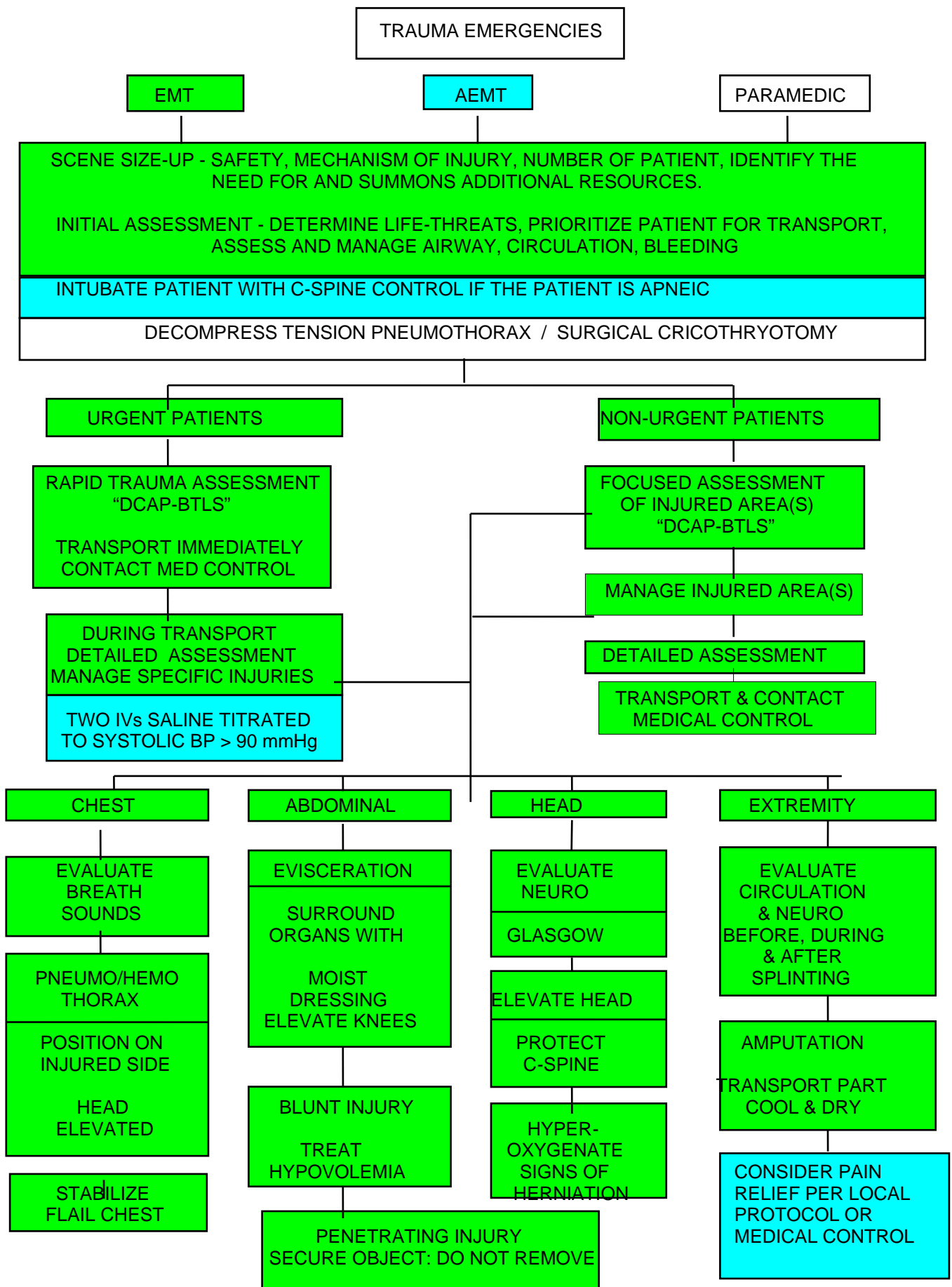
- a. Orotracheal, nasotracheal, or digital intubation may be indicated if the patient is apneic and should be accomplished gently maintaining in-line cervical spine immobilization
 - b. Do not hesitate to take control of airway
 - c. Hyperoxygenate when there are signs of cerebral herniation:
 - i. Blown pupils, bradycardia, posturing

F. Spinal Injuries:

1. Immobilize spine - See Cervical Immobilization Assessment Protocol

TRAUMA EMERGENCIES (cont'd)

2. Cervical Immobilization Assessment
 - a. Cervical immobilization should be used if the following criteria are met.
 - i. The patient complains of neck pain
 - ii. The patient has pain on palpation of the neck
 - iii. The patient complains of neurologic deficits or is found upon physical exam to have neurologic deficits. (subjective: numbness, tingling, weakness) (objective: loss or diminished sensation or motor weakness)
 - iv. The patient with altered LOC and impaired competence whether from drugs, alcohol or head injury and suggestive mechanism of injury for neck injury (refer to Refusal of Service for impaired competence criteria)
 - v. The patient with suggestive mechanism of injury for neck injury and the patient has other major distracting injuries.
 - vi. The patient has neck pain with any head motion
 - b. All patients that meet the above criteria should have full cervical immobilization.
3. If patient is wearing a helmet, see Helmet Removal Protocol in the Special Procedures Section
4. Always contact medical control and relay information regarding patient to the hospital. Spinal cord injury patients may need to be delivered to another facility if the hospital initially contacted cannot handle this injury.
5. If patient is alert and complaining of severe pain consider pain relief per local protocol.



TRAUMA ARREST

GENERAL INFORMATION

- A. Resuscitation should not be attempted in cardiac arrest patients with hemicorporectomy, decapitation, or total body burns, nor in patients with obvious, severe blunt trauma who are without vital signs, pupillary response, or an organized or shockable cardiac rhythm at the scene. Patients in cardiac arrest with deep penetrating cranial injuries and patients with penetrating cranial or truncal wounds associated with asystole and a transport time of more than 15 minutes to a definitive care facility are unlikely to benefit from resuscitative efforts.

Trauma victims who are initially found by EMS professionals in cardiac arrest or found at the scene without vital signs may be considered dead and follow the DOA policy.

- B. Extensive, time-consuming care of trauma victims in the field is usually not warranted. Unless the patient is trapped, they should be enroute to a medical facility within 10 minute after arrival of the ambulance on the scene

EMT

- A. Ventilate with 100% oxygen by two-person bag valve mask or oxygen powered, manually triggered or automatic transport ventilation device with an oral or nasal airway

Ventilation should be delivered over two seconds and cricoid pressure should be considered to help reduce gastric distention

Always consider cervical spine injury

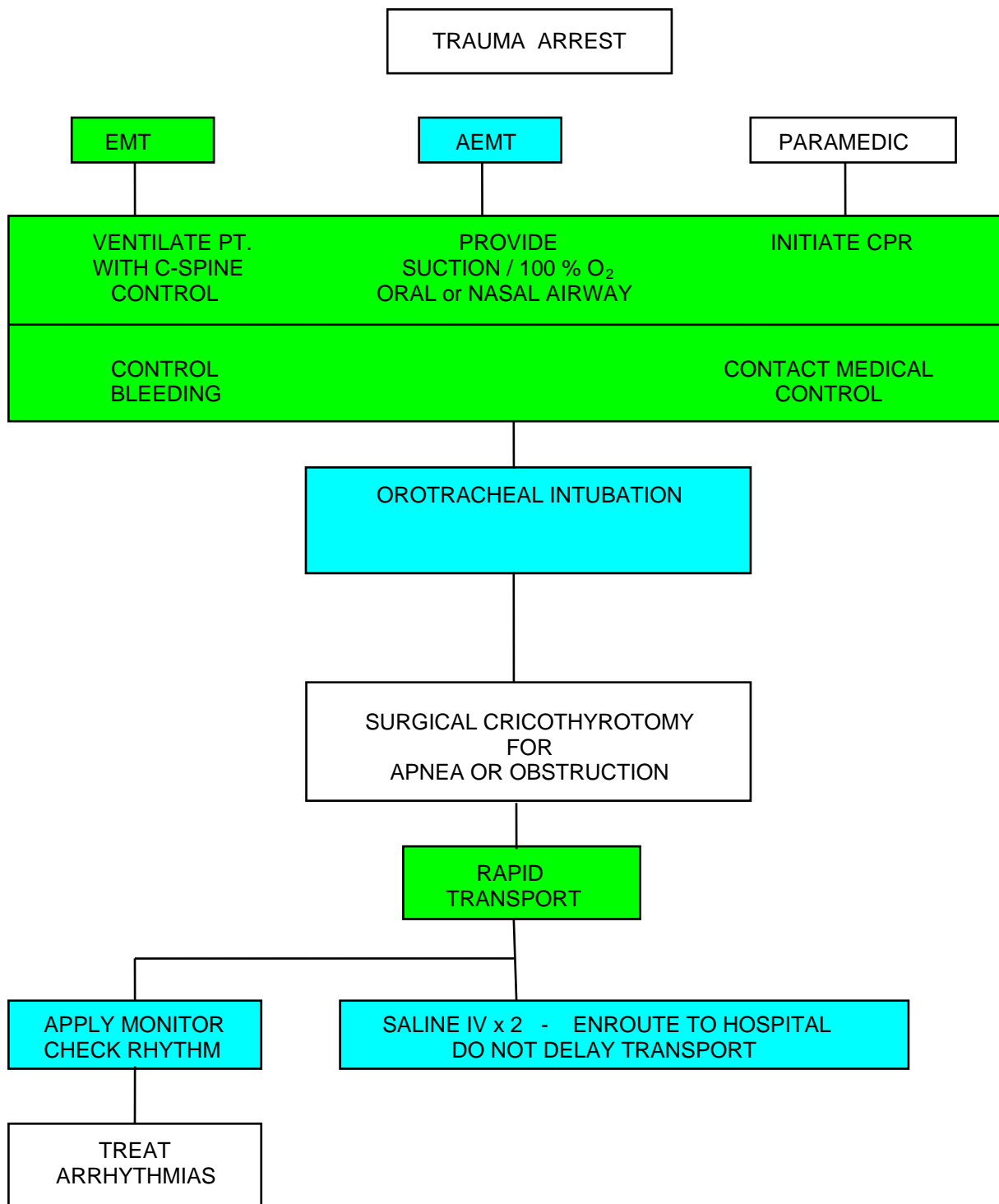
- B. Basic CPR with consideration of cervical spine
- C. Immobilize cervical spine and TRANSPORT IMMEDIATELY

AEMT

- A. Assist EMS professionals, obtain patient condition and circumstance
- B. Start two IVs of normal saline and transport to the hospital
- C. Check pulse, intubate patient, contact medical control and advise of patient condition, while continuing CPR

PARAMEDIC

- A. Assume charge and confer with EMS professionals as to patient condition and circumstances
- B. Intubate patient:
 - 1. Patients should be intubated orotracheally without movement of the cervical spine
 - 2. If orotracheal intubation is not possible, or an obstruction is present, then a cricothyrotomy may be necessary per local protocol.
- C. Assess cause of patient's condition and treat according to appropriate guidelines.



GLASGOW COMA SCALE

		GCS
EYES	SPONTANEOUSLY	4
	TO VERBAL COMMAND	3
	TO PAIN	2
	NO RESPONSE	1
BEST MOTOR RESPONSE	OBEYS VERBAL COMMAND	6
	PURPOSEFUL MOVEMENT TO PAIN	5
	FLEXION - WITHDRAWAL	4
	FLEXION - ABNORMAL	3
	EXTENSION	2
	NO RESPONSE	1
BEST VERBAL RESPONSE	ORIENTED & CONVERSES	5
	DISORIENTED & CONVERSES	4
	INAPPROPRIATE WORDS	3
	INCOMPREHENSIBLE SOUNDS	2
	NO RESPONSE	1

REVISED TRAUMA SCORE

		RTS
GLASGOW COMA SCALE	13 - 15	4
	9 - 12	3
	6 - 8	2
	4 - 5	1
	0 - 3	0
RESPIRATORY RATE	10 - 29	4
	LESS THAN 29	3
	6 - 9	2
	1 - 5	1
	0	0
SYSTOLIC BLOOD PRESSURE	LESS THAN 89	4
	76 - 89	3
	50 - 75	2
	1 - 49	1
	0	0

AEROMEDICAL TRANSPORT

- 1) Rotor wing air medical services may be requested directly to the scene by:
 - a) an on-scene EMS organization
 - b) hospitals and healthcare facilities
- 2) A request for rotor wing air medical service response may be initiated when one or more of the following conditions exists:
 - a) The patient's airway, breathing, or hemorrhage/circulation can not be controlled by conventional means and the estimated arrival time of the air medical service is less than the time required for ground transport to the nearest hospital.

OR

- b) Air transport to a medical facility/the most appropriate trauma center will occur in a shorter time than ground transport to a medical facility/them most appropriate trauma center.
 - a. Time estimation should be made from the time the patient is ready for transport to arrival at the medical facility/the most appropriate trauma center. This should include aircraft response to the scene.

Destinations

- a) An appropriate medical facility/the most appropriate trauma center based upon, but not limited to the following factors:
 - i) Time to definitive care
 - ii) Capabilities of receiving hospitals
 - iii) Patient wishes and family continuity
 - iv) Maximizing utilization of resources

COMMUNICATIONS

A member of the prehospital care team must contact medical control at the earliest time conducive to good patient care. This may be a brief early notification or “heads up”. It may mean that the hospital is contacted from the scene if assistance is needed in the patient's immediate care or permission is required for part of the patient care deemed necessary by the EMS professional in charge.

When possible, the member of the team most knowledgeable about the patient should be the one calling in the report.

Although all EMS professionals have been trained to give a full, complete report, this is often not necessary and may interfere with the physician's duties in the emergency department. Reports should be as complete but concise as possible to allow the physician to understand the patient's condition. It is not an insult for the physician to ask questions after the report is given. This is often more efficient than giving a thorough report consisting mostly of irrelevant information.

If multiple victims are present on the scene, it is advisable to contact medical control with a preliminary report. This should be an overview of the scene, including the number of victims, seriousness of the injuries, estimated on-scene and transport times to the control hospital or possible other nearby facilities. This allows preparation for receiving the victims and facilitates good patient care.

When contacting the receiving facility or medical direction, the patient report it should begin with the identification of the squad calling, and the highest level of care which is able to be provided to the patient (i.e., EMT, AEMT, or Paramedic), and the nature of the call (the physician or nurse to whom you need to speak directly).

CODE THREE PATIENTS – MOST SERIOUSLY ILL

This category is for the most seriously ill or injured patients.

1. Type of Squad: EMT, AEMT, Paramedic
2. Age and Sex of Patient:
3. Type of Situation: Injury and/or Illness
4. Specific Complaint: Short and to the point (i.e., chest pain, skull fracture)
5. Mechanism: MVA / MCA / Fall
6. Vital Signs: BP / Pulse / Resp. / LOC / EKG
7. Patient Care: Airway Management, Circulatory Support, Drug Therapy
8. General Impression: Stable / Unstable
9. ETA to Medical Facility

CODE TWO PATIENTS –SIGNIFICANTLY ILL

This category is for individuals who have significant signs or symptoms of illness or injury, and at this time are stable.

1. Type of Squad: EMT, AEMT, Paramedic
2. Age and Sex of Patient:
3. Type of Situation: Injury and/or Illness
4. Specific Complaint: Short and to the point (i.e. 10% 2nd degree burn to leg)
5. Mechanism: MVA / MCA / Fall

COMMUNICATIONS (cont'd)

6. Vital Signs: BP / Pulse / Resp. / LOC / EKG
7. ETA to Medical Facility

CODE ONE PATIENTS—MINOR ILLNESSES

This category covers all minor illness or injury circumstances and the patient is in no danger of developing any significant signs or symptoms.

1. Type of Squad: EMT, AEMT, Paramedic
2. Age and Sex of Patient:
3. Type of Situation: Injury and/or Illness
4. Specific Complaint: Short and to the point (i.e., abdominal pain for the last two weeks)

Code I (non-transport) for minors

If after evaluation of a minor, the EMS professional and medical control agree that the patient is a Code I, that minor can be left in the care of a responsible adult that is not the parent or legal guardian. The responsible adult may be a family friend, neighbor, school bus driver, teacher, school official, police officer, social worker, or other person at the discretion of medical control and the EMS professional.

Once the above information is given, wait for further requests and/or orders from Medical Control.

If the patient requires special care; (i.e., security; interpreter; additional people for lifting, isolation for infection, vermin infestation, or hazardous material) this information should also be relayed.

TYPES OF PATIENTS ACCORDING TO TRIAGE PRIORITY

CODE THREE PATIENTS

Airway and/or Breathing Difficulty
Cardiac Arrest
Circulation Difficulty (Bleeding and/or Shock)
Open Chest and Abdominal Injury
Complicated Childbirth
Chest Pain

Unconsciousness
Severe Head Injury
Severe Burns
Severe Poisoning
Status Epilepticus
Altered LOC
Multiple Fractures

CODE TWO PATIENTS

Cervical Spine Injury
Acute Abdominal Pain
Moderate Burns

Normal Childbirth
Violent and/or Combative Patient
Psychiatric

CODE ONE PATIENTS

Minor Injury
Minor Illness

PROTOCOL FOR DOA

GENERAL STATEMENT

- A. When a DOA is encountered, the squad members should avoid disturbing the scene or the body as much as possible, unless it is necessary to do so in order to care for and assist other victims. Once it is determined that the victim is, in fact, dead the squad members should move as rapidly as possible to transfer responsibility or management of the scene to the police department and/or Coroner's Office. It is the squad member's responsibility to notify the Coroner's Office directly or to ensure that the Coroner's Office has been notified by a police officer on the scene.

A determination that the victim is dead rests with the squad members. Any of the following may be used as guidelines to support the determination that a victim is deceased:

1. There is an injury which is incompatible with life (i.e., decapitated, or burned beyond recognition).
 - a. Cardiac arrest, secondary to massive blunt trauma without signs of exsanguinating hemorrhage (i.e. limb amputation).
2. The victim shows signs of decomposition, rigor mortis, or extremely dependent lividity.
3. If the patient is an adult with an unwitnessed cardiac arrest, has a history of an absence of vital signs for greater than 20 minutes, and is found in asystole, not secondary to hypothermia or cold water drowning.
4. If there are valid DNR (Do Not Resuscitate) orders, see DNR Protocol.
5. If the patient has a history of terminal disease, the family refuses resuscitation and permission to pronounce the patient dead is given by Medical Control.

CAUTION: IF ANY DOUBT EXISTS THAT THE VICTIM IS DEAD AT THE TIME OF ARRIVAL OF THE SQUAD, RESUSCITATIVE MEASURES SHOULD BE INSTITUTED IMMEDIATELY. WHENEVER RESUSCITATIVE MEASURES ARE INSTITUTED, THEY MUST BE CONTINUED UNTIL ARRIVAL AT A HOSPITAL OR UNTIL A PHYSICIAN HAS PRONOUNCED THE VICTIM DEAD OR A VALID DNR IS PRONOUNCED.

DO NOT RESUSCITATE/SUPPORT CARE GUIDELINES

BACKGROUND

In 1999, the Ohio Department of Health successfully established a Do-Not-Resuscitate Comfort Care (DNR Comfort Care) Protocol within the Ohio Revised Code. In the past, do-not-resuscitate (DNR) orders could not be honored without contacting medical direction when EMS or the 911 system was activated. The DNR Comfort Care Protocol will permit EMS to honor DNR orders without immediately contacting medical direction and provides guidelines for the prehospital management of these patients.

A DNR Comfort Care patient has completed a living will or has been issued a DNR order. The DNR Comfort Care protocol can be performed immediately by EMS for these patients. There is a subset of patients who are DNR Comfort Care-Arrest patients. This protocol is to be activated only in the event of a cardiac or respiratory arrest for these patients. EMS should follow the State of Ohio EMS Guidelines for these cases unless they present as a cardiac or respiratory arrest. In the event of a cardiac or respiratory arrest in a DNR Comfort Care-Arrest patient, the patient care should then be diverted to the Do Not Resuscitate (Comfort Care) Protocol. For the purposes of this protocol, a cardiac arrest is defined as the absence of a palpable pulse, and a respiratory arrest is defined as the absence of spontaneous respirations or presence of agonal respirations. The patient's DNR order or DNR identification should be checked very carefully to distinguish between the DNR Comfort Care and the DNR Comfort Care-Arrest classifications.

A DNR Comfort Care designation does not imply that the patient does not want to be treated for illnesses or injuries unrelated to a terminal disease process. For example, if the patient sustained a bee sting and was developing anaphylaxis, EMS providers should follow the anaphylaxis protocol. Medical direction should be contacted as soon as possible for further guidance and potential temporary revocation of the DNR Comfort Care order.

A reasonable effort should be made to positively identify the patient with DNR orders, but it is not required for the performance of this protocol. Patients of health care facilities do not require verification of identity when the DNR order is present on the patient chart. Acceptable methods of patient identification verification include a driver's license, passport, picture ID, institution identification band, or personal identification by a family member, caregiver, friend, or health care worker.

A patient's DNR Comfort Care or DNR Comfort Care-Arrest status can be confirmed by one of the following:

1. A DNR Comfort Care card or form completed for the patient.
2. A completed State of Ohio living will (declaration) form that states that the patient does not want CPR (in the case of a patient who has been determined by two doctors to be in a terminal or permanently unconscious state).
3. A DNR Comfort Care necklace or bracelet bearing the DNR Comfort Care official logo.



4. A DNR order signed by the patient's attending physician or, when authorized by section 2133.211 of the Ohio Revised Code, a certified nurse practitioner (CNP) or clinical nurse specialist (CNS).
5. A verbal DNR order is issued by the patient's attending physician, CNP, or CNS.

EMS providers are not required to search a patient to locate DNR identification. Copies of the documents listed under items 1, 2, or 4 are sufficient. The EMS provider must verify the identity of a physician or CNP/CNS issuing a verbal DNR order. Acceptable methods of verification include personal knowledge of the physician or CNP/CNS, a return telephone call to verify the information provided, or a list of practitioners with other identifying information such as addresses.

DO NOT RESUSCITATE/SUPPORT CARE GUIDELINES (cont'd)

A DNR order is considered current if it is present in a health care facility's records or patient chart. A DNR order for a patient outside of a health care facility is considered current unless it is revoked by the patient or by the patient's attending physician or CNP/CNS. EMS providers are not required to research whether a DNR order that appears to be current has been discontinued.

The DNR Comfort Care patient always retains the right to request resuscitation even if the protocol has been activated. A request for resuscitation by the patient revokes the DNR Comfort Care status and the EMS providers should immediately follow the resuscitation procedures in the State of Ohio EMS Guidelines.

Once the DNR Comfort Care protocol has been activated, the wishes of family members or bystanders demanding or requesting resuscitation should not be honored. Any and all resuscitative measures should continue to be withheld. Attempts should be made to help the family understand the dying process and the patient's choice not to be resuscitated.

When the DNR Comfort Care Protocol has been activated, EMS personnel will provide the following care as clinically indicated:

1. Suction the airway.
2. Administer oxygen.
3. Position for comfort.
4. Splint or immobilize.
5. Control bleeding.
6. Provide pain medication.
7. Provide emotional support.
8. Contact medical direction
9. Contact other appropriate health care providers such as hospice, home health, attending physician, CNP/CNS as time or patient scenario permits.

When the DNR Comfort Care Protocol has been activated, EMS personnel will not perform the following:

1. Administer chest compressions.
2. Insert an artificial airway.
3. Administer resuscitative drugs.
4. Defibrillate or cardiovert.
5. Provide respiratory assistance other than the methods listed above.
6. Initiate resuscitative IV access.
7. Initiate cardiac monitoring.

NOTE: If any of these actions have been initiated prior to confirmation of the patient's DNR Comfort Care status, discontinue them when the DNR Comfort Care protocol is activated. Any and all respiratory assistance, IV medications, or other therapies that have been part of a patient's ongoing course of treatment for an underlying disease may be continued.

When the DNR Comfort Care protocol is performed, the suggested documentation on the patient care report should include the following information:

1. The document identifying the DNR Comfort Care status of the patient.
2. The method of verification of the patient's identity, if any was found through reasonable efforts.
3. DNR Comfort Care or DNR Comfort Care-Arrest classification.
4. All actions taken to implement the DNR Comfort Care protocol.
5. Any and all unusual events occurring enroute or on scene including interactions with family members, bystanders, or health care providers.

Any and all questions or concerns that arise during the management of DNR Comfort Care patients may be directed to and discussed with medical direction for assistance and guidance.

PROTOCOL FOR PATIENT REFUSAL

GENERAL STATEMENT

A. Competent adult patients have the right to give consent for, or refuse, any or all treatments. EMS professionals should attempt to obtain vital signs on all patients. Competent adult patients also have the right to give consent for, or refuse ambulance transport. Each agency should have established guidelines for patient consent and refusal. A performance improvement (PI) process should be in place to review these runs.

1. Consent

a. When waiting to obtain lawful consent from the person authorized to make such consent would present a serious risk of death, serious impairment of health or would prolong severe pain or suffering of the patient, treatment may be undertaken to avoid those risks without consent. In no event should legal consent procedures be allowed to delay immediately required treatment.

b. Adults

A competent patient may withdraw consent for treatment at any time.

1. Prior to discontinuing or withdrawing treatment, the EMS professionals should determine if the patient is competent

2. Mental Competence - Decision Making Capability

- a. A person is mentally competent if he:
 1. Is capable of understanding the nature and consequences of the proposed treatment.
 2. Has sufficient emotional control, judgment, and discretion to manage his own affairs.
- b. Ascertaining that the patient is oriented, has an understanding of what happened and may possibly happen if treated or not treated, and a plan of action - such as whom he will call for transportation home - should be adequate for these determinations.

3. Impairment

- a. Patients may be considered incompetent to refuse care and/or transportation when they appear impaired. Patients who appear impaired include:
 - Suicidal Patients
 - Patients impaired by alcohol
 - Patients impaired by illicit drugs
 - Patients impaired by prescription or nonprescription drugs
 - Patients impaired by medical conditions such:
 - Hypoglycemia
 - Hypoxemia
 - Hypoperfusion
 - Head trauma
 - Psychiatric conditions

PROTOCOL FOR PATIENT REFUSAL (cont'd)

c. Pediatric

1. A critically ill or injured child should be treated and transported immediately
2. In non-emergency cases involving minors, consent should be obtained from the parent or legal guardian prior to undertaking any *treatment*. All children must be evaluated for acuity of illness, regardless of obtaining parental consent.
3. Each agency should have policies which delineate situations in which children may be left at the scene, emancipated status, and instances when medical control should be contacted.

PROCEDURE FOR REFUSAL

- A. If a patient wishes to refuse treatment, examination or transportation, each agency should have steps which will be followed and optimally all of these runs will be reviewed as part of the PI process.
- B. The completion of a Patient Refusal Checklist by the EMS professional is suggested (see enclosed example)
 1. The patient must be advised of the benefits of treatment and transport as well as the specific risks of refusal of treatment and transport.
 2. The patient must be able to relate to the EMS professional in his or her own words what the risks and benefits of refusal of transport.
 3. The patient will be provided with a refusal information sheet, also attached. A copy of this refusal information sheet or the refusal section of the check list will be signed by the patient, dated, and both will be kept with the patient's file.

EMS PATIENT REFUSAL CHECKLIST

1. ASSESSMENT OF PATIENT (CIRCLE APPROPRIATE RESPONSE)

ALCOHOL / DRUGS INGESTION PER HISTORY OR EXAM	Y	/	N
ALTERED LEVEL OF CONSCIOUSNESS	Y	/	N
HEAD INJURY	Y	/	N
ORIENTED TO: PERSON PLACE TIME SITUATION			

2. MEDICAL CONTROL

CONTACTED VIA: PHONERADIO TIME _____
 UNABLE TO CONTACT () MEDICAL CONTROL PHYSICIAN _____

If medical control not able to be contacted, explain in comment section of checklist
 ORDERS:

- () INDICATED TREATMENT / TRANSPORT MAY BE REFUSED BY PATIENT
- () USE REASONABLE FORCE / RESTRAINT TO PROVIDE TREATMENT
- () USE REASONABLE FORCE AND / OR RESTRAINT TO TRANSPORT

OTHER _____

3. PATIENT ADVISED (CIRCLE APPROPRIATE RESPONSE)

*	MEDICAL TREATMENT / EVALUATION NEEDED	Y	/	N
*	AMBULANCE TRANSPORT NEEDED	Y	/	N
*	FURTHER HARM MAY RESULT WITHOUT MEDICAL TREATMENT OR EVALUATION	Y	/	N
*	TRANSPORT BY MEANS OTHER THAN AMBULANCE COULD BE HAZARDOUS IN LIGHT OF THE PATIENT'S PRESENT ILLNESS OR INJURY	Y	/	N
*	PATIENT PROVIDED WITH REFUSAL ADVICE SHEET	Y	/	N
*	PATIENT WOULD NOT ACCEPT REFUSAL SHEET	Y	/	N

4. DISPOSITION

- () REFUSED ALL EMS SERVICES
- () REFUSED TRANSPORT, ACCEPTED FIELD TREATMENT
- () REFUSED FIELD TREATMENT, ACCEPTED TRANSPORT
- () RELEASED IN CARE OR CUSTODY OF SELF
- () RELEASED IN CUSTODY OF LAW ENFORCEMENT AGENCY
 AGENCY _____
 OFFICER _____
- () RELEASED IN CARE OR CUSTODY OF RELATIVE OR FRIEND
 NAME _____
 RELATION _____

5. COMMENTS

EMS PROFESSIONAL _____ DATE _____ TIME _____

OFFICER _____ DATE _____ TIME _____

REFUSAL INFORMATION SHEET

PLEASE READ AND KEEP THIS FORM

This form has been given to you because you have refused treatment and/or transport by the Emergency Medical Service. Your health and safety are our primary concern, so even though you have decided not to accept our advice, please remember the following:

1. The evaluation and/or treatment provided to you by EMS professionals is not a substitute for medical evaluation and treatment by a doctor. We advise you to get medical evaluation and treatment.
2. Your condition may not seem as bad to you as it actually is. Without treatment your condition or problem could become worse. If you are planning to get medical treatment, a decision to refuse treatment or transport by the EMS may result in a delay which could make your condition or problem worse.
3. Medical evaluation and/or treatment may be obtained by calling your doctor, if you have one, or by going to any hospital emergency department in this area, all of which are staffed 24 hours a day by emergency physicians. You may be seen at these emergency departments without an appointment.
4. If you change your mind or your condition becomes worse and you decide to accept treatment and transport by the Emergency Medical Service, please do not hesitate to call us back. We will do our best to help you.
5. ☐ **If the box at the left has been checked**, it means that your problem or condition has been discussed with an emergency physician at the medical control hospital by radio or telephone, and the advice given to you by the Emergency Medical Service has been issued or approved by the emergency physician.

*** I have been informed of the dangers of my not being treated and/or transported by the Emergency Medical Services, for my condition, for treatment by an emergency department or private physician. I release _____ and consulting hospital their employees and officers from all liability for any adverse results caused by my decision.

I have received a copy of this information sheet.

Signature: _____

Circle one: Patient Spouse Parent Guardian

Print Name: _____

Signature of EMS professional: _____ Witness: _____

Print Name: _____

Report Number: _____ Date: _____

NON-TRANSPORTS

A number of EMS calls result in non-transport of the patient or victim. If an individual is not transported by the squad, the following guidelines will apply:

1. In the event of a patient assist call and no Emergency Medical Services are rendered, a report should be made but Medical Control need not be contacted.
2. If the patient refuses treatment or transport, the patient refusal procedure should be followed.
2. If the patient is requesting transport and the EMS professionals in charge does not feel it is necessary to transport the patient, Medical Control must be contacted and approve the EMS refusal. This includes any case that might be transported by car or private ambulance.
 - a. A Code I Advisory Sheet should be initiated and given to the patient. (See Code I Advisory Sheet)
4. Code I (non-transport) for minors

If after evaluation of a minor, the EMS professional and medical control agree that the patient is a Code I, that minor can be left in the care of a responsible adult that is not the parent or legal guardian. The responsible adult may be a family friend, neighbor, school bus driver, teacher, school official, police officer, social worker, or other person at the discretion of medical control and the EMS professional.

CODE I ADVISORY SHEET

You have been evaluated by an EMS professional in communication with a physician over a radio. It has been determined that you do not need an ambulance at this time. **THIS DOES NOT MEAN THAT YOU SHOULD NOT BE SEEN BY A PHYSICIAN. THE EVALUATION AND TREATMENT YOU RECEIVED WAS TO DETERMINE THE SEVERITY OF YOUR PROBLEM AND WHETHER OR NOT YOU NEEDED AN AMBULANCE; IT IS NOT A SUBSTITUTE FOR FINAL EVALUATION AND TREATMENT BY A PHYSICIAN.**

We advise you to see a physician at this time. You may decide that you don't need to see a physician now, but if you don't then you must take the risk that you will not receive treatment that you need and that this may cause problems for you later on. The following may help you decide:

1. If you have a cut, only a physician should decide whether or not you need stitches. Most physicians recommend stitches within 8 hours because after that the risk of an infection becomes much greater.
2. If you have a cut, scrape or burn and have not had a tetanus (lockjaw) shot within 5 years, you may need one. You do not need to get a tetanus shot immediately, but you should not delay this more than 24 hours.
3. Many burns do not appear to be as bad as they really are. Also, serious problems can develop from some burns which may be prevented by early medical treatment.
4. If the pain or other discomfort you had has gone away, it does not necessarily mean the problem that caused it has gone away.
5. If you decide you don't need to see a physician and then change your mind, don't wait. The longer you wait, the more problems you may have.

USE COMMON SENSE!!!

"IF I DON'T HAVE A PHYSICIAN, OR CAN'T SEE MY PHYSICIAN NOW, WHAT CAN I DO?"

GO TO THE NEAREST EMERGENCY DEPARTMENT OR CALL BACK EMERGENCY MEDICAL SERVICES.

Patient Signature _____ Date _____

EMS Professional's Signature _____

Report # _____

HEAVY PATIENTS

GENERAL CONSIDERATIONS

Less than one percent of the population has a weight in excess of 300 pounds. This means that in any community there may be one or more individuals who fall into this extreme. As patients, these individuals are frequently classed as high risk because of the increased medical complications associated with their excess weight. In the EMS system they present the additional problem of movement and transportation. These individuals have the right to expect prompt and expert emergency medical care. Therefore, in order to facilitate the care of these individuals without risking the health of EMS professionals, the following protocol is established.

- A. In managing a patient with weight over 300 pounds, at no time should the patient be moved without at least 6 individuals to assist. At the scene, as many EMS professionals as can be mobilized may be supplemented by police or other safety personnel as appropriate. If 6 individuals are not available, mutual aid will be required.
- B. It may be necessary to remove doors, walls or windows. The situation is no different than extrication from a vehicle, although property damage may be higher. At all times the patient's life must be the first priority.
- C. The patient is to be placed on at least 2 (double) backboards or other adequate transfer device for support.
- D. The patient is to be loaded on a cot that is in the down position, and the cot is to be kept in the down position at all times.
- E. Three (3) EMS professionals are to accompany the patient during transport. If additional personnel are available they are to travel in a separate vehicle.
- F. The patient will be loaded directly from the squad onto a special hospital bed for this type of patient, which will be brought to the ED entrance.
- G. It is NECESSARY TO NOTIFY THE HOSPITAL WELL IN ADVANCE of arrival so that preparations can be completed in a timely fashion.
- H. If individuals in the community are known to fall within this special category it is appropriate to inform them in advance of the type of assistance they can expect from the EMS system, and help them make plans well in advance to assist you. When calling for the squad, and if they identify themselves and their special needs, it will promote the timeliness of your efforts.

PATIENTS WITH FUNCTIONAL NEEDS

In 1980, the World Health Organization created a classification called the International Classification of Impairments, Disabilities, and Handicaps (ICHDH) to identify populations with health components of special needs and/or disability. The list of conditions cited under this classification has been expanded several times over the years and remains in a fluid state. In 2001, the World Health Assembly amended the title of this classification to the International Classification of Functioning, Disability, and Health (ICF), and over time, the term “special needs” has been replaced with “functional needs”. In the United States, the Americans with Disabilities Act of 1990 (ADA) was the initial broad civil rights law to address individuals with disabilities. Many states, including Ohio, passed similar legislation to support individuals with disabilities and patients with functional needs. Per the ADA, disability is defined as “a physical or mental impairment that substantially limits a major life activity”.

EMS professionals must be cognizant of the protocols provided by the EMS medical director for the prehospital management of functional needs patients as well as the existing state and federal legislation. Most importantly, the quality of medical care should not intentionally be diminished or adversely altered during the triage, treatment, and transport of functional needs patients. Although your EMS medical director may provide additional parameters and protocols, the following provides a basic overview of the patient management scenarios most frequently seen by EMS professionals.

Communication Barriers

Language Barriers: EMS professionals may accept the assistance of family members or bystanders during communication with a patient who has expressive and/or receptive aphasia, is nonverbal, or who speaks a different language than the EMS professional. Documentation of the identification of the person assisting with the communication and, if possible, transport of this individual to the hospital with the patient is advised. For differences in language, there are a number of products on the market (translation cards, symbols, telephone-accessible services with live interpreters, etc.) specifically created for the medical environment to assist EMS professional in obtaining a patient’s chief complaint, medical history, medication, allergies, and other critical information. The methods through which the patient augments their communication skills (eye blinking, nodding, etc.) should be noted and communicated to the receiving facility.

Sensory Barriers: Sensory barriers, i.e. visual or auditory impairment, may present challenges in the prehospital setting, particularly during the acquisition of a patient history and the completion of patient assessment. The methods through which the patient augments their communication skills (use of Braille, sign language, lip reading, etc.) should be noted and communicated to the receiving facility. Written communication between the patient and the EMS professional is part of the medical record, even if it is on a scrap sheet of paper, and it should be retained with the same collation, storage, and confidentiality policies and procedures that are applicable to the written or electronic patient care report.

Assistance Adjuncts

Assistance devices: The devices that facilitate the activities of life for the patient with functional needs should be noted. These devices include, but are not limited to, magnifiers, white or sensory canes, hearing aids, tracheostomy speaking valves, or extremity prostheses. These devices should accompany the patient if possible during transport as their availability to the patient can facilitate the interaction between the patient and the healthcare provider and enhance the patient’s safety and overall well-being.

Service Animals: A service animal, usually a dog, is not classified as a pet and should, by law, always be permitted to accompany the patient. A service animal as defined by the ADA is “any guide dog, signal dog, or other animal individually trained to do work or perform tasks for the benefit of an individual with a disability, including, but not limited to guiding individuals with impaired vision, alerting individuals with impaired hearing to intruders or sounds, providing minimal protection or rescue work, pulling a wheelchair, or fetching dropped items.” The service animal is not required to wear a vest or a leash, and it is illegal to make a request for special identification or documentation from the service animal’s partner. EMS professionals may only ask the patient if the service animal is required because of a disability and the form of assistance the animal has been trained to perform. EMS professionals are not responsible for the care of service animals. If the patient is incapacitated and cannot personally care for the service animal, a decision can be made whether or not to transport the animal in this situation. Animals that provide emotional support, comfort, or companionship do not qualify as service animals.

ON SCENE EMS INTERVENER

On an EMS run where an unknown EMS professional from outside the responding EMS agency wishes to intervene in the care of patients, the following steps should be initiated:

1. Ideally, if no further assistance is needed, the offer should be declined.
2. If the EMS intervener's assistance is needed or may contribute to the care of the patient:
 - a. An attempt should be made to obtain proper identification and confirm the possession of a valid Ohio EMS certificate. Acceptance of borderline states' EMS certification or licensure documents is at the discretion of individual EMS services. Notation of the EMS intervener's name, address and certification numbers must be documented on the run report.
3. Significant involvement with patient care or variance from protocols will require the EMS intervener to accompany the patient to the hospital.

PHYSICIAN AT THE SCENE

GOOD SAMARITAN PHYSICIAN

This is a physician with no previous relationship to the patient, who is not the patient's private physician, but is offering assistance in caring for the patient. The following criteria must be met for this physician to assume any responsibility for the care of the patient:

1. Medical Control must be informed and give approval.
2. The physician must have proof they are a physician. They should be able to show you their medical license. Notation of physician name, address, and certification numbers must be documented on the run report.
3. The physician must be willing to assume responsibility for the patient until relieved by another physician, usually at the emergency department.
4. The physician must not require the EMS professional to perform any procedures or institute any treatment that would vary from protocol and/or procedures outlined in the protocols provided by the medical director of the EMS agency or is not within the Ohio EMS scope of practice.

If the physician is not willing or able to comply with all the above requirements, his assistance must be courteously declined.

PHYSICIAN IN HIS/HER OFFICE, OR URGENT CARE CENTER

1. EMS should perform its duties as usual under the supervision of medical control or by protocol.
2. The physician may elect to treat the patient in his office.
4. The EMS professional should not provide any treatment under the physician's direction that varies from protocols provided by the medical director of the EMS agency or is not within the Ohio EMS scope of practice. If asked to exceed these boundaries, the EMS professional should decline the request until contact is made with Medical Control.
4. Once the patient has been transferred into the squad, the patient's care becomes entirely under medical control.

RESTRAINTS

GENERAL GUIDELINES

- A. Soft restraints are to be used only when necessary in situations where the patient is potentially violent and may be of danger to themselves or others. Patients who are clinically competent retain a right to refuse transport. EMS professionals must remember that aggressive violent behavior may be a symptom of medical conditions such as but not limited to:
 - 1. Head trauma
 - 2. Alcohol/drug related problems
 - 3. Metabolic disorders (i.e., hypoglycemia, hypoxia, etc.)
 - 4. Psychiatric/stress related disorders
- B. Patient health care management remains the responsibility of the EMS professional. The method of restraint shall not restrict the adequate monitoring of vital signs, ability to protect the patient's airway, compromise peripheral neurovascular status or otherwise prevent appropriate and necessary therapeutic measures. It is recognized that evaluation of many patient parameters requires patient cooperation and thus may be difficult or impossible.
- C. All restraints should have the ability to be quickly released, if necessary.
- D. The person who was responsible for applying a restraining device that requires a key or special releasing device must physically remain with the patient regardless of the vehicle of transport in the interest of the patient's safety. This policy is not intended to negate the need for law enforcement personnel to use appropriate restraint equipment to establish scene control.
- E. Patients should be transported in the supine or decubitus position to ensure adequate respiratory and circulatory monitoring and management. The prone position should be a position of last resort and rarely used. All restrained patients should be placed on a stretcher with adequate foam padding particularly underneath the head if the patient is positioned in the prone position. Extremity restraints should be secured to the stationary portion of the stretcher frame in a fashion where they can be removed quickly in the event of an emergency. Stretcher straps should be placed on all patients as these are analogous to seatbelts during transport. Restraint of the extremities in a spread eagle fashion significantly reduces the strength the patient can generate from the large muscle groups. Restraints that use multiple knots or that may restrict chest wall motion are unacceptable.
- F. Restrained extremities should be monitored for color, nerve and motor function, pulse quality, and capillary refill at the time of application and frequently thereafter. The patient's ventilatory status, pulse oximetry, or waveform capnography should be monitored during transport.
- G. After addressing and/or treating metabolic causes of aggressive or violent behavior, administration of a benzodiazepine and/or antipsychotic as a chemical restraint should be considered.

RESTRAINTS (cont'd)

- H. Restraint documentation on the EMS report shall include:
 - 1. Reason for restraint
 - 2. Agency responsible for restraint application (i.e., EMS, Police)
 - 3. Documentation of serial cardio-respiratory status and peripheral neurovascular status
- I. Prehospital care providers reserve the right to refuse elective transport of patients who are deemed too violent or uncooperative to be controlled by the restraint methods and devices permitted by their prehospital protocols. The safety of prehospital care providers will be maintained at all times during transport. The prehospital care provider reserves the right to request completion of transport by law enforcement personnel. The prehospital care provider may administer an appropriate dose of a benzodiazepine and/or antipsychotic as a pharmacological restraint prior to transport of the patient. The prehospital care provider reserves the right to suggest to medical facilities the use of adequate pharmacological restraints prior to acceptance of the patient. A decision to refuse elective transport of a violent or uncooperative patient may be made by any member of the prehospital care team or its supervisor. Medical direction may be contacted at any time for advice or for pharmacological orders.

TRANSPORT TO FREE-STANDING EMERGENCY/URGENT CARE CLINICS

EMS units should not transport patients to free-standing emergency care clinics (***free-standing emergency departments are acceptable destinations***), urgent care facilities, or private physicians' offices in response to emergency calls except:

1. When directed by Medical Control.
2. If specifically authorized by on-line medical direction.
3. When the EMS unit is following protocols approved by medical control.
4. When the EMS unit is a private service responding to a call in which the patient and/or the family requests transport to such facility and the patient is clearly in stable condition.
5. During a declared emergency disaster as directed by medical control, a public health authority, or the governor.

NON-HOSPITAL TRANSFER POLICY

GUIDELINES FOR TRANSFER FROM A NON-HOSPITAL LOCATION TO A NON-HOSPITAL LOCATION: HOME TO HOSPICE; HOSPICE TO HOME

- A. On occasion, the out-of-hospital EMS professional(s) will be called upon to transport a patient from a non-hospital location to another non-hospital facility such as hospice center or from hospice to home or a doctor's office. The provider(s) will follow the written or pre-existing orders of the patient's physician or physician approved hospice center orders for the transport. At times, a hospice nurse may arrive or already be at the scene. He/she should be able to help review orders and/or advance directives such as DNR or "Support Care" orders to enable transport in accordance with the wishes of the patient and his/her family. A hospice patient by definition is DNR.

Medical Control does not need to be contacted unless the DNR is revoked. However, if the EMS professional(s) feels the need to contact Medical Control for advice or direction, the professional(s) will clearly advise Medical Control of the patient's terminal condition and DNR status.

If medication(s) needs to be "wasted", e.g., morphine, Valium® or Versed®, then the receiving hospice supervisor, nurse or EMS supervisor may witness and document appropriate disposal of the said medication(s) and administration equipment, e.g., needle(s), syringe(s), IV catheter(s), heparin or saline lock(s) or IV lines and/or solutions. Medications or equipment should never be transported to an emergency department to be disposed of or wasted. Any and all waste materials will be disposed into approved and appropriately labeled containers.

INTERFACILITY PATIENT TRANSPORT GUIDELINES

The transportation of patients from one healthcare facility to another should be carried out in an orderly and expeditious manner. Regardless of origin or destination, patients remain the responsibility of the transferring physician until received by the accepting physician or his/her agent. The transfer papers and accompanying record must document the reason for transfer as well as the time of contact and the name of the receiving facility, physician and/or accepting agent in accordance with nationally recognized standards and federal regulations.

The decision regarding the level and scope of practice of the out-of-hospital transporting agency and the individual providers should be made in consultation with the receiving physician and must be appropriate to the stability of the patient and their medical and equipment needs. The provider will be responsible for carrying out the orders of the transferring physician during the transfer unless acting as the agent of the receiving facility with superseding medical control, or if a physician accompanies the patient. Any questions or concerns regarding those orders, including but not limited to Do Not Resuscitate (DNR) orders, medications or treatments, must be answered or clarified prior to departure. The route(s) of travel, possible diversionary medical facilities and their phone or radio call numbers should also be determined.

If unanticipated problems or concerns arise during transport, direct, on-line medical control will be obtained. If for technical or logistical reasons this is not possible, the transporting agent should follow written protocols or standing orders until the transferring, receiving or nearest diversionary facility can be contacted on-line.

TERMINATION OF RESUSCITATION EFFORTS

"Resuscitation may be discontinued in the prehospital setting when the patient is nonresuscitable after an adequate trial of ACLS."

In accordance with the Journal of American Medical Association's guidelines for cardiopulmonary resuscitation and emergency cardiac care, the above statement encourages local medical directors to develop guidelines for prehospital care providers to terminate resuscitation efforts when the patient's survivability is questionable.

A trial of ACLS, according to the guidelines, occurs when:

- 1) adequate BLS has been provided for a reasonable length of time;
- 2) endotracheal intubation has been successfully accomplished;
- 3) intravenous access has been achieved and rhythm-appropriate medications and countershocks for ventricular fibrillation have been administered according to protocol; and
- 4) persistent asystole or agonal electrocardiographic patterns are present and no reversible causes are identified.

The State of Ohio Regional Physician Advisory Board has adopted the following criteria for termination of resuscitation efforts at the scene following unmonitored, out of hospital, adult, primary cardiac arrest.

Paramedic personnel under local medical control authority may terminate resuscitation when:

- 1) adult cardiopulmonary arrest (not associated with trauma, body temperature aberration, respiratory etiology, or drug overdose);
- 2) standard ACLS in accordance with American Heart Association guidelines has been carried out for over 20 minutes;
- 3) no restoration of circulation (spontaneous pulse rate of greater than 60 beats per minute for at least a 5 minute period); and
- 4) absence of persistent, recurring, or refractory ventricular fibrillation/tachycardia or any continuous neurological activity (e.g., spontaneous respirations, eye opening or motor response).

When the above conditions have been met, the Paramedic should contact medical control and request termination of resuscitation.

Documentation should be completed and forwarded to the appropriate medical control authority within 48 hours of the run.

CENTRAL LINE MONITORING

1. All fluids, medications, modified total parenteral nutrition (TPN), and hyperalimentation can be administered via central lines.
2. Central sites should be monitored for bleeding, swelling, redness, pain or leaking of the infusing fluid. If any of these complications occur, the infusion should be discontinued immediately. Firm pressure should be applied on the entrance site if bleeding or fluid leakage persists.
3. Do not remove central venous catheters.
4. Common central venous sites include the internal jugular, subclavian, femoral, and antecubital veins.
5. Central catheters may have single or multiple lumens. Medications can be administered simultaneously using one continuous medication per lumen.
6. Swan-Ganz catheters are used to measure cardiac output and pulmonary artery and central venous pressure as well as to infuse fluids.
 - a. Disconnect the Swan-Ganz catheter from the transducer.
 - b. Continue fluid infusion through the catheter port or have the nurse close the port with a cap or heparin lock port.
 - c. Have the nurse check the balloon port to insure that it is deflated.

CHEST DECOMPRESSION

GENERAL CONSIDERATIONS

The treatment of tension pneumothorax involves decompression of the affected chest cavity to release the pressure that has developed.

Decompression can be achieved, with minimal risk, by the insertion of a 14 or 16 gauge needle into the second inter-costal space at the midclavicular line. Also an approach in the mid-axillary line between the fifth and sixth rib is possible, and considered safer by some physicians.

The needle must be inserted superior to the rib because the intercostal artery, vein and nerve follow the inferior portion of the rib.

INDICATION

Tension pneumothorax indicated by:

- A. Diminished or absent lung sounds
- B. Cyanosis and difficulty breathing
- C. Distended neck veins
- D. Tachycardia, tachypnea, hypotension, narrow pulse pressure
- E. Tracheal shift to the unaffected side (May not always be present)

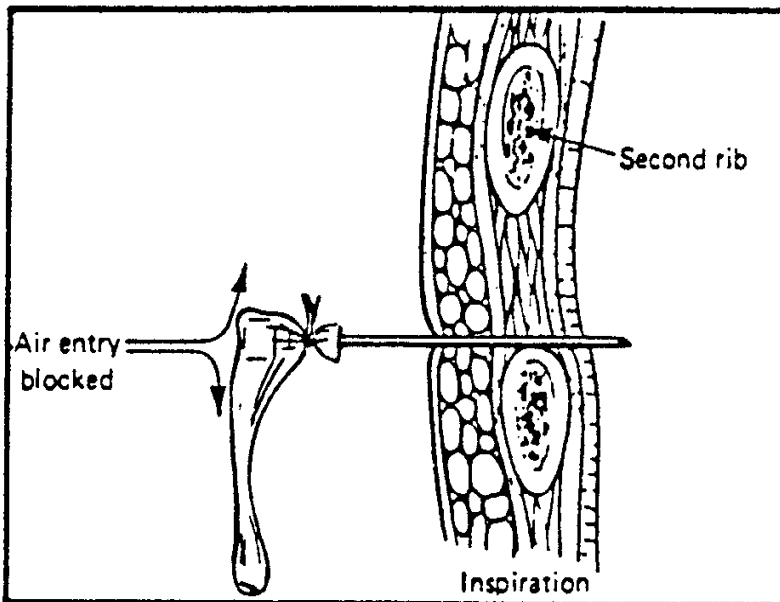
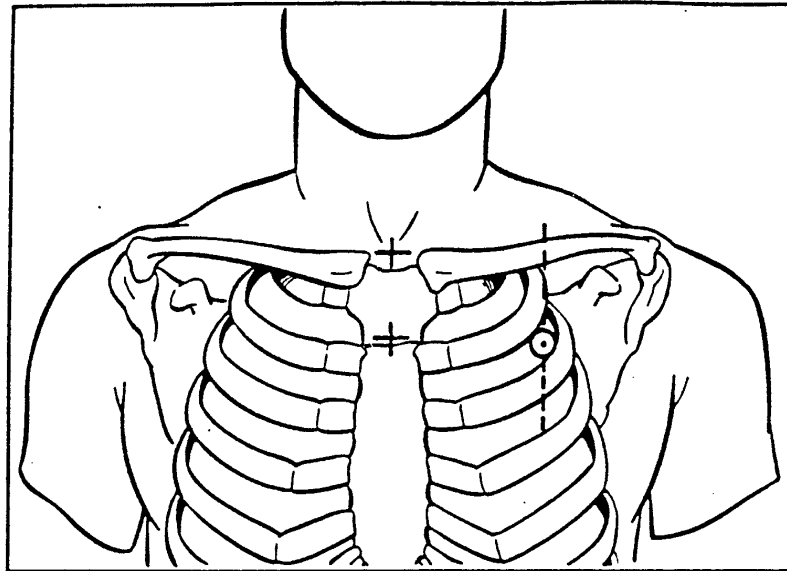
PROCEDURE

- A. Prepare equipment: 14 or 16 gauge needle, antiseptic solution (Intracath[®] needle with stylet removed is preferred, because sheath provides one-way valve.)
- B. Locate site:
 - 1. Second or third intercostal space, midclavicular
 - 2. Fourth intercostal space between the fourth and fifth rib, midaxillary
- C. Prep site, if time permits
- D. Insert the needle just superior to the rib until a rush of air is felt and/or heard
- E. Secure needle in place
- F. Support patient with 100% oxygen and transport without delay

CONTRAINDICATIONS

Insufficient training.

CHEST DECOMPRESSION (cont'd)



CHEST TUBE MONITORING

Chest tubes, which drain intrathoracic air or fluid, are positioned in the fourth or fifth intercostal space at the mid-axillary line or the second or third intercostal space at the mid-clavicular line. They are secured with sutures and tape and the entrance site covered with a clean, sterile dressing.

Chest tubes are connected to suction via a drainage system. The transferring nurse should check the suction control and record its pressure on the transfer form. The collection chamber of the drainage system contains the intrathoracic fluid if present. The collection chamber should be emptied by the nurse prior to transfer. The water seal chamber of the drainage system prevents reentry of air or fluid into the intrathoracic space. Bubbles in the water may be seen and may vary with the patient's respirations. Chest tubes usually require 15 to 20 cm of water pressure in the suction chamber to drain properly.

Prior to transfer of the patient, inspect for and remove all kinks and loops in the tubing. The connection between the chest tube and drainage system should be secure and taped. The drainage system is to be placed in the upright position below the level of the patient's chest.

If a chest tube comes out during transfer, treat as a sucking chest wound. Cover the entrance site with an occlusive dressing, preferably Vaseline[®] gauze. If Vaseline[®] gauze is unavailable, cover the entrance site with sterile gauze and apply firm, continuous pressure with the hand.

Call medical direction immediately for:

- Deterioration of respiratory status
- Chest tube fluid drainage greater than 100 ml/hour
- New onset of bloody fluid drainage from chest tube

CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

Continuous positive airway pressure (CPAP) has been shown to rapidly improve vital signs, gas exchange, the work of breathing, decrease the sense of dyspnea, and decrease the need for endotracheal intubation in the patients who suffer from shortness of breath from congestive heart failure and acute cardiogenic pulmonary edema. CPAP is also shown to improve dyspnea associated with pneumonia, chronic obstructive pulmonary disease (asthma, bronchitis, emphysema). In patients with CHF, CPAP improves hemodynamics by reducing preload and afterload.

Indications:

Dyspnea and/or hypoxemia secondary to congestive heart failure, acute cardiogenic pulmonary edema, pneumonia, chronic obstructive pulmonary disease (asthma, bronchitis, emphysema) and:

- A. Any patient who is complaining of shortness of breath for reasons other than pneumothorax or chest trauma
- B. Is awake and oriented
- C. Has the ability to maintain an open airway (GCS>10)
- D. Has a respiratory rate greater than 25 breaths per minute
- E. Has a systolic blood pressure above 90 mmHg
- F. Uses accessory muscles during respirations

Contraindications:

1. Pneumothorax
2. Respiratory arrest
3. Agonal respirations
4. Unconscious
5. Shock associated with cardiac insufficiency
6. Penetrating chest trauma
7. Persistent nausea/vomiting
8. Facial anomalies / stroke obtundation / facial trauma
9. Has active upper GI bleeding or history of recent gastric surgery

Procedure:

1. Assess patient for signs / symptoms of pneumothorax
2. Place patient in a sitting position
3. Assess vital signs and SpO₂ frequently
4. AEMT and Paramedic: Attach ECG monitor
5. If BP <90 systolic contact Medical Control prior to beginning CPAP
6. Begin at lowest level of positive pressure available
7. Explain the procedure to the patient:
 - i. Patient requires reassurance to be used effectively.
 - a. Example: "You are going to feel some pressure from the mask but this will help you breath easier."
 - ii. Place delivery device over mouth and nose.
 - iii. Instruct patient to breath in through their nose slowly and exhale through their mouth as long as possible (count slowly and aloud to four then instruct to inhale slowly).

CONTINUOUS POSITIVE AIRWAY PRESSURE (cont'd)

8. For CHF/Pulmonary Edema, titrate to 10 cm H₂O. For all other SOB, titrate to 5 cm H₂O
9. Check for air leaks
10. Treatment should be given continuously throughout transport to the emergency department.
11. Continue to coach patient to keep mask in place and readjust as needed
12. If respiratory status or level of consciousness deteriorates, remove device and begin bag valve mask ventilation.
13. Documentation on the patient care record should include:
 - a. CPAP level
 - b. Frequent SpO₂ and vital sign assessment
 - c. Response to treatment
 - d. Any adverse reactions

Special Notes:

1. CPAP should not be used in children under 12 years of age
2. Advise receiving hospital as soon as possible so they can prepare for the patient's arrival
3. Do not remove CPAP until transfer of care has taken place at receiving hospital
4. Continuous reassessment of patient airway

CRICOTHYROTOMY

INDICATIONS

Unable to intubate by another route. This may be seen with:

- A. Cervical spine injuries
- B. Maxillofacial trauma
- C. Laryngeal trauma
- D. Oropharyngeal obstruction from:
 - 1. Edema from infection, caustic ingestion, allergic reaction, and/or inhalation injuries
 - 2. Foreign body
 - 3. Mass lesion
- E. Orotracheal or nasotracheal intubation is contraindicated for any reason

COMPLICATIONS

- A. Postoperative bleeding
- B. Late bleeding
- C. Abscess behind packing
- D. Cellulitis of neck
- E. Subcutaneous emphysema
- F. Voice change
- G. Feeling of lump in throat
- H. Persistent stoma
- I. Obstructive problems
- J. Misplacement of the airway

NEEDLE CRICOTHYROTOMY PROCEDURE

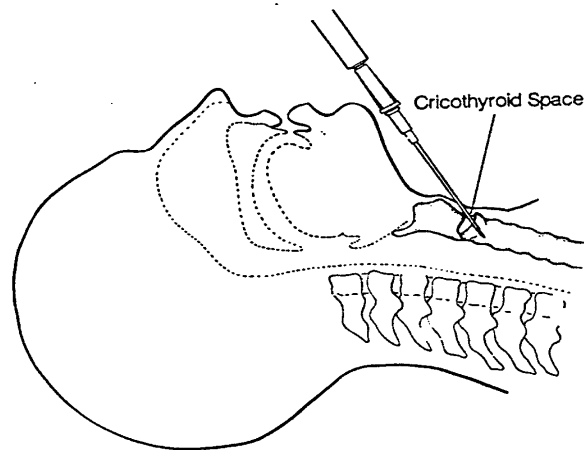
If time permits, prep the area with appropriate antiseptic solution. Attach a large angiocath (14-16 ga) to a syringe, and insert the needle through the cricothyroid membrane (CTM) and aspirate. Aspiration of air indicates proper placement.

If the intention is to use this as a temporary means of oxygenation then the catheter should then be slid into place.

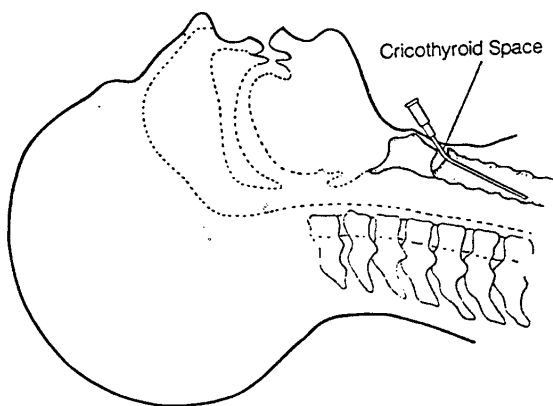
If the needle is going to be used as a guide for formal cricothyrotomy then the catheter should not be used in order to prevent the possibility of shearing off the catheter when the scalpel is used.

A jet ventilator should be used to provide sufficient volume of oxygen at a pressure of no more than 30 psi.

Needle cricothyrotomy is the preferred method in children less than 11 years of age.



14 Gauge Catheter Insertion



SURGICAL CRICOTHYROTOMY PROCEDURE

Make a 2 to 4 cm vertical skin incision over cricothyroid membrane. Once the membrane has been exposed, make a 1.5 to 2 cm horizontal incision into the membrane and through to the trachea. Maintain a slight caudal direction, with the blade, to avoid damage to vocal cords.

Use forceps or dilator to spread the aperture in the cricothyroid membrane. Again, caution against vocal cord injury by angling instruments caudally.

If time does not allow or equipment is not available, the blunt end of the scalpel can be placed in the incision and twisted to open the aperture.

Insert an appropriate size endotracheal tube (6 cm tube). Advance caudally and inflate balloon. When the tube is in place, check breath sounds and secure the tube.



ENDOTRACHEAL INTUBATION

INDICATION

Endotracheal intubation is to be utilized for any victim with respiratory arrest and/or insufficiency to achieve complete control over the airway. It protects the airway from aspiration of foreign material and it allows for intermittent positive pressure ventilation to be achieved with 100% oxygen. It makes the trachea and the respiratory tract available for suctioning, and also eliminates the problem of gastric distention.

NOTE: Orotracheal intubation is outside of the Ohio EMS scope of practice for EMTs effective **January 13, 2013**.

HAZARDS

- A. Esophageal intubation
- B. Tracheal rupture
- C. Right mainstem bronchus intubation
- D. Broken teeth
- E. Laryngospasms
- F. Trauma to the oropharynx
- G. Trauma or puncture of trachea due to misplacement of stylet

OROTRACHEAL INTUBATION

- A. Always begin artificial ventilation as soon as possible using mouth-to-mouth, nose-to-nose, bag-valve-mask or oxygen powered manually triggered or automatic transport ventilation device.
- B. Assemble and ready equipment:
 - 1. Endotracheal tubes of various sizes
 - 2. Laryngoscope and blades
 - 3. Malleable stylet
 - 4. Magill forceps
 - 5. 10 ml syringe
 - 6. Suction apparatus and catheters
 - 7. Water soluble lubricant
 - 8. ET tube tape
 - 9. Oropharyngeal airway
- C. Check cuff on tube for leaks and lubricate tube. First attempt should be without stylet. Insert stylet into tube, if necessary.
- D. Assemble laryngoscope and check bulb
- E. Put victim's head in sniffing position. Do not allow the head to hang over the end of the table or bed; the occiput of the head should be on the same horizontal plane as the back of the shoulders, with the neck somewhat elevated.

ENDOTRACHEAL INTUBATION (cont'd)

- F. Holding the laryngoscope in the left hand, insert the blade to the right of the midline, moving the tongue up and to the left, with the blade ending up in the midline, giving clear visualization of the glottic opening
- G. Suction the mouth and the pharynx
- H. Visualize the epiglottis and vocal cords
- I. Select the proper size tube and insert in with the right hand, starting at the corner of the mouth down into the trachea, past the vocal cords approximately 2 inches
- J. Remove laryngoscope and stylet (if used), holding the tube securely with the right hand
- K. Attempt to ventilate with mouth-to-tube or bag-valve-mask and check for breath sounds in BOTH lungs
- L. If breath sounds are heard, inflate the tube's cuff with 4-6 ml of air and secure the tube in place with oropharyngeal airway used as bite block
- M. Maintain ventilation until adequate respirations resume or victim is delivered to an emergency department
- N. Recheck lungs sounds and verify tube placement each time patient is moved or every 10 minutes
- O. Document the intubation by noting the following:
 - 1. Number of attempts
 - 2. Person(s) making attempts
 - 3. Size of tube used
 - 4. Type of laryngoscope blade used on each attempt
 - 5. Lung sounds before intubation
 - 6. Lung sounds after intubation and time of each check
 - 7. Measurement on tube at lips of patient when lung sounds are present
 - 8. Any complications

NASOTRACHEAL INTUBATION

- A. Nasotracheal intubation of the airway may be used when the patient has an unprotected, inadequate airway creating hypoxia
- B. Nasotracheal intubation is indicated in:
 - 1. Patients with spontaneous breathing when all other methods of airway control and oxygenation proved to be inadequate.
 - 2. Trauma patients when cervical spine manipulation must be kept to a minimum and all other methods of airway control and oxygenation prove to be inadequate.
- C. Nasotracheal intubation is contraindicated in patients with fractures in the base of the skull or face, and in any patients who are apneic
- D. Hazards of nasotracheal intubation include:
 - 1. Nasal hemorrhage
 - 2. Laryngeal damage due to increased manipulation
 - 3. Rupture of cuff balloon from use of Magill forceps

ENDOTRACHEAL INTUBATION (cont'd)

E. When attempting nasotracheal intubation:

1. Always begin basic airway control and oxygenation as soon as possible.
2. Assemble and ready equipment:
 - a. Endotracheal tubes of various sizes with directional distal tip control
 - b. Laryngoscope and blades
 - c. Magill forceps
 - d. 10 ml syringe
 - e. Water soluble lubricant
3. Determine size of tube based on size of nasal opening.
4. Check tube cuff for leaks and lubricate tube; seat 15 mm connector firmly into tube
5. Holding tube in dominant hand, place thumb against the 15 mm connector and index finger in the ring loop
6. Insert the tube into the right nostril and advance tube gradually, anterior to posterior, avoiding superior movement which will be met with resistance and could cause injury
7. As the tube enters the pharynx, listen for breathing and pull on the tip control ring loop to turn the tube anterior towards the trachea
8. When the patient takes a breath, advance the tube into the trachea.
9. Listen for lung sounds, inflate the tube's cuff, maintain ventilation and oxygenation. Confirm tube placement with breath sounds, fogging of tube and end tidal CO₂ monitoring.
10. Intubation attempt should not take longer than 30 seconds.
11. If any resistance is encountered during insertion, abandon procedure and utilize another method of airway control and oxygenation
12. Recheck lungs sounds and verify tube placement each time patient is moved or every 10 minutes
13. Document the intubation by noting the following:
 - a. Number of attempts
 - b. Person(s) making attempts
 - c. Size of tube used
 - d. Lung sounds before intubation
 - e. Lung sounds after intubation and time of each check
 - f. Measurement on tube at nose of patient when lung sounds are present
 - g. Any complications

ENDOTRACHEAL INTUBATION (cont'd)

TUBE REMOVAL

If the patient begins to breathe spontaneously and effectively and is resisting the presence of the tube, removal of the tube may be necessary. The following procedures will be followed:

- A. Explain procedure to victim
- B. Prepare suction equipment with large-bore catheter and suction secretions from endotracheal tube, mouth and pharynx
- C. The lungs should be completely inflated so that the patient will initially cough or exhale as the tube is taken from the larynx. This is accomplished in 2 ways:
 - 1. The patient is asked to take the deepest breath they possibly can and, at the very peak of the inspiratory effort, the cuff is deflated and the tube removed rapidly; or
 - 2. Positive pressure is administered with a hand-held ventilator and, at the end of deep inspiration, the cuff is deflated and the tube rapidly removed
- D. Prepare to suction secretions and gastric content if vomiting occurs
- E. Appropriate oxygen is then administered
- F. The patient's airway is immediately evaluated for signs of obstruction, stridor or difficulty breathing. The patient should be encouraged to take deep breaths and to cough.
- G. The patient is not to be left unattended until there is no doubt of their ability to function without the artificial airway.

TUBE SIZING

The size of tube that can be passed easily into most adults is 8.0 mm (id). Therefore this tube should be tried first on the average adult. The size of tube is judged by the size of the adult, not by age.

For children, the proper tube is usually equal to the size of the child's little finger. The following guide will also help in determining the proper size tube:

Premature.....3 mm (id)	18-24 months.....5-6 mm (id)
14-24 weeks....4 mm (id)	2-4 years.....6 mm (id)
6-12 months....4-5 mm (id)	4-7 years.....6-7 mm (id)
12-18 months....5 mm (id)	7-10 years.....7 mm (id)

All the above tube sizes are still dependent on the child's size in consideration of age.

Children before puberty should have a cuffless tube, or if the tube has a cuff it should not be inflated after insertion.

ADMINISTRATION OF MEDICATION THROUGH ENDOTRACHEAL TUBE

In the event an intravenous or intraosseous route for administration of medication cannot be established, but an endotracheal tube (ETT) has been properly put in place, medications such as Narcan[®], atropine, epinephrine and lidocaine can effectively be administered through the tube.

EMS personnel under this protocol administer the medication via the lumen of the ETT. ETTs with an integral injection port that delivers the medication to the distal end of the tube are preferred as they allow the care providers to administer medications without interrupting CPR or disconnecting the ETT from the BVM. For medications that are delivered via a catheter that is inserted into the lumen of the ETT, the catheter should be passed beyond the tip of the endotracheal tube, compressions stopped, and the medication sprayed quickly into the lower airway.

Medications should be administered at two (2) times the IV dosage and diluted with 10 ml of saline or sterile water before administration.

If ETTs without integral injection ports are used or when medication injection catheters are not available, the following procedure should be followed:

1. Remove needle from syringe
2. Hyperventilate patient and make sure ETT and airway are clear of mucous
3. Disconnect ventilation device from tube and squirt medication rapidly into tube
4. Reconnect ventilation device and rapidly ventilate patient to assure passage of medication down tube and airway

SPECIAL NOTE: Do not take longer than 15 seconds to administer medication in order to prevent hypoxia of the patient.

CAPNOGRAPHY

Capnography allows the EMS professional to measure and monitor a patient's concentration or partial pressure of end tidal carbon dioxide (P_{ETCO_2}). In addition to the use of capnography in the post-arrest patient, the continuous monitoring of end tidal carbon dioxide facilitates early detection of displaced ETTs and allows the EMS professional to detect hypoventilation and/or hypercarbia.

Although quantitative capnography is acceptable, the use of waveform capnography is preferred in intubated patients. EMS professionals should apply and utilize these capnography devices according to the manufacturer's recommendations.

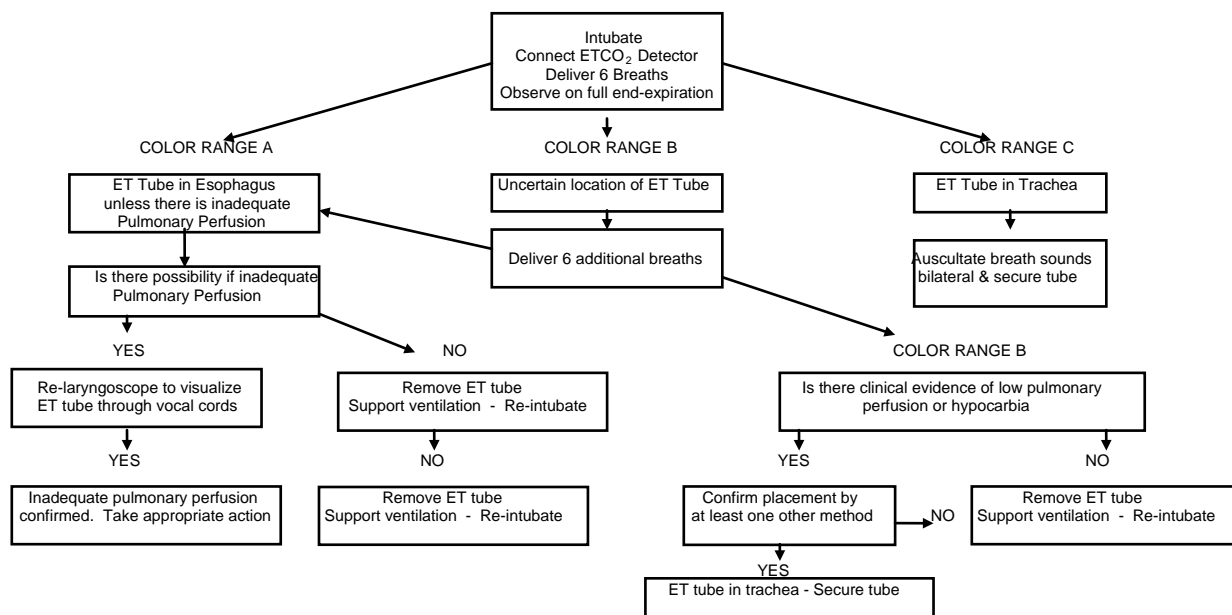
ENDOTRACHEAL INTUBATION (cont'd)

END TIDAL CO₂ MONITORING

In order to assure placement of the ET tube into the trachea after intubation, end tidal CO₂ monitoring is highly suggested. This can be achieved through the use of an end tidal CO₂ detector after each intubation attempt.

Procedure for use:

- A. Remove the end tidal CO₂ detector from package (Do not remove end caps until ready to use device)
- B. Remove end caps immediately before use and shake device to introduce room air
- C. Match initial color of the indicator to the purple color labeled "CHECK" on the product dome. If the purple indicator color is not the same or darker, do not use.
- D. Insert endotracheal tube (Inflate cuff if tube is equipped with one)
- E. Firmly attach the end tidal CO₂ detector between the endotracheal tube and the breathing device
- F. Ventilate patient with six breaths of moderate tidal volume (may be done quickly). Interpreting result with less than six breaths can yield false results.
- G. Compare color of indicator on full end-expiration to color chart on product dome. SEE ALGORITHM
- H. If initial intubation attempts fail, the end tidal CO₂ detector can be used for re-intubation on the same patient provided the indicator color still matches the "CHECK" color standard on product dome
- I. The end tidal CO₂ detector may left in place during ventilation to assist in monitoring tube placement
- J. This device is not to be used for:
 1. Detection of hypercarbia
 2. Detect mainstem bronchial intubation
 3. During mouth to tube ventilations



EXTERNAL PACEMAKER

INDICATIONS

An external pacemaker may be used in the following situations:

- A. Bradycardia: External pacemakers are indicated as first line therapy associated with second degree heart block Mobitz II and third degree heart block when a pulse is present. External pacing may also be indicated for the treatment of sinus bradycardia or ventricular rhythms <60 beats per minute unresponsive to atropine if the patient symptomatic with chest pain, shortness of breath or hypotension when a pulse is present.
- B. External pacing is not effective for asystole or pulseless electrical activity that is bradycardic in any situation and should not be used to treat asystole or pulseless electrical activity. Specifically, do not delay other therapies such as airway control, medication and CPR to institute external pacing.
- C. Additional patients at the discretion of the on-line Medical Control Physician

APPLICATION

For conscious patients with bradycardia, set the rate at 70 beats per minute and current at 20 milliamperes initially. Increase the amperage by 20 milliamperes every 10 seconds till capture is obtained.

For unconscious patients with bradycardia, set the rate at 100 beats per minute and 200 milliamperes.

Once electrical capture is obtained, check for mechanical capture (a pulse).

On-line medical consultation is indicated for all pediatric patients prior to using an external pacemaker.

Remove nitroglycerin patches prior to using an external pacemaker.

IV PROCEDURES

GENERAL CONSIDERATIONS

IVs will be started by the Advanced Emergency Medical Technician and/or the Paramedic as allowed by each patient care protocol.

IV placement must not delay transport of any critical patient involved in trauma.

Generally, no more than two (2) attempts or more than five minutes should be spent attempting an IV. If unable to initiate IV line, transport patient and notify hospital IV was not able to be started.

IVs may be started on patients of any age providing there are adequate veins and patient's condition warrants an IV

Blood draws for hospital laboratory testing will not be required under this protocol.

IV SOLUTION

Normal saline (0.9% sodium chloride) will be the only fluid used in the pre-hospital setting under this protocol. Normal saline is provided in 250 ml bags and 3 ml syringes for TKO IVs and 1000 ml bag for fluid replacement.

The normal saline is to be infused as directed by specific treatment protocols.

IV TUBING

The following tubing will be used for this protocol:

- A. For all adult fluid lines, use regular administration set (15 drop/min) tubing.
- B. For child and infant patients, use 15 gtt/min set with 3-way stopcock and extension tubing.
- C. For all patients needing TKO lines, use extension tubing with pre-pierced adapter as saline lock.

MECHANICS FOR STARTING PERIPHERAL IV

- A. Prepare equipment
- B. The initial attempt should be the dorsum of hand. Further attempts should proceed to the forearm; do not use the antecubital fossa unless necessary
- C. Apply tourniquet
- D. Cleanse site with Betadine[®] solution and alcohol. (The only time Betadine[®] is not required is when the patient has an allergy to Betadine[®] type solutions)
- E. First attempt at insertion on an adult patient should be:
 - 1. 16 ga IV catheter for trauma patients
 - 2. 18 ga IV catheter for medical patients

IV PROCEDURES (cont'd)

- G. Attach IV tubing
- H. Secure IV using appropriate measures to insure stability of the line
- I. Check for signs of infiltration
- J. Adjust flow rate
- K. Document IV procedure on run sheet.

MECHANICS FOR STARTING EXTERNAL JUGULAR IV LINE

- A. Locate external jugular vein
- B. Cleanse site with Betadine® solution and alcohol. (The only time Betadine® is not required is when the patient has an allergy to Betadine® type solutions)
- C. Select IV catheter
 - 1. On adults, a large bore (16ga or 18ga) may be used
 - 2. Use 2" IV catheter when available
- D. Position yourself at patient's head
- E. Turn patient's head so as to maximally expose vein and minimize interference of jaw
- F. Cannulate the vein by directing the needle caudal at an angle nearly parallel to the neck
- G. Attach IV tubing
- H. Secure IV using appropriate measures to insure stability of the line
- I. Check for signs of infiltration
- J. Adjust flow rate
- K. Document IV procedure on run sheet.

MECHANICS OF STARTING SALINE LOCK

- A. Prepare equipment: Attach pre-pierced adapter to extension tubing, Inject saline (approx. 1 ml) in to tubing and leave syringe attached to tubing
- B. The initial attempt should be the dorsum of hand. Further attempts should proceed to the forearm; the antecubital fossa should not be used for saline locks.
- C. Apply tourniquet
- D. Cleanse site with Betadine® solution and alcohol. (The only time Betadine® is not required is when the patient has an allergy to Betadine® type solutions)

IV PROCEDURES (cont'd)

- E. A 20 ga IV catheter should be used for all saline locks.
- G. Attach IV tubing and push remaining saline through tubing and catheter. Remove syringe.
- H. Secure IV using appropriate measures to insure stability of the line
- I. Check for signs of infiltration
- J. Document IV procedure on run sheet.

DOCUMENTATION

ALL IV attempts must be recorded on run sheet and include the following:

- A. When successful:
 - i. time IV was started
 - ii. type and amount of solution hung and infused during run
 - iii. flow rate
 - iv. size of catheter or needle used
 - v. location of IV site
 - vi. Initials of all EMS professionals who attempted and/or started IV
 - vii. Signature of EMS professionals in-charge of run
- B. When unsuccessful:
 - i. time IV was attempted
 - ii. type of solution
 - iii. size of catheter or needle used
 - iv. location of attempted site
 - v. Initials of all EMS professionals who attempted and/or started IV
 - vi. Signature of EMS professionals in-charge of run
- C. Record all IV medications given
 - i. Name of medication
 - ii. Dosage and amount given
 - iii. Time ordered (if applicable)
 - iv. Time given
 - v. Initial of all EMS professionals who administered medication
 - vi. Signature of EMS professionals in-charge of run

INTRAOSSIOUS INFUSION

INDICATIONS

- A. To establish parenteral means to administer fluids, blood products and parenteral medications, and to draw blood (except for CBCs)
- B. May be used in any instance that an IV route would be appropriate
- C. Its use should be considered after two IV attempts have failed or if no peripheral IV sites are found
- D. This procedure is indicated primarily in children

CONTRAINDICATIONS

- A. Osteomyelitis or cellulitis over the proposed site
- B. Fracture at or above the proposed site
- C. Previous IO attempt at the proposed site

EQUIPMENT

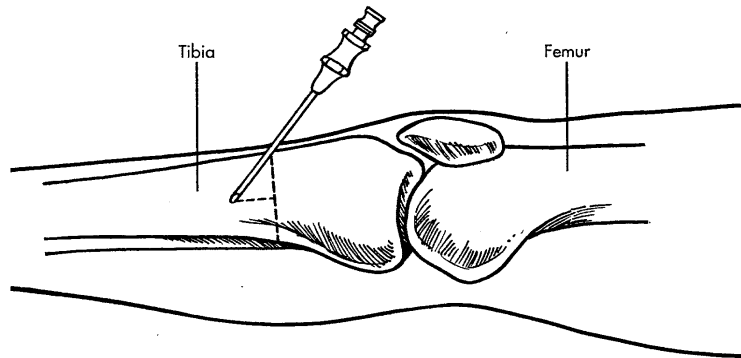
- A. 16ga intraosseous Needle
- B. Betadine® and Alcohol
- C. IV setup
- D. Syringe for aspiration
- C. Lidocaine prn

PROCEDURE

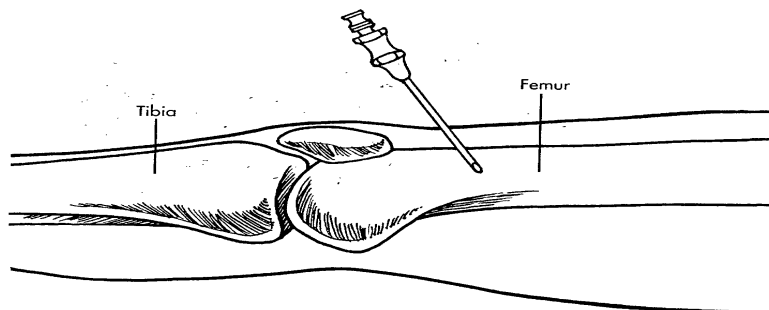
- A. Prepare as for a surgical procedure, using sterile technique
- B. Attempt to have feet in flexed position against board or sandbag
- C. If the patient is alert, consider using a local anesthetic
- D. The preferred site is the proximal anteromedial tibia, 1-3 cm below the tibial tuberosity
Secondary site is the distal femur, midline, 3 cm above condyle
- E. Needle insertion varies between seventy and ninety degree angle to the skin surface, approximately one to two finger breadths distal to the tibial tuberosity. With a straight steady push and/or rotary motion, push needle through subcutaneous tissue and bone until a drop or pop is felt.
- F. Once the needle has reached the bone marrow, saline should be injected via syringe to clear needle and then aspiration should be attempted. The infusion should flow freely without evidence of subcutaneous infiltration.

INTRAOSSEROUS INFUSION (cont'd)

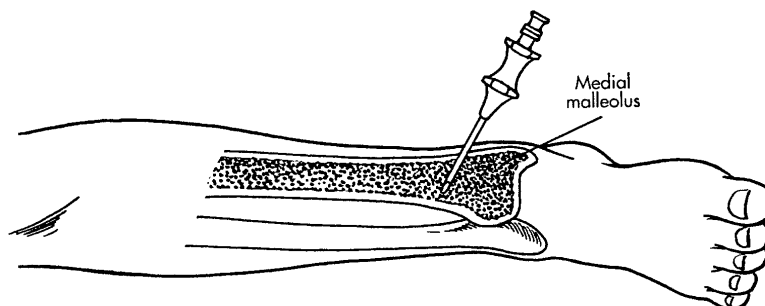
- G. The needle should feel firm in position and stand upright without support.
- H. Infusion via this route is the same as venous access without limit to rate of administration, drugs pushed or fluid type infused.
- I. After removing needle (for successful or unsuccessful attempt), apply pressure to area for five minutes and apply dressing to area.
- J. Intraosseous infusions of fluid may cause subcutaneous infiltration, osteomyelitis or subcutaneous infections.



Proximal tibial site for intraosseous infusion.



Distal femur site for intraosseous infusion.



Distal tibial site for intraosseous infusion.

MAINTENANCE OF BLOOD ADMINISTRATION

Blood products may be infusing into patients that require interfacility transport. Blood contains hemoglobin, the protein that carries oxygen to the vital organs and tissues of the body. Blood administration is indicated for hypovolemic shock that is unresponsive to crystalloid fluid bolus or when the estimated blood loss is obviously significant. The packed red blood cells that are most commonly available in the hospital setting has all of the other elements (plasma, serum antibodies, etc.) separated and removed.

The prehospital care provider must be able to recognize the clinical complications that may occur with blood administration. Blood is typically classified using two major blood groups systems, the ABO system and the Rh system. The classifications are based upon antigens and antibodies present in blood on a genetic level.

The ABO system includes four blood groups: A, B, AB, and O. The letter classification describes the presence of a genetic antigen present on the **red blood cell**. Antibodies to the other genetic antigens are present in the **serum**. Antibodies will destroy incompatible antigens. In other words, antibodies will destroy a red blood cell that has a conflicting antigen.

For example, a person with group A blood will have serum antibodies that destroy the B antigen. If a person with group A blood receives group B or AB blood, the anti-B serum antibodies will attack and destroy the group B or AB red blood cell causing a massive intravascular hemolysis (transfusion reaction). Therefore, a person with group A blood should never receive group B or AB blood.

Group O red blood cells are the only blood group that has no antigens. A person with group O blood has anti-A and anti-B serum antibodies in the serum. A person with group O blood will have a transfusion reaction if they receive group A, B, or AB blood. Individuals with group A, B, or AB blood can receive group O blood because it there are no antigens on the group O red blood cell.

Packed red blood cells are gathered by taking whole blood and removing all other blood components, including serum and the antibodies they contain. Group O packed red blood cells are inherently antigen-free and have all serum antibodies removed.

The Rh system is based on the presence or absence of the D (Rh) antigen. The red blood cells of the majority of the population have the D antigen and are classified as Rh-positive. Individuals who lack the D (Rh) antigen on the red blood cell are classified as Rh-negative.

Patients with Rh-negative blood will develop antibodies against the Rh-positive antigen if they receive Rh-positive blood. Once the antibodies against the Rh-positive antigen are formed, the patient with Rh-negative blood will develop a severe transfusion reaction and hemolytic anemia if they receive Rh-positive blood again. A small amount of exposure to Rh-positive blood is required to form antibodies in the serum of an Rh-negative patient. The small amount of placental blood exchange during the delivery of a baby places the Rh-negative mother at risk for having a “blue baby” if a subsequent fetus is Rh-positive.

Blood type is described by stating the ABO group and the Rh group, i.e. A-positive, AB-negative. The blood type of packed red blood cells which is essentially free of major antigens is O-negative. Thus, O-negative is considered the “universal donor” as all patients may receive this blood type with minimal chance of a transfusion reaction.

MAINTENANCE OF BLOOD TRANSFUSIONS (cont'd)

Packed red blood cells from the blood bank are stored under refrigeration and have a blood bank tag attached to the fluid bag. There are blood bank identification numbers on the blood bank tag as well as the requisition sheet accompanying the fluid bag. The nursing staff will check the identification numbers to insure that the numbers on the blood bag correspond to the numbers on the requisition sheet. They will document these identification numbers on the patient's record. The prehospital care provider should confirm that the blood bank identification numbers are included in the copies of the chart that accompanies the patient before the interfacility transfer is initiated.

Blood should be administered through an IV catheter that is 20 gauge or larger. The intravenous access for blood administration must be a dedicated IV line through which no other medication or solution other than normal saline may be infused. If medications have been administered through an IV, the IV should be flushed well prior to the initiation of the blood administration.

The patient should be constantly observed for clinical signs of a transfusion reaction or intravascular hemolysis. A transfusion reaction will occur if the patient's serum contains antibodies against an antigen in the transfused blood. Administration of type O-negative blood significantly reduces the risk of this event; however, there are several less significant blood types and antigen classifications genetically present in blood. Also, if the patient has had a prior remote blood transfusion, antibodies against the more minor blood antigens are more likely to be present in the patient's serum.

Symptoms of a transfusion reaction include nausea, flushing of the skin, chest and/or lumbar pain, anxiety, restlessness, tachypnea, tachycardia, and dark or bloody urine. If a patient develops a transfusion reaction, the blood administration should be terminated and medical direction should be notified **immediately**. The remaining packed blood cells should be secured and transported with the patient for further investigation. Documentation of the onset of symptoms, vital signs, and the blood bank identification numbers on the prehospital care report is imperative. Maintenance of kidney function after a transfusion reaction is imperative. Crystalloid fluids should be given liberally to maintain an adequate urine output.

NITRONOX®
(Nitrous Oxide - Oxygen Administration)

Nitronox® is a self-administered analgesic gas containing a mixture of 50% oxygen and 50% nitrous oxide. Nitronox® is supplied in a carrying case containing two cylinders; one of nitrous oxide and one containing oxygen, with a mixing valve and supply tubing. These agents are mixed on administration to deliver a 50% concentration of each to the patient. Negative pressure is required to open the valve, so the patient must have an airtight seal at the face mask.

INDICATIONS

Nitronox® should be given to any patient who is alert and complaining of severe pain.

Examples:

- Abdominal pain
- Chest pain secondary to infarction or angina
- Acute urinary retention
- Fractures
- Severe burns
- Kidney stones
- Musculoskeletal trauma

CONTRAINDICATIONS

Nitronox® is not to be used in patients with these conditions:

- Altered level of consciousness
- Head injuries
- Chest injuries (blunt or penetrating)
- Intoxication
- Maxillofacial injuries
- Psychiatric problems
- COPD (because of the 50% oxygen mixture)
- Pediatric patients under 12 years of age
- Pregnancy
- Respiratory distress

APPLICATION

- A. Instruct patients to administer Nitronox® to themselves by placing the mask tightly against their face and breathing deeply and slowly
- B. Allow mask to fall away from face spontaneously when effects are felt
- C. Check Blood Pressure - Nitronox® may cause the blood pressure to drop in some cases

SPECIAL CONSIDERATIONS

- A. Nitronox[®] should never be administered by the EMT, AEMT, or Paramedic. Only self-administration by the patient is to be used.
- B. Upon administration of Nitronox[®], constantly monitor patient to see he does not fall asleep with mask in place.
- C. The side effects of nitrous oxide, in addition to analgesia, include light-headedness, drowsiness, and very occasionally nausea and vomiting. Changes in heart rate and respiratory rate are minimal.
- D. Nitrous oxide and oxygen are both non-flammable gases, but both support combustion. For this reason do not use Nitronox[®] in areas where there is a combustion hazard.
- E. SPECIAL NOTE TO EMTs, AEMTs, AND PARAMEDICS:

There is an increased risk of liver cancer and birth defects to individuals who are exposed to repeated applications of nitrous oxide. For this reason, Nitronox[®] should be used in a well-ventilated environment.

SAFETY ISSUES

- A. The Nitronox[®] unit must be stored in the EMS vehicle with its gas cylinders in an "OFF" position when not in use
- B. The unit must not be used in any environment where:
 - 1. There are possible ignition sources
 - 2. Other patients are in close proximity (less than 10 ft. away)
 - 3. The room is small and no nitrous oxide alarm is monitoring the gas concentration in ambient air
- C. The unit should not be used if the mixture pressure is not in the 30-35 PSI range
- D. Any problem with the mechanical status of the apparatus shall be immediately reported to the person in charge, so appropriate evaluation and/or repair can be made before further use

PULSE OXIMETRY

GENERAL CONSIDERATIONS

Pulse oximetry is used in conjunction with other assessment processes to determine the actual available oxygen in the blood for use by body tissue. Pulse oximetry measures the oxygen saturation of the red blood cells, (%SpO₂).

Studies have shown that EMS personnel are fairly accurate in the assessment and treatment of patients in profound hypoxia. However in mild to moderate hypoxic states, EMS personnel sometimes do not react until the patient has progressed to profound hypoxia. Signs of progressive hypoxia need to be identified rapidly and the condition treated before profound hypoxia occurs.

Use of pulse oximetry in conjunction with other assessment processes may sometimes identify those patients in mild to moderate hypoxia, and with proper intervention profound hypoxia can be prevented.

If available, pulse oximetry should be used on all patients. Pulse oximetry should be maintained and evaluated until the patient is delivered to the Emergency Department.

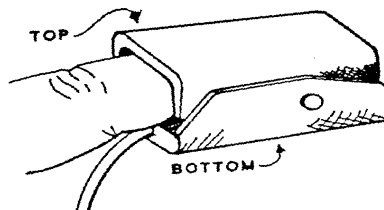
REMEMBER, INITIATE NORMAL AIRWAY AND OXYGENATION SUPPORT REGARDLESS OF THE AVAILABILITY OF PULSE OXIMETRY.

NEVER BASE ANY TREATMENT OR OXYGEN THERAPY SOLELY ON THE READING FROM THE PULSE OXIMETER.

PROCEDURE

A. Select sensor and apply according to manufacturer's recommendations. The following should be noted:

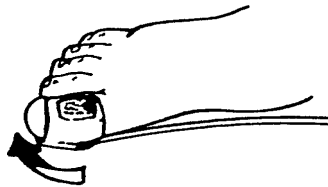
1. Finger Clip Sensors - These are designed for spot-check monitoring of older pediatric and adult patients and/or continuous monitoring less than 30 minutes where patient movement is not expected.
 - a. Insert finger (preferably left or right index finger) completely into sensor, keeping fingernail side facing the sensor top. It is specifically recommended that the thumb not be used in the finger clip sensor.
 - b. For best results when using the finger clip in longer term monitoring or with active patients, secure the sensor cable independently from the sensor, preferably around the base of the finger. Make sure blood supply to the finger is not impaired by the application of the tape.



Finger Clip Sensor Positioning

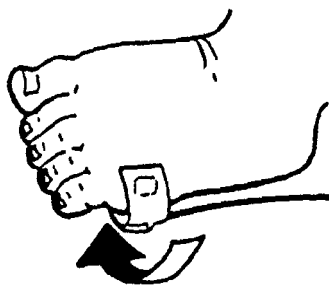
PULSE OXIMETRY (cont'd)

2. Flex Sensor - This sensor is designed for monitoring pediatric and adult patients in which moderate patient movement is expected.
 - a. Position the sensor on the top and bottom of the end of the finger or toe. Place the light emitter portion on the finger/toe-nail side and the detector of the side opposite of the nail, making sure to align the emitter and detector through the tissue.
 - b. Secure the sensor with 3M Micropore® tape, making sure not to restrict blood flow. Attach the sensor cable independently at the base of the finger, again being careful not to restrict blood flow.



Infant Sensor Placement on Big Toe

3. Infant and Neonatal Sensors - These sensors are designed for continuous monitoring of infants and neonates since fingertip monitoring is impractical.
 - a. The infant sensor is designed for application on the big toe of infants greater than 2 kilograms (5 pounds).
 - b. The neonatal sensor is designed for application on the foot of infants less than 2 kilograms in weight.
 - c. Apply and secure these sensors as described for the flex sensor, being sure not to restrict blood supply to the monitored area.



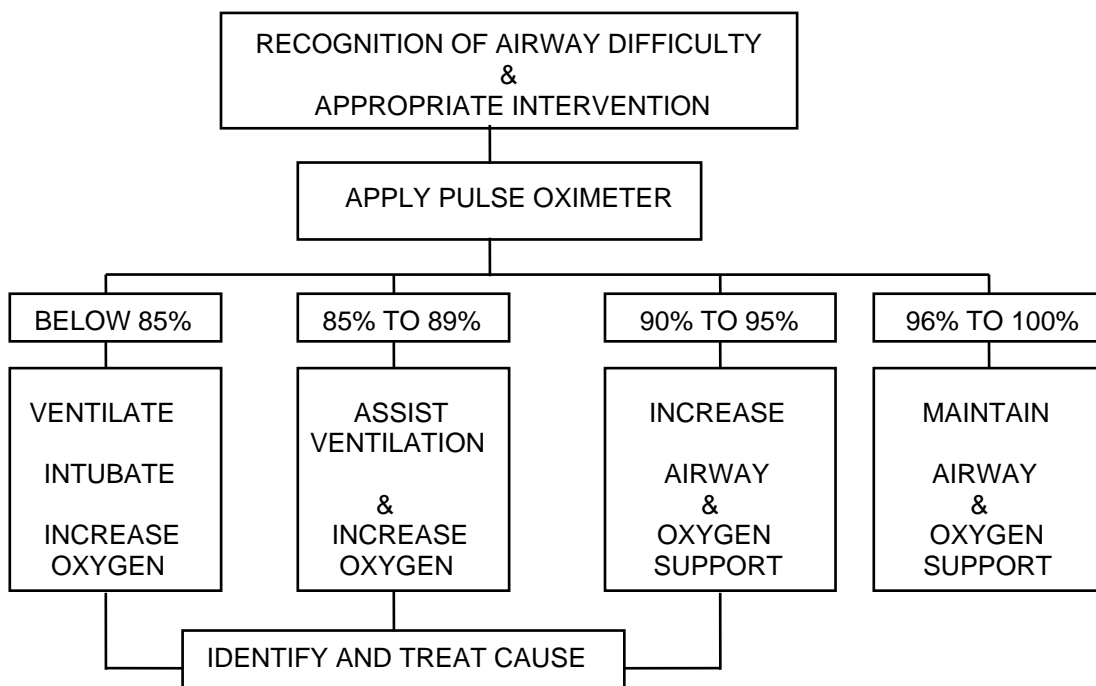
Infant and Neonatal Sensor Placement on Foot

PULSE OXIMETRY (cont'd)

4. Ear Clip Sensor - This sensor is used when finger clip sensing is not possible. Be sure to clean the ear lobe with alcohol before applying the sensor. Be aware pierced ears may allow some light to pass directly to the detector and result in an accurate reading.
 5. Reflectance Sensor - This sensor is used on well vascularized skin surfaces in adult patients only. This method is not preferred in the pre-hospital setting.
- B. Turn oximeter on and verify operation according to manufacturer's operating procedure.
 - C. A relative operation check can be achieved by applying the sensor to your own finger.
 - D. Always cleanse sensor site of blood and dirt for reliable reading. Some fingernail polishes may have to be removed to obtain a reading.
 - E. Apply sensor to patient and obtain reading.

Interpretation of Reading:

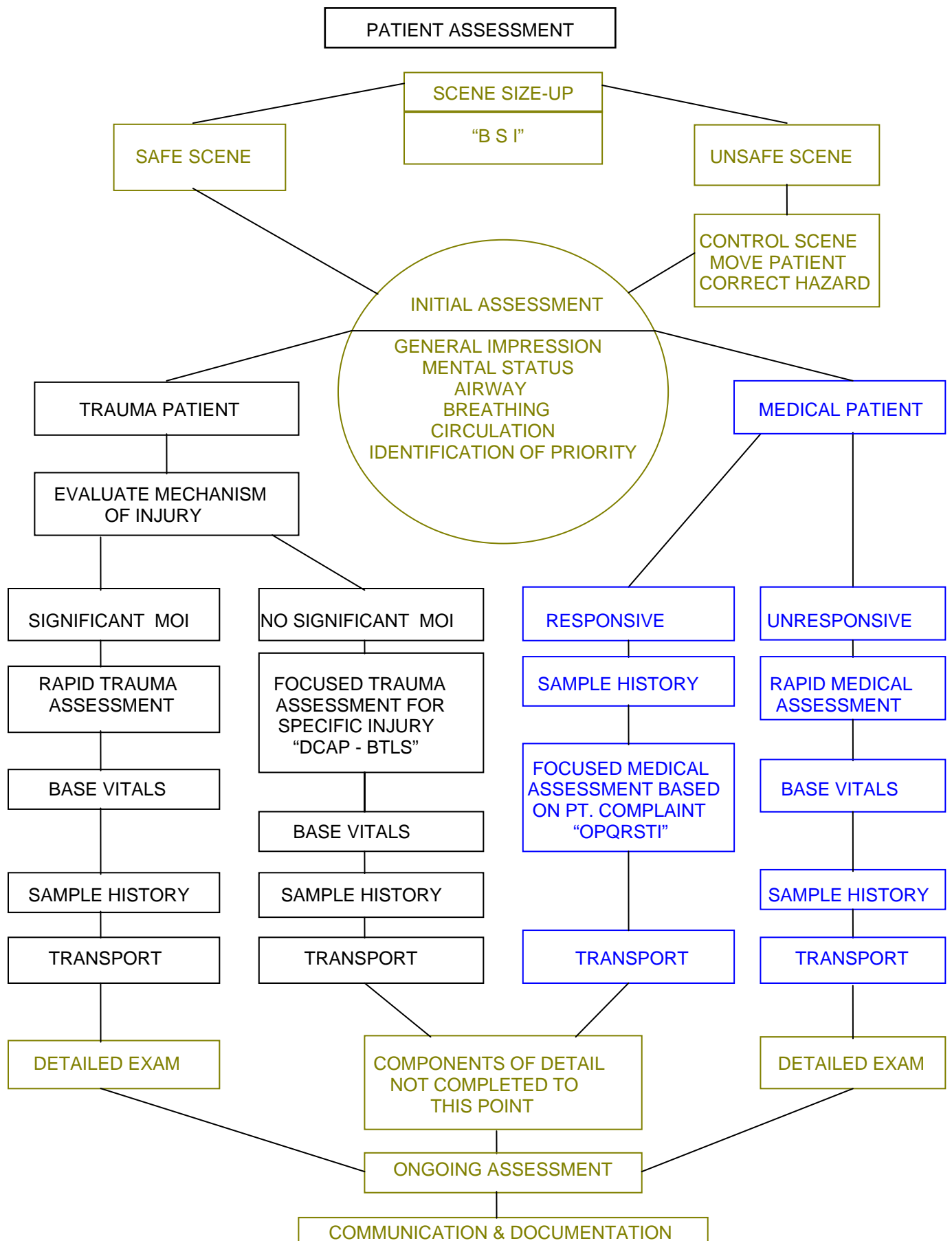
100% to 96%	Ideal Range - Maintain oxygen and airway support methods being used
95% to 90%	Mild to Moderate Hypoxemia - Check airway and increase oxygen support until ideal range is achieved
89% to 85%	Severe Hypoxemia - Aggressive airway and oxygen support is essential Look for and treat cause: i.e. COPD, metabolic imbalance, peripheral vascular shutdown
Below 85%	BE PREPARED TO INTUBATE AND/OR ASSIST VENTILATION



PULSE OXIMETRY (cont'd)

CONSIDERATIONS

- A. Hypovolemic, hypothermic, and peripheral vascular disease patients may not be suitable candidates for pulse oximetry due to peripheral shutdown
- B. Be aware that there may be a 30 to 60 second delay between changes in %SpO₂ conditions and pulse oximetry readings
- C. A pulse must be detected by the oximeter to determine the %SpO₂
- D. Pulse oximetry is not indicated in carbon monoxide poisoning
- E. COPD patients will normally have a low %SpO₂ and should not be treated in accordance with this guideline



MEDICATION APPENDIX

MEDICATION LIST

Adenosine (Adenocard®)
Amiodarone
Aspirin
Atropine Sulfate
25% Dextrose (D25)
50% Dextrose (D50)
Diazepam (Valium®)
Diphenhydramine (Benadryl®)
Dopamine (Inotropin®)
Epinephrine (Adrenalin®)
Furosemide (Lasix®)
Glucagon
Lidocaine (Xylocaine®) 2%
Methylprednisolone (Solumedrol®)
Midazolam (Versed®)
Morphine Sulfate
Naloxone (Narcan®)
Nitroglycerin
Oxygen (O₂)
Procainamide
Proventil®/Ventolin® (Albuterol)
Sodium Bicarbonate
Sotalol (Betapace®)
Vasopressin (Pitressin®)

PHARMACOLOGY REVIEW

I. ACTIONS OF DRUGS

- A. Local effects
- B. Systemic effects

II. EFFECTS DEPENDS UPON

- A. Age of patient
- B. Condition of patient
- C. Dosage
- D. Route of administration

III. ROUTE OF ADMINISTRATION

- A. Intravenous (IV)
 - * Most rapidly effective
 - * Most dangerous
 - * Give SLOWLY through an established IV line
- B. Intramuscular (IM)
 - * Takes longer to act
 - * Longer duration of action
 - * Deltoid or gluteus maximus Site
 - * Absorption VERY dependent on blood flow
- C. Subcutaneous (SQ)
 - * Slower and more prolonged absorption
 - * Under skin of upper arms, thigh, abdomen
- D. Inhalation
 - * Bronchodilators
 - * Steroids
- E. Endotracheal
 - * Epinephrine, atropine, lidocaine, Narcan[®]
 - * Dilute usual IV dose with 10 ml of sterile water
- F. Sublingual (SL)
 - * Rapid absorption

- G. Oral
 - * Ipecac
 - * Charcoal
- H. Rectal
 - * Rapid but unpredictable absorption
- I. Intracardiac
 - * Dangerous
 - * No advantage over IV or endotracheal routes
 - * Dilute usual IV dose with 10ml of sterile water

IV. RATES OF ABSORPTION

- A. "Directly related to route of administration"
 - * IV -- Fastest
 - * IM
 - * SQ
 - * Oral -- Slowest

V. ELIMINATION

- A. Many methods
- B. Usually metabolized by the liver
- C. Eliminated by the kidneys, lungs, skin

VI. TERMS

- A. Indications - Conditions for which the drug is used
- B. Contraindications - Conditions for which the drug should not be used
- C. Depressants - Lessens / decreases activity
- D. Stimulant - Increases activity
- E. Physiologic Action - Action from the body from a normal dose of the drug
- F. Therapeutic Action - Beneficial action expected
- G. Untoward Reaction - Harmful side effect
- H. Irritation - Damage to tissue
- I. Antagonism - Opposition between effects of drugs
- J. Cumulative Action - Increased action after several doses
- K. Tolerance - Decreased effects after repeated doses

- L. Synergism - Combined effects greater than sum of parts
- M. Potentiation - Enhancement of one drug by another
- N. Habituation - Drug necessary for feeling of "well being"
- O. Idiosyncrasy - Unexpected, abnormal response to a drug
- P. Hypersensitivity - Exaggerated response, allergy

VII. AUTONOMIC NERVOUS SYSTEM

Controls Automatic or Involuntary Actions

- A. Parasympathetic - Controls vegetative functions
- B. Sympathetic - "Flight or fight"

VIII. PARASYMPATHETIC NERVOUS SYSTEM

- A. Mediated by vagus nerve
- B. Acetylcholine is transmitter (cholinergic)
- C. Atropine is acetylcholine blocker

IX. SYMPATHETIC NERVOUS SYSTEM

- A. Mediated by nerves from sympathetic chain
- B. Norepinephrine is transmitter (adrenergic)
- C. Epinephrine is released from adrenals

X. SYMPATHETIC RECEPTORS

- A. Alpha (α)
- B. Beta (β)

XI. COMMON SYMPATHETIC AGENTS

- A. Isoproterenol (Isuprel[®]) - pure BETA
- B. Epinephrine (Adrenalin[®]) - predominately BETA
- C. Dobutamine (Dobutrex[®]) - predominately BETA, slight ALPHA
- D. Norepinephrine (Levophed[®]) - predominately ALPHA
- E. Dopamine (Intropin[®]) - BETA at low dose: ALPHA at high dose
- F. Metaraminol (Aramine[®]) - predominately ALPHA

G. Phenylephrine (Neo-Synephrine®) - pure ALPHA

XII. SYMPATHETIC BLOCKERS

A. Propranolol (Inderal®) - BETA BLOCKER

XIII. DRUG ADMINISTRATION

Appropriate:

1. Indication
2. Order
3. Dose
4. Observation
5. Dilution
6. Route
7. Rate

ADENOSINE (ADENOCARD[®])

THERAPEUTIC EFFECTS:	Adenosine slows tachycardias associated with the AV node via modulation of the autonomic nervous system without causing negative inotropic effects. It acts directly on sinus pacemaker cells and vagal nerve terminals to decrease chronotropic and dromotropic activity. Adenosine is the drug of choice for paroxysmal supraventricular tachycardia (PSVT) and can be used diagnostically for stable, wide-complex tachycardias of unknown type after two doses of lidocaine.	
INDICATIONS:	Conversion of PSVT to sinus rhythm	
CONTRAINDICATIONS:	Second or third degree AV block, or sick-sinus syndrome Hypersensitivity to adenosine	
SIDE EFFECTS:	Facial flushing Lightheadedness Paresthesia Headache Diaphoresis Palpitations	Chest pain Hypotension Shortness of breath Nausea Metallic taste
HOW SUPPLIED:	6 mg/2 ml and 12 mg/4 ml vials or prefilled syringes	
ADULT DOSAGE:	Initial Dose:	6 mg rapid IVP (over 1-3 sec.) immediately followed with a 20 ml saline flush
	Repeat Dose:	If no response is observed after 1-2 min., administer 12 mg rapid IVP (over 1-3 sec.) immediately followed with a 20 ml saline flush
PEDIATRIC DOSAGE:	Initial Dose:	0.1 mg/kg rapid IVP followed with a 10 ml saline flush
	Repeat Dose:	If no response is observed after 1-2 min., administer 0.2 mg/kg rapid IVP followed with a 10 ml saline flush

AMIODARONE

THERAPEUTIC ACTIONS:	Amiodarone prevents or suppresses cardiac arrhythmias by prolongation of the myocardial action potential duration and refractory period and via non-competitive alpha- and beta-adrenergic inhibition.
INDICATIONS:	Recurrent ventricular fibrillation Recurrent hemodynamically unstable ventricular tachycardia
CONTRAINDICATIONS:	Severe sinus node dysfunction Marked sinus bradycardia Second-degree or third-degree atrio-ventricular heart block Bradycardia resulting in syncope (except for patients with pacemakers) Known allergy or hypersensitivity to amiodarone
SIDE EFFECTS:	Hypotension, particularly with repeated doses Hypotension, heart block and/or severe bradycardia if administered with other Drugs that prolong the QT interval (i.e. procainamide)
HOW SUPPLIED:	150 mg and 300 mg vials
ADMINISTRATION:	Can be administered via IV or IO routes
DOSAGE:	ADULT: 300 mg IV or IO (150 mg IV or IO for second dose) PEDIATRIC: 5 mg/kg IV or IO

ASPIRIN

THERAPEUTIC EFFECTS:	Aspirin exhibits analgesic, anti-inflammatory and antipyretic activity. Due to aspirin's ability to inhibit platelet aggregation and cause vasodilation, there is a decreased likelihood of thrombosis.
INDICATIONS:	Cardiac related chest pain
CONTRAINDICATIONS:	Aspirin hypersensitivity Active or history of GI lesions Impaired renal function Pregnancy Trauma
SIDE EFFECTS:	GI bleeds Mucosal lesions Bronchial spasm in some asthma patients
HOW SUPPLIED:	325 mg coated tablets
ADMINISTRATION:	Orally
ADULT DOSAGE:	160-325 mg upon onset of cardiac signs and symptoms

ATROPINE SULFATE

THERAPEUTIC EFFECTS: By blocking parasympathetic (vagal) action on the heart, atropine increases the rate of discharge by the sinus node, enhances conduction through the AV junction, and accelerates the heart rate, thereby improving cardiac output. In addition, by speeding up a slow heart to a normal rate, atropine reduces the chances of ectopic activity in the ventricles and thus of ventricular fibrillation.

Atropine is most effective in reversing bradycardia due to increased parasympathetic tone or to morphine; it is less effective in treating bradycardias due to actual damage to the AV or SA node.

INDICATIONS: SINUS BRADYCARDIA when accompanied by hypotension

SECOND and THIRD DEGREE HEART BLOCK when accompanied by bradycardia

In some cases of ASYSTOLE to remove any type of heart block

As an antidote in ORGANOPHOSPHATE POISONING (mega doses)

CONTRAINDICATIONS: Atrial flutter or atrial fibrillation where there is a rapid ventricular response

Glaucoma - narrow angle

Use with caution in myocardial infarction

SIDE EFFECTS: The patient should be warned that they may experience some of the following side effects and that these side effects are part of the drug's usual and expected actions:

- * Blurred vision, headache, pupillary dilatation
- * Dry mouth, thirst
- * Flushing of the skin

HOW SUPPLIED: Prefilled syringes containing 1 mg in 10 ml

ADMINISTRATION: In the field, atropine is usually given intravenously for bradycardia

For organophosphate poisoning, a combination of intravenous and intramuscular administration is commonly used

In resuscitation from cardiac arrest, if an intravenous route cannot be established, atropine may be given through the endotracheal tube

ATROPINE SULFATE (cont)

ADULT DOSAGE: In bradycardia: 0.5 mg IV, repeated at 5-minute intervals until the desired heart rate is achieved

The total dose should not, however, exceed 3 mg. (Except in organophosphates)

Doses smaller than 0.5 mg, or a dose given too slowly, may slow rather than speed up the heart rate

Excessive doses may precipitate ventricular tachycardia or fibrillation

* For asystole, 1mg IV, repeated in 5 minutes if asystole persists.

* For organophosphate poisoning: 2 mg IM and 1 mg IV.

The IV dose may be repeated every 5 to 10 minutes as needed until a decrease in secretions is observed

Endotracheal Dosage: 1.0-2.0 mg diluted in 10ml NS

PEDIATRIC DOSAGE: In bradycardia: 0.02 mg/kg; may be repeated one time

Minimum dose - 0.1 mg

Maximum dose - 0.5 mg in child/1.0mg in adolescent

Endotracheal Dosage: 0.02 mg/kg diluted in 10ml NS

25% DEXTROSE (D25)

THERAPEUTIC EFFECTS:	Restores circulating blood sugar level to normal in states of hypoglycemia. Acts transiently as an osmotic diuretic.
INDICATIONS:	When blood sugar reading is below 70 with Glucometer in symptomatic patients: to treat coma caused by HYPOGLYCEMIA; to treat COMA OF UNKNOWN CAUSE; to treat STATUS EPILEPTICUS OF UNCERTAIN CAUSE; and some cases of REFRACTORY CARDIAC ARREST
CONTRAINDICATIONS:	Avoid in cases of presumed intracranial hemorrhage
SIDE EFFECTS:	Will cause tissue necrosis if it infiltrates; should therefore be given only through a good, rapidly flowing IV line
HOW SUPPLIED:	Prefilled syringes and vials containing 10 ml of 25% dextrose (2.5 gm of dextrose)
ADMINISTRATION:	Given intravenously, <u>through a free-flowing intravenous line</u> , preferably in a large vein. If possible, draw blood for serum glucose determinations before administering the dextrose.
PEDIATRIC DOSAGE:	2 ml/kg in children under 50 pounds Newborn dose: 1 ml/kg

50% DEXTROSE (D50)

THERAPEUTIC EFFECTS:	Restores circulating blood sugar level to normal in states of hypoglycemia. Acts transiently as an osmotic diuretic.
INDICATIONS:	When blood sugar reading is below 70 with glucometer in symptomatic patients: Treatment of coma caused by HYPOGLYCEMIA; Treatment of COMA OF UNKNOWN CAUSE; Treatment of STATUS EPILEPTICUS OF UNCERTAIN CAUSE; and Treatment of some cases of REFRACTORY CARDIAC ARREST
CONTRAINDICATIONS:	Avoid in cases of presumed intracranial hemorrhage
SIDE EFFECTS:	May precipitate severe neurologic symptoms in alcoholics For this reason, when given to a known alcoholic, should be accompanied by <u>thiamine</u> , 50 mg IV and 50 mg IM, which will prevent this neurologic syndrome Will cause tissue necrosis if it infiltrates; should therefore be given only through a good, rapidly flowing IV line
HOW SUPPLIED:	Prefilled syringes and vials containing 50 ml of 50% dextrose (25 gm of dextrose)
ADMINISTRATION:	Given intravenously, <u>through a free-flowing intravenous line</u> , preferably in a large vein If possible, draw blood for serum glucose determinations before administering the dextrose
ADULT DOSAGE:	50 ml of 50% dextrose (25 g) as a bolus IV
PEDIATRIC DOSAGE:	1 ml/kg in children over 50 pounds

DIAZEPAM (VALIUM®)

THERAPEUTIC EFFECTS:	Through its depressant action on the central nervous system, can terminate some seizures. Also has a calming effect in anxiety or violent behavior.
INDICATIONS:	Status epilepticus Sedation (e.g. prior to cardioversion in conscious patients)
CONTRAINDICATIONS:	Allergy to benzodiazepines Dangerous with prior ingestion of alcohol or other sedative drug Respiratory depression from any source Hypotension
SIDE EFFECTS:	Hypotension Confusion, unconsciousness In some patients, especially the elderly, the critically ill, and those with pulmonary disease, may cause respiratory arrest and/or cardiac arrest.
HOW SUPPLIED:	In prefilled syringes and ampules of 2 ml and in vials of 10 ml, frequently in a concentration of 5 mg/ml.
ADMINISTRATION:	Intravenously in slow titrated doses or rectally. Although it can be given IM, the absorption is poor and unpredictable.
ADULT DOSAGE:	2-5 mg IV or per rectum, titrate additional doses up to a total of 10 mg.
PEDIATRIC DOSAGE:	0.2-0.3 mg/kg IV to a maximum dose of 10 mg. 0.5 mg/kg per rectum to a maximum dose of 10 mg.

DIPHENHYDRAMINE (BENADRYL[®])

THERAPEUTIC EFFECTS:	Blocks histamine effects in allergic reactions Sedative Reverses side effects of some phenothiazines.
INDICATIONS:	Allergic reactions As an adjunct to epinephrine in the treatment of anaphylactic shock Extrapyramidal reactions (Parkinson-like movements) secondary to phenothiazines
CONTRAINDICATIONS:	Narrow angle (acute) glaucoma Prostate enlargement Ulcer disease with symptoms of obstruction
SIDE EFFECTS:	Drowsiness, confusion Blurring of vision Dry mouth Thickening of bronchial secretions
HOW SUPPLIED:	In vials of 10 or 30 ml, containing 10 mg/ml In vials of 10 ml containing 50 mg/ml In ampules of 1 ml containing 50 mg/ml In prefilled syringes containing 50 mg in 1 ml
ADULT DOSAGE:	25-50 mg IVP or IM
PEDIATRIC DOSAGE:	1 mg/kg IV or IM to a maximum dose of 50 mg

DOPAMINE (INTROPIN®)

THERAPEUTIC EFFECTS:	<p>β-sympathetic drug causes an increase in the force and rate of cardiac contractions as well as dilation of renal and mesenteric arteries.</p> <p>This latter effect promotes urine flow, and for this reason, dopamine is sometimes preferred over norepinephrine (which constricts renal arteries) in shock.</p> <p>Dopamine causes less increase in oxygen consumption by the myocardium than does isoproterenol.</p> <p>At low doses, the β effects of dopamine predominate. At high doses, dopamine has α effects as well and thus will cause vasoconstriction.</p>
INDICATIONS:	<p>To increase cardiac output in cardiogenic shock while maintaining good renal perfusion</p>
CONTRAINDICATIONS:	<p>Should not be used as first-line therapy in hypotension caused by hypovolemia (e.g., hemorrhagic shock), where volume replacement should precede the use of vasopressors</p> <p>Pheochromocytoma (a tumor that produces epinephrine and/or related substances)</p> <p>Should not be given in the presence of uncorrected tachyarrhythmia or ventricular fibrillation</p> <p>Do not mix with bicarbonate since dopamine may be inactivated by alkaline solutions</p>
SIDE EFFECTS:	<p>Ectopic beats, palpitations, tachycardia</p> <p>Nausea, vomiting</p> <p>Dyspnea, angina</p> <p>Headache</p>
HOW SUPPLIED:	<p>400 mg in 250 ml D5W</p>
ADMINISTRATION:	<p>Given by titrated intravenous infusion (microdrip infusion set)</p>
ADULT DOSAGE:	<p>Start the infusion at a rate of 5 mcg/kg/min and titrate the infusion until adequate heart rate, blood pressure, and level of consciousness are achieved.</p>

EPINEPHRINE (ADRENALIN[®])

THERAPEUTIC EFFECTS:	<p>In cardiac arrest, may restore electric activity in asystole; increases myocardial contractility; and decreases the threshold for defibrillation--all through its actions as a beta sympathetic agent.</p> <p>In addition, the alpha effects of epinephrine, causing vasoconstriction, elevate the perfusion pressure and may thus improve coronary blood flow during external cardiac compressions.</p> <p>In anaphylaxis, acts as a bronchodilator (beta effect) and helps maintain blood pressure (alpha effect).</p>
INDICATIONS:	<p>In CARDIAC ARREST, to restore electric activity in asystole or to enhance defibrillation potential in ventricular fibrillation; also to elevate systemic vascular resistance and thereby improve perfusion pressure during resuscitation.</p> <p>To treat the life-threatening symptoms of ANAPHYLAXIS</p> <p>To treat acute attacks of ASTHMA</p>
CONTRAINDICATIONS:	<p>Must be used with caution in patients with angina, hypertension, or hyperthyroidism</p> <p>THERE ARE NO CONTRAINDICATIONS TO THE USE OF EPINEPHRINE IN THE SITUATION OF CARDIAC ARREST OR ANAPHYLACTIC SHOCK</p>
SIDE EFFECTS:	<p>In a conscious patient, may cause <u>palpitations</u>, from tachycardia or ectopic beats, and <u>elevations of blood pressure</u> (which may not be desirable if the patient is already hypertensive)</p> <p>The asthmatic with preexisting heart disease may experience <u>dysrhythmias</u> if treated with epinephrine</p>
HOW SUPPLIED:	<p>Prefilled syringes containing 1 mg in 10 ml (1:10,000 solution)</p> <p>Ampules containing 1 mg in 1 ml (1:1,000 solution)</p> <p>Multi-dose vial: 30 mg in 30 ml (1:1,000 solution)</p>
ADMINISTRATION:	<p>In <u>cardiac arrest</u>, epinephrine is given intravenously in an escalating dose every 3 minutes</p> <p>If an IV route cannot be established quickly, the drug may be instilled in the tracheo-bronchial tree via catheter through an endotracheal tube</p> <p>For <u>anaphylactic reactions</u>, epinephrine is given via the intramuscular route</p>

EPINEPHRINE (ADRENALIN®) (Continued)

ADULT DOSAGE:

In cardiac arrest situations:

Initial Dose: 1.0 mg (10 ml of 1:10,000 solution) IVP

Second Dose: 1.0 mg (10 ml of 1:10,000) or 3 mg (3 ml of 1:1,000) IVP

Third and subsequent dose: 5 mg (5 ml of 1:1,000) IVP

Endotracheal dose: 2 mg (1:1,000) diluted with 10 ml normal saline given via catheter during ventilation

In anaphylactic reactions:

Mild reactions: 0.3 mg intramuscular, (0.3 ml of a 1:1,000 solution)
(Do not, however, inject fingers or toes)

Another 0.3 ml is given SQ can be administered on another extremity

Severe reactions, with shock: 0.5 mg slow IV. (5 ml of a 1:10,000 solution)

For mild to moderate asthmatic attacks: 0.3 to 0.5 ml of a 1:1,000 solution, SQ

PEDIATRIC DOSAGE:

Bradycardia: 0.01 mg/kg 1:10,000 every 3 minutes

Cardiac Arrest:

Initial Dose: 0.01 mg/kg 1: 10,000 IVP or IO push

Second & Subsequent Dose: 0.1 mg/kg 1:1000 IVP or IO push

Endotracheal: 0.1 mg/kg 1:1,000 diluted with 2 ml of NS

Newborn Cardiac Arrest: 0.02 mg/kg 1:10,000 every 5 min. By IV, IO

Allergic Reaction/Asthma: 0.01 mg/kg 1:1,000 SQ Max 0.3 mg. No response and IV in place, 0.1 mg/kg 1:10,000 IVP

FUROSEMIDE (LASIX[®])

THERAPEUTIC EFFECTS:	<p>Potent diuretic, causing the excretion of large volumes of urine within 5 to 30 minutes of administration, thus useful in ridding the body of excess fluid in conditions such as congestive heart failure (CHF).</p> <p>However, furosemide may be useful in long range transports of patients in marked heart failure (especially catheterized patients) where there is a need to begin definitive therapy before the patient arrives at the hospital.</p>
INDICATIONS:	To reverse fluid overload associated with CONGESTIVE HEART FAILURE and PULMONARY EDEMA
CONTRAINDICATIONS:	<p>Should not be given to pregnant women</p> <p>Hypokalemia may be suspected in a patient who has been on chronic diuretic therapy or whose EKG shows prominent P waves, diminished T waves, and the presence of U waves</p>
SIDE EFFECTS:	Immediate side effects may include <u>nausea</u> and <u>vomiting</u> , <u>potassium depletion</u> (with attendant cardiac dysrhythmias), and <u>dehydration</u>
HOW SUPPLIED:	Pre-filled syringes of 10 ml in a concentration of 10 mg/ml
ADMINISTRATION:	In the field, furosemide is given intravenously
ADULT DOSAGE:	40 mg SLOWLY IV (injected over 1-2 min) If a response is not obtained, a second dose of 60 to 80 mg may be given in 30 minutes.

GLUCAGON

THERAPEUTIC EFFECTS:	<p>Accelerates the breakdown of glycogen to glucose in the liver, causing an increase in blood glucose level.</p> <p>Glucagon also relaxes the smooth muscle of the GI tract</p> <p>Glucagon is helpful, in hypoglycemia only if the liver glycogen is available. Because glucagon is of little or no help in states of starvation, adrenal insufficiency, or chronic hypoglycemia, glucose should be considered for the treatment of hypoglycemia.</p>
INDICATIONS:	<p>For the treatment of hypoglycemia when IV Dextrose is not available</p> <p>Anaphylaxis</p>
CONTRAINDICATIONS:	<p>Glucagon is contraindicated in patients with known hypersensitivity to it or in patients with pheochromocytoma</p>
SIDE EFFECTS:	<p>Glucagon is relatively free of adverse reactions except for occasional nausea and vomiting which may also occur with hypoglycemia</p> <p>Generalized allergic reactions including urticaria, respiratory distress and hypotension, have been reported in patients who receive glucagon by injection</p>
HOW SUPPLIED:	<p>Vials of 1 mg glucagon with 1 ml of diluting solution</p>
ADMINISTRATION:	<p>For adults and for children weighing more than 20 kg, administration may be by subcutaneous intramuscular or intravenous injection</p> <p>Glucagon must be reconstituted with dilution solution provided and used immediately. If dose is higher than 2 mg, reconstitute with sterile water for injection and use immediately</p> <p>Glucagon is compatible with dextrose solutions, but precipitates may form in solutions of sodium chloride, potassium chloride or calcium chloride</p>
ADULT DOSAGE:	<p>In hypoglycemia, 0.5 to 1.0 mg IV, SC or IM injection. Response is usually seen in 5 to 20 minutes. If response is delayed, dose may be repeated 1 to 2 times</p>
PEDIATRIC DOSAGE:	<p>In hypoglycemia for children weighing more than 20 kg, 0.5 to 1.0 mg IV, SC or IM injection. Response is usually seen in 5 to 20 minutes. If response is delayed, dose may be repeated 1 to 2 times</p>

LIDOCAINE (XYLOCAINE[®]) 2%

THERAPEUTIC EFFECTS:	Suppresses ventricular ectopic activity by decreasing the excitability of heart muscle and the cardiac conduction system.
INDICATIONS:	<p>Lidocaine is the drug of first choice:</p> <p>To SUPPRESS PREMATURE VENTRICULAR CONTRACTIONS (PVCs) in the appropriate setting</p> <p>To PREVENT RECURRENCE OF VENTRICULAR FIBRILLATION after electric conversion</p> <p>To treat VENTRICULAR TACHYCARDIA</p> <p>To suppress reflex rise in ICP during intubation</p>
CONTRAINDICATIONS:	<p>Known history of allergy to lidocaine or local anesthetics (e.g., Novocaine[®])</p> <p>Second or third degree heart block</p> <p>Sinus bradycardia or sinus arrest</p> <p>Idioventricular rhythm</p>
SIDE EFFECTS:	<p>By decreasing the force of cardiac contractions as well as decreasing peripheral resistance, may cause a <u>fall in cardiac output and blood pressure</u></p> <p>May cause <u>numbness</u>, <u>drowsiness</u>, or <u>confusion</u> when given in high doses, especially to the elderly or to patients in heart failure, may cause <u>seizures</u></p>
HOW SUPPLIED:	Ampules and prefilled syringes containing 100 mg in 5 ml (20 mg/ml) for bolus injection
ADMINISTRATION:	<p>Given by intravenous bolus</p> <p>Reduce the dosage (both bolus and infusion) by half for patients in congestive heart failure or shock and for patients over 70 years old</p> <p>If an intravenous route cannot be established, lidocaine may be given via catheter through an endotracheal tube</p>
ADULT DOSAGE:	<p>1.5 mg/kg IV push, followed by 50 mg bolus every 20 minutes</p> <p>1 mg/kg IV push prior to intubation of head injured patient</p>
PEDIATRIC DOSAGE:	Ventricular fibrillation: 1 mg/kg IVP, IO push or ET

METHYLPREDNISOLONE (SOLUMEDROL[®])

THERAPEUTIC EFFECT:	Methylprednisolone is a synthetic glucocorticoid that is used as an anti-inflammatory or immunosuppressive agent. Glucocorticoids are naturally occurring hormones that prevent or suppress inflammation and immune responses when administered at pharmacological doses. These drugs have very little mineralocorticoid activity and are therefore not used to manage adrenal insufficiency.
INDICATIONS:	Wheezing
CONTRAINDICATIONS:	Corticosteroid hypersensitivity Fungal infection
SIDE EFFECTS:	Hypertension Impaired wound healing Fluid retention Increased risk of infection Muscle weakness Osteoporosis
HOW SUPPLIED:	Injectable solution: 40 mg, 80 mg, 125 mg, 500 mg, 1g, 2g, 20 mg/ml, 40 mg/ml, 80 mg/ml
ADMINISTRATION:	IV or IM
ADULT DOSE:	125 mg IV or IM .
PEDIATRIC DOSE:	0.5-1 mg/kg IV or IM

MIDAZOLAM (VERSED®)

THERAPEUTIC EFFECTS:	May potentiate the effects of GABA, depress the CNS, and suppress the spread of seizure activity.
INDICATIONS:	Seizures Sedation
CONTRAINDICATIONS:	Hypersensitivity to the medication Narrow angle glaucoma
SIDE EFFECTS:	Hypotension Respiratory depression Amnesia
HOW SUPPLIED:	5 mg/2 ml
ADMINISTRATION:	Intravenous Intramuscular Intranasal
ADULT DOSAGE:	2-5 mg IVP every 5 minutes as needed 10 mg IN
PEDIATRIC DOSAGE:	0.1m mg/kg IV, IO, or IM

MORPHINE SULFATE

THERAPEUTIC EFFECTS:	Primary use is as an analgesic Helps to allay the anxiety associated with pulmonary edema.
INDICATIONS:	To treat the anxiety associated with PULMONARY EDEMA in CONGESTIVE HEART FAILURE To RELIEVE PAIN in myocardial infarction and other, selected conditions
CONTRAINDICATIONS:	Marked hypotension. Respiratory depression, except that caused by pulmonary edema, where the drug may be used if ventilatory support is provided.
SIDE EFFECTS:	<u>Hypotension</u> (most likely in volume depleted patients). Increased vagal tone, leading to <u>bradycardia</u> . (This effect can be reversed with atropine.) <u>Respiratory depression</u> . (This effect can be reversed with naloxone.) <u>Nausea and vomiting</u> .
HOW SUPPLIED:	Prefilled (Tubex®) syringes containing 10mg.
ADMINISTRATION:	Given by titrated intravenous injection. If hypotension occurs, keep the patient flat, and do not give more of the drug. Watch for respiratory depression.
ADULT DOSAGE:	2 to 5 mg by IV push every 5 to 30 minutes until the desired therapeutic effect is achieved. Do not exceed 15 mg in the field.

NALOXONE (NARCAN[®])

THERAPEUTIC EFFECTS:	<p>Specific antidote for narcotic agents.</p> <p>Reverses the actions of all narcotic drugs including heroin, morphine, methadone, codeine, Demerol[®], Dilaudid[®], Darvon[®], paregoric, and Percodan[®].</p> <p>Naloxone is thus effective in counteracting the effects of overdose from any of these agents, although large doses are required to reverse the effects of Darvon overdose.</p> <p>Naloxone will reverse stupor, coma, respiratory depression, etc. when these are due to narcotic overdose.</p>
INDICATIONS:	<p>To treat known NARCOTIC OVERDOSE or coma suspected to be due to narcotic overdose.</p>
CONTRAINDICATIONS:	<p>None</p>
SIDE EFFECTS:	<p>Too rapid administration may precipitate <u>projectile vomiting</u> and <u>ventricular dysrhythmias</u>.</p> <p>Administration to people who are physically dependent on narcotics may cause an acute withdrawal syndrome.</p> <p>For this reason, naloxone should be given very slowly, using improvement of respiratory status as an end point.</p> <p>In general, the duration of action of naloxone is shorter than that of the narcotics it is used to counteract.</p> <p>Thus, the patient who has been successfully roused with naloxone may fall back into stupor or coma as the naloxone wears off.</p> <p>These patients must therefore be watched closely, and the dose of naloxone should be repeated as necessary.</p> <p>Has been reported to cause pulmonary edema and sudden death in rare cases.</p>
HOW SUPPLIED:	<p>2 mg in 2 ml prefilled syringe.</p>

NALOXONE (NARCAN[®]) (cont'd)

ADMINISTRATION:	<p>In the field, given slowly by slow intravenous injection.</p> <p>As soon as there is improvement in the respirations, stop giving the drug.</p> <p>It is preferable that the patient NOT wake up fully in the field, as these patients may be violent when brought abruptly out of coma.</p> <p>USE RESPIRATIONS AS A GUIDE.</p> <p>If there is no response to two doses, suspect overdose with another, non-narcotic drug.</p>
ADULT DOSAGE:	<p>Initial dose: 2 mg Administer this solution VERY SLOWLY IV while monitoring the rate and depth of the patient's respirations.</p> <p>If there is no response to the full dose of naloxone, it may be repeated in 5 minutes in the same fashion.</p>
PEDIATRIC DOSAGE:	<p>0.1 mg/kg</p> <p>Newborn dose (narcotic dependent with decreased respiration):</p> <p>0.1 mg/kg every 3 minutes until respiration is improved.</p>

NITROGLYCERIN

THERAPEUTIC EFFECTS:	<p>The primary pharmacologic effect of nitroglycerin and related drugs is to relax smooth muscle, and the effects of nitroglycerin on the cardiovascular system are chiefly due to relaxation of <u>vascular</u> smooth muscle (hence vasodilatation).</p> <p>Nitroglycerin provides relief of pain in angina, probably by dilating coronary arteries and thereby increasing blood flow through them as well as by decreasing myocardial oxygen demand.</p> <p>Through its vasodilatation action on peripheral vessels, nitroglycerin promotes pooling of the blood in the systemic circulation and decreases the resistance against which the heart has to pump (the afterload); these effects may be useful in treating congestive heart failure.</p>
INDICATIONS:	<p>To relieve the pain of ANGINA.</p> <p>To treat selected cases of PULMONARY EDEMA due to LEFT HEART FAILURE</p>
CONTRAINDICATIONS:	<p>Use with caution in presumed right ventricular myocardial infarction.</p>
SIDE EFFECTS:	<p>Transient, throbbing <u>headache</u>.</p> <p><u>Hypotension</u></p> <p><u>Dizziness, weakness</u></p>
HOW SUPPLIED:	<p>Many forms, including ointment, spray, tablets, sustained release capsules.</p> <p>For use in the field, tablets or spray of 0.4 mg strength are preferred.</p>
ADMINISTRATION:	<p>Given sublingually (under tongue).</p> <p>The patient should be semi-sitting or recumbent.</p> <p>Monitor blood pressure and be prepared for hypotension.</p>
ADULT DOSAGE:	<p>One 0.4 mg tablet or spray under the tongue.</p> <p>May repeat once every 5 minutes as long as blood pressure remains normal.</p>

OXYGEN (O₂)

THERAPEUTIC EFFECTS:	Reverses the deleterious effects of hypoxemia on the brain, heart, and other vital organs.
INDICATIONS:	<p>Any condition in which global or local hypoxemia may be present:</p> <p>CARDIAC or RESPIRATORY ARREST (given with artificial ventilation). DYSPNEA or RESPIRATORY DISTRESS from any cause. CHEST PAIN. SHOCK. COMA from any cause. CHEST TRAUMA. NEAR-DROWNING. PULMONARY EDEMA. TOXIC INHALATIONS (smoke, chemicals, carbon monoxide). ACUTE ASTHMATIC ATTACK. ACUTE DECOMPENSATION OF COPD. STROKE, HEAD INJURY. REPEATED SEIZURES. Any patient in CRITICAL CONDITION.</p>
CONTRAINDICATIONS:	<p>None.</p> <p>May depress respirations in rare patients with chronic obstructive pulmonary disease. This is <u>not</u> a contraindication to its use, but simply means that such patients must be watched closely and assisted to breathe if the respiratory rate declines.</p>
SIDE EFFECTS:	None when given for short periods to adults (less than 24 hrs)
HOW SUPPLIED:	As a compressed gas in cylinders of varying sizes.
ADMINISTRATION:	<p>Administered by inhalation from a dosage mask, nasal cannula, endotracheal tube, etc.</p> <p>A patent airway and adequate ventilation must be ensured.</p>
ADULT DOSAGE:	Depends on the condition being treated. For cardiac arrest and other critical conditions, 100% oxygen should be given as soon as possible.

PROCAINAMIDE

THERAPEUTIC EFFECTS: Suppresses diastolic repolarization by reducing the automaticity of all myocardial pacemakers and slowing intraventricular conduction.

INDICATIONS: Ventricular fibrillation or pulseless ventricular tachycardia that reoccurs after periods of non-ventricular fibrillation rhythms.

CONTRAINDICATIONS: Complete or first degree heart block, presence of congestive heart failure, torsades de pointes, patients with lupus or myasthenia gravis, patients taking quinidine or disopyramide.

SIDE EFFECTS: Hypotension, widening of the QRS complex, heart block.

HOW SUPPLIED: 1000 mg/10 ml

ADMINISTRATION: Intravenously as an infusion.

ADULT DOSAGE: Infuse at 20 mg/min up to a total dose of 17 mg/kg to load the patient with procainamide, then infuse at 1 to 4 mg/min for patients with normal renal function. For patients with renal failure, the total loading dose is 12 mg/kg followed by an infusion of 1 mg/min.

PROVENTIL[®] / VENTOLIN[®] (ALBUTEROL)

THERAPEUTIC EFFECTS:	Beta-2 agonist (stimulator), dilates smooth muscle, bronchodilator
INDICATIONS:	Shortness of breath caused by bronchoconstriction May help transiently decrease potassium levels in patients with hyperkalemia
CONTRAINDICATIONS:	<ul style="list-style-type: none">* Allergy to drug* Excessive prior use of beta stimulants* Shortness of breath not from bronchoconstriction
SIDE EFFECTS:	<ul style="list-style-type: none">* Nervousness* Weakness* Tremor* Increased heart rate
HOW SUPPLIED:	Unit dose 2.5 mg vials (3 ml)
ADMINISTRATION:	By inhalation through a breathing aerosol device.
ADULT DOSAGE:	2.5 mg in NS via aerosol device with oxygen at 8 liters per minute.
PEDIATRIC DOSAGE:	2.5 mg (3 ml) in aerosol device with oxygen at 8 liters per minute

SODIUM BICARBONATE

THERAPEUTIC EFFECTS:	By neutralizing excess acid, helps return the blood towards a physiologic pH, in which normal metabolic processes and sympathomimetic agents (such as epinephrine) work more effectively.
INDICATIONS:	<p>To treat severe METABOLIC ACIDOSIS</p> <p>To treat HYPERKALEMIA (high serum potassium)</p> <p>To promote the excretion of some types of drugs taken in OVERDOSE.</p>
CONTRAINDICATIONS:	None
PRECAUTIONS:	<p>Because each meq of bicarbonate comes along with a meq of sodium, sodium bicarbonate has the same effect as any other salt-containing infusion, i.e., it increases the vascular volume.</p> <p>Three 50 ml syringes of sodium bicarbonate (1 meq/ml) contain approximately the same amount of salt as 1 liter of normal saline.</p> <p>Patients in borderline heart failure cannot tolerate salt loads of this magnitude.</p>
SIDE EFFECTS:	<p>Administration of sodium bicarbonate lowers serum potassium.</p> <p>In some cases, this is the desired effect, as when bicarbonate is used to treat hyperkalemia.</p> <p>However, in cardiac patients, if the potassium falls too low, the heart becomes irritable, and dysrhythmias may occur.</p> <p>This is especially likely in patients taking diuretics.</p> <p>Sodium bicarbonate administration transiently raises the arterial carbon dioxide level, and thus its administration must be accompanied by adequate ventilation.</p>
HOW SUPPLIED:	Vials and prefilled syringes of 50 ml, containing 1 meq/ml.
ADMINISTRATION:	Given by intravenous bolus injection

SODIUM BICARBONATE (cont'd)

ADULT DOSAGE:

For cardiac arrest:

If used at all, 1 meq/kg after the first 10 minutes of CPR.

Acidosis should thereafter be prevented with adequate ventilation.

Do not give bicarbonate in the same syringe with epinephrine or calcium.

For other conditions: As ordered by physician.

PEDIATRIC DOSAGE:

Cardiac Arrest:

1 meq/kg diluted with 1 ml/kg NS

Newborn: 0.5 meq/kg diluted with .5 ml/kg NS

SOTALOL (BETAPACE[®])

THERAPEUTIC EFFECTS: Sotalol is a β -blocker that also inhibits potassium channels at the cellular level resulting in prolongation of PR and QT intervals.

INDICATIONS: Wide complex ventricular tachycardia.

CONTRAINDICATIONS: Asthma, congestive heart failure, COPD, second or third degree AV block

SIDE EFFECTS: Bradycardia, prolongation of QT intervals, dizziness, dyspnea

HOW SUPPLIED: Injectable solution 15 mg/ml

ADMINISTRATION: Intravenous

ADULT DOSAGE: 1.5 mg/kg (to a maximum of 100 mg) IV over 5 minutes.

,

VASOPRESSIN (PITRESSIN[®])

THERAPEUTIC EFFECTS: Vasoconstriction, as an α agonist, with shunting of the blood to the brain and the heart.

INDICATIONS: Ventricular fibrillation, pulseless ventricular tachycardia

CONTRAINDICATIONS: Known hypersensitivity. This is a naturally occurring substance in the body; hence, adverse or allergic reactions are extremely rare.

SIDE EFFECTS: Mesenteric or limb ischemia secondary to arterial vasospasm, nausea, vomiting, diarrhea

HOW SUPPLIED: 20 units/1 ml

ADMINISTRATION: Intravenous

ADULT DOSAGE: 40 units IVP

STATE OF OHIO

EMS BOARD

Emergency Medical Services Pediatric Guidelines and Procedures Manual

INTRODUCTION

On behalf of the State Board of Emergency Medical Services, the Ohio Emergency Medical Services for Children Program was charged with drafting proposed pediatric guidelines that EMS agencies could use in setting a standard for emergency medical services to the children of Ohio.

Please note that the proposed guidelines are not mandatory for Ohio EMS agencies. The guidelines and procedures manual is meant to assist in the development of local protocols. It is the Board's hope that individual regions or agencies will review these guidelines with their medical directors and legal counsel when drafting their own individualized protocols.

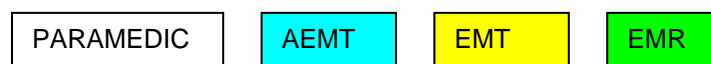
February 6, 2012

USING THE PEDIATRIC GUIDELINES

The pediatric guidelines are color coded for quick and easy reference, and represent the scope of practice as recommended by the Ohio EMSC Committee. In some cases, this differs from Ohio's scope of practice. Consult your medical director should questions arise regarding scope of practice.

Please see the color coded key below to determine how to use the guidelines.

PARAMEDICS may perform all instructions coded:



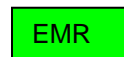
ADVANCED EMERGENCY MEDICAL TECHNICIANS (AEMT) may perform all instructions coded:



EMERGENCY MEDICAL TECHNICIANS (EMT) may perform all instructions coded:



EMERGENCY MEDICAL RESPONDERS (EMR) may perform all instructions coded:



MEDICAL CONTROL RECOMMENDATION



TABLE OF CONTENTS

PEDIATRIC PROTOCOL

Pediatric Altered Level of Consciousness	3
Arrhythmias	7
Pediatric Bradycardia	12
Pediatric Narrow Complex Tachycardia	13
Pediatric Stable Wide Complex Tachycardia	14
Pediatric Unstable Wide Complex Tachycardia	15
Cardiac Arrest	16
Pediatric Cardiac Arrest: AED Use-Ages 1-8 Years	20
Pediatric Cardiac Arrest: AED Use-Age 8 Years and Older	21
Pediatric Cardiac Arrest	22
Child Abuse / Neglect	23
Fever	26
Fluid and Drug Administration	27
Multiple Trauma	28
Newborn Resuscitation	29
Pediatric Respiratory Distress	34
Upper Airway Obstruction	34
Lower Airway Obstruction	36
Pediatric Seizure	40
Pediatric Shock	43
Special Needs Children	47
Emergencies in Children with Tracheostomies	49
Emergencies in Children with In-Dwelling Central Lines	51
Emergencies in Children with Gastrostomy Tubes	53
Emergencies in Children on Ventilators	55
APPENDIX	
Normal Pediatric Vital Signs	57
Pediatric Coma Scoring	57
Pediatric Prehospital Medications	58

PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS

EMR

- A. Assess ABCs. Manually stabilize cervical spine as per Multiple Trauma Protocol if cause of unconsciousness is unknown.
- B. If not breathing, assist ventilation with bag-valve-mask while administering 100% oxygen or provide mouth to mouth ventilation using barrier device.
- C. If breathing, administer 100% oxygen by NRB mask.
- D. Evaluate patient's general appearance, relevant history of condition and determine:
 - Allergies
 - Medication
 - Past Medical History - especially, diabetic, seizures, stroke, head injury, drug abuse
 - Last Meal
 - Events leading to present illness
- E. Obtain and document a pulse oximetry and/or capnography measurement.

EMT

- A. Determine blood sugar level by available means.
 - 1. If blood sugar is less than 70 mg/dl, administer oral glucose if alert. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl.

PATIENT MUST HAVE A GAG REFLEX.
 - 2. If blood sugar is greater than 400 mg/dl, TRANSPORT.
- B. If unable to check blood sugar or blood sugar is between 70 mg/dl and 400 mg/dl, establish communications with Medical Control and advise of patient condition.
- C. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.

AEMT

- A. Assist EMS professionals; obtain patient condition and circumstances.
- B. Check heart rhythm.
- C. Start IV saline, TKO.
- D. If any of the following are present: unresponsiveness, dehydrated or dry appearance, tachycardia, low BP, poor capillary refill and/or blood sugar is above 400 mg/dl, IV fluid bolus 20 ml/kg of normal saline.

PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS (cont'd)

- E. Determine blood sugar level by available means. Treat accordingly:
1. Blood sugar less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose (D25)
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl
 2. Blood sugar greater than 400 mg/dl and signs of hypoperfusion are present, administer an IV fluid bolus:
 - a. 20 ml/kg of saline
 - b. May be repeated if no response in 10 minutes.
- F. If blood sugar is normal, respirations are impaired, or patient does not respond to dextrose or fluid bolus, administer Narcan® 0.1 mg/kg IV, IO, ET. Refer to most current version of length based drug treatment guide (e.g. BROSELOW® PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage.
- If patient improves somewhat with Narcan® but is not fully awake, contact medical control for repeat dose.
- G. Re-evaluate patient condition, contact medical control, and transport to the hospital.
- H. In some cases, patient may require restraint, and should not be transported until appropriately restrained.

DO NOT DELAY TRANSPORT

PARAMEDIC

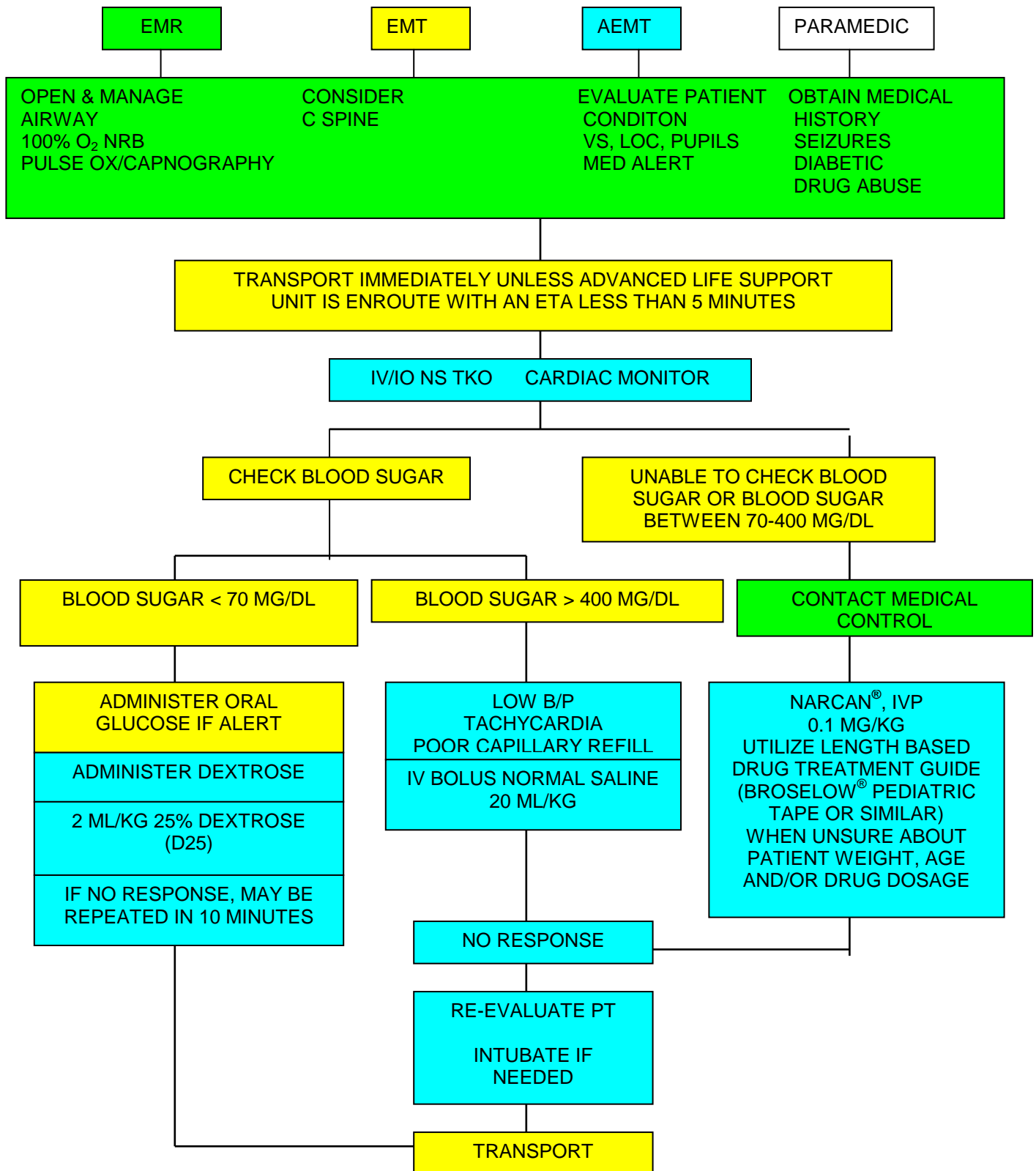
- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Assess airway adequacy and assist ventilation with bag-valve-mask while administering 100% oxygen. May consider intubation.
- C. Check heart rhythm.
- D. Start IV/IO of normal saline. If any of the following are present: unresponsiveness, dehydrated or dry appearance, tachycardia, low BP, or poor capillary refill, administer a fluid bolus of 20 ml/kg normal saline IV/IO push.
- E. Determine blood sugar level by available means. Treat accordingly:
1. Blood sugar less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose (D25)
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl
 2. Blood sugar greater than 400 mg/dl and signs of hypoperfusion are present, administer an IV fluid bolus:

PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS (cont'd)

- a. 20 ml/kg of normal saline
 - b. May be repeated if no response in 10 minutes.
- F. If blood sugar is normal, respirations are impaired, or patient does not respond to dextrose or fluid bolus, administer Narcan[®] 0.1 mg/kg IV, IO, ET. Refer to most current version of length based drug treatment guide (e.g. BROSELOW[®] PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage.

If patient improves somewhat with Narcan[®] but is not fully awake, contact medical control for repeat dose.
- G. Re-evaluate patient condition, contact medical control, and transport to the hospital.
- H. In some cases, patient may require restraint, and should not be transported until appropriately restrained.

PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS



PEDIATRIC ARRHYTHMIAS

GENERAL CONSIDERATIONS

- A. In the treatment of cardiac arrhythmia, current American Heart Association guidelines were referred to for protocol development.
- B. Life-threatening cardiac rhythm disturbances in children are more frequently the result rather than the cause of acute cardiovascular emergencies with hypoxia being the primary cause.
- C. In infants and children, an arrhythmia should be treated if:
 - 1. the arrhythmia compromises cardiac output (poor perfusion), or
 - 2. the arrhythmia has the potential for degenerating into a rhythm that compromises cardiac output
- D. Initial therapy in children will consist of proper ventilation and oxygenation, along with the assessment of cardiac output
- E. Quality CPR consists of pushing hard with compression of the chest to $\geq 1/3$ of the anteroposterior diameter of the chest, compressions of at least 100 per minute, and allowing complete chest recoil.
- F. For two-person CPR, the rate of chest compressions without the presence of an advanced airway is 3:1 in newborns with a suspected primary etiology of respiratory compromise, and 15:2 in children and newborns in arrest with a suspected cardiac etiology. If an advanced airway is in place, 8-10 breaths per minute should be administered with continuous chest compressions.
- G. Transport is essential when advanced cardiac life support is not available within ten minutes of receipt of the call
- H. Refer to length based drug treatment guide (e.g. BROSELOW[®] PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage.

EMR

- A. Per current American Heart Association Pediatric Basic Life Support guidelines, establish unresponsiveness, activate the emergency response system, get the AED/defibrillator, and check for a pulse.
- B. If the patient has a pulse and is not breathing or only gasping, give one breath every three minutes and recheck the pulse every 2 minutes. Assist ventilation with bag-valve-mask while administering 100% oxygen or provide mouth to mouth ventilation using barrier device.
- C. If the patient does not have a pulse, immediately provide quality CPR for two minutes, apply the AED, analyze the rhythm, and deliver a shock if indicated. If the patient remains unresponsive, resume quality CPR for two minutes and analyze the rhythm after each two minute cycle of CPR until the patient starts to Move or ALS providers assume care
- D. Immobilize the patient's cervical spine only if clinically indicated.

EMT

- A. Open and manage the airway and provide 100% oxygen by NRB mask
 - 1. Assist ventilations if rate is below or above normal limits and signs of hypoxia are present
 - 2. Apply pulse oximeter and obtain reading
- B. If patient show signs of decreased cardiac output (decreased LOC, poor capillary refill, low blood pressure,) and a heart rate less than 60 bpm that is unimproved with oxygenation, start quality CPR.

PEDIATRIC ARRHYTHMIAS (cont'd)

- C. Evaluate patient's general appearance and determine:
 - 1. Vital signs
 - 2. Level of consciousness
 - 3. Cardiac output
 - 4. Lung sounds
- D. Obtain relevant history of current condition.
- E. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.
- F. If cardiac monitor is available, and patient has an unusual and/or irregular heart rate or pulse, may assist the AEMT or Paramedic with the application of a cardiac monitor and the acquisition of a strip for interpretation by ED physician, during transport only.

AEMT

- A. Start IV normal saline (NS), TKO.
- B. Assess airway adequacy and assist ventilation with bag-valve-mask while administering 100% oxygen. May consider intubation.
- C. Apply monitor and determine arrhythmia.
- D. Treat arrhythmias as follows:
 - 1. Bradycardia. Treat only if:
 - a. Infant or child's heart rate < 60 bpm and the patient has poor perfusion.
 - b. Airway management and 100% oxygenation does not improve patient condition.
 - i. Begin quality CPR
 - ii. Transport immediately

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Assess airway adequacy and assist ventilation with bag-valve-mask while administering 100% oxygen. Perform appropriate airway management (airway adjuncts or intubation).
- C. Apply monitor and determine arrhythmia.
- D. Treat arrhythmias as follows:
 - 1. Bradycardia. Treat if:
 - a. Infant or child's heart rate < 60 bpm and patient has poor perfusion.
 - c. Airway management and 100% oxygenation does not improve patient condition.
 - i. Begin quality CPR

- ii. Administer epinephrine IV, IO, or ET every three to five minutes or until perfusion improves
 - (a) When IV or IO routes are available, administer 0.01 mg/kg (0.1 mL/kg) of 1:10,000
 - (b) When administering through ET tube, use 0.1 mg/kg (0.1 mL/kg) of epinephrine 1:1,000 ET that must be diluted with 3-5 ml of NS.
 - iii. If no response, administer atropine
 - (a) When IV or IO routes are available, 0.02 mg/kg. (minimum dose 0.1 mg, maximum single dose 0.5 mg)
 - (b) When administering through ET tube, administer 0.04 mg/kg
 - (c) Atropine may be repeated once if the patient is not improved in 3-5 minutes
 - (d) Refer to length based drug treatment guide (e.g. BROSELOW® PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage.
 - iv. Transport and contact medical control for possible cardiac pacing
2. Narrow Complex Tachycardia:
- a. If patient is asymptomatic, transport immediately.
 - b. Consider normal pulse for age of patient
 - d. Consider hypovolemia and follow Hypovolemic Shock Protocol.
 - d. Inquire about a history of Wolfe Parkinson White syndrome or other arrhythmias.
 - e. Consider vagal maneuver. Success of vagal maneuvers are variable and depend upon the presence of underlying conditions, the patient's level of cooperation, and age. Regardless of what type of vagal maneuver is attempted, obtain a cardiac monitor tracing before and during the attempt. The following vagal maneuvers may be attempted in pediatric patients:
 - Ice water applied to the face
 - Crushed ice in a plastic bag/glove applied to the face without obstructing ventilation
 - Have child blow through a straw
 - f. If patient is symptomatic (poor perfusion, shock, hypotension, respiratory difficulty, SOB, signs of CHF, altered LOC) and heart rate is ≥ 220 /minute in an infant or ≥ 180 /minute in a child:
 - i. Administer adenosine, 0.1 mg/kg (maximum 6mg) RAPID IV bolus over 1 to 3 seconds followed IMMEDIATELY with a 5-10 ml NS bolus IV.

- ii. If the first dose is ineffective, repeat adenosine in 1-2 minutes, 0.2 mg/kg (maximum 12 mg) RAPID IV bolus followed IMMEDIATELY with a 5-10 ml NS bolus IV.
- iii. Contact medical control
- iv. Consider sedation Valium®/Versed® 0.2 mg/kg IV
- v. Synchronous cardioversion at
 - (a) : 0.5-1 joules (monophasic or biphasic)
 - (b) : 2 joules/kg (monophasic or biphasic)
 - (c) If the second synchronized cardioversion is unsuccessful, consider contacting medical control for an antiarrhythmic (amiodarone or procainamide)

3. Wide Complex Tachycardia (With a pulse)

Assess patient's perfusion. Signs/symptoms of poor perfusion include

- Hypotension
- Acutely altered mental status
- Signs of shock

a. Good perfusion

i. If the rhythm is regular and the QRS complex is monomorphic, consider the administration of adenosine 0.1 mg/kg (maximum 6 mg) RAPID IV bolus over 1 to 3 seconds followed IMMEDIATELY with a 5-10 ml NS bolus IV. If the first dose is ineffective, repeat adenosine in 1-2 minutes, 0.2 mg/kg (maximum 12 mg) RAPID IV bolus followed IMMEDIATELY with a 5-10 ml NS bolus IV.

Antiarrhythmics that are indicated for a wide complex tachycardia are amiodarone or procainamide. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization. Do not routinely administer amiodarone and procainamide together. If the patient is stable or has a history of congenital heart disease, please discuss with the medical control physician at the receiving facility prior to administration of an antiarrhythmic. Otherwise, follow these guidelines for administration:

ii. If the rhythm is not regular and/or the QRS complex is not monomorphic or the EMT is unsure about the rhythm, contact medical direction for potential orders for an antiarrhythmic.

- Amiodarone 5 mg/kg IV over 20-60 minutes
- Procainamide IV infusion of 15 mg/kg over 30-60 minutes
 - Max dose is 15 mg/kg
 - Discontinue infusion if hypotension develops, development of a prolonged QRS complex greater than 50%, the arrhythmia resolves, or the maximum dose of 15 mg/kg has been administered.

****NOTE: If at anytime the patient becomes unstable with poor perfusion, go directly to synchronous cardioversion.**

****NOTE: Do not administer more than one antiarrhythmic to a patient. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization.**

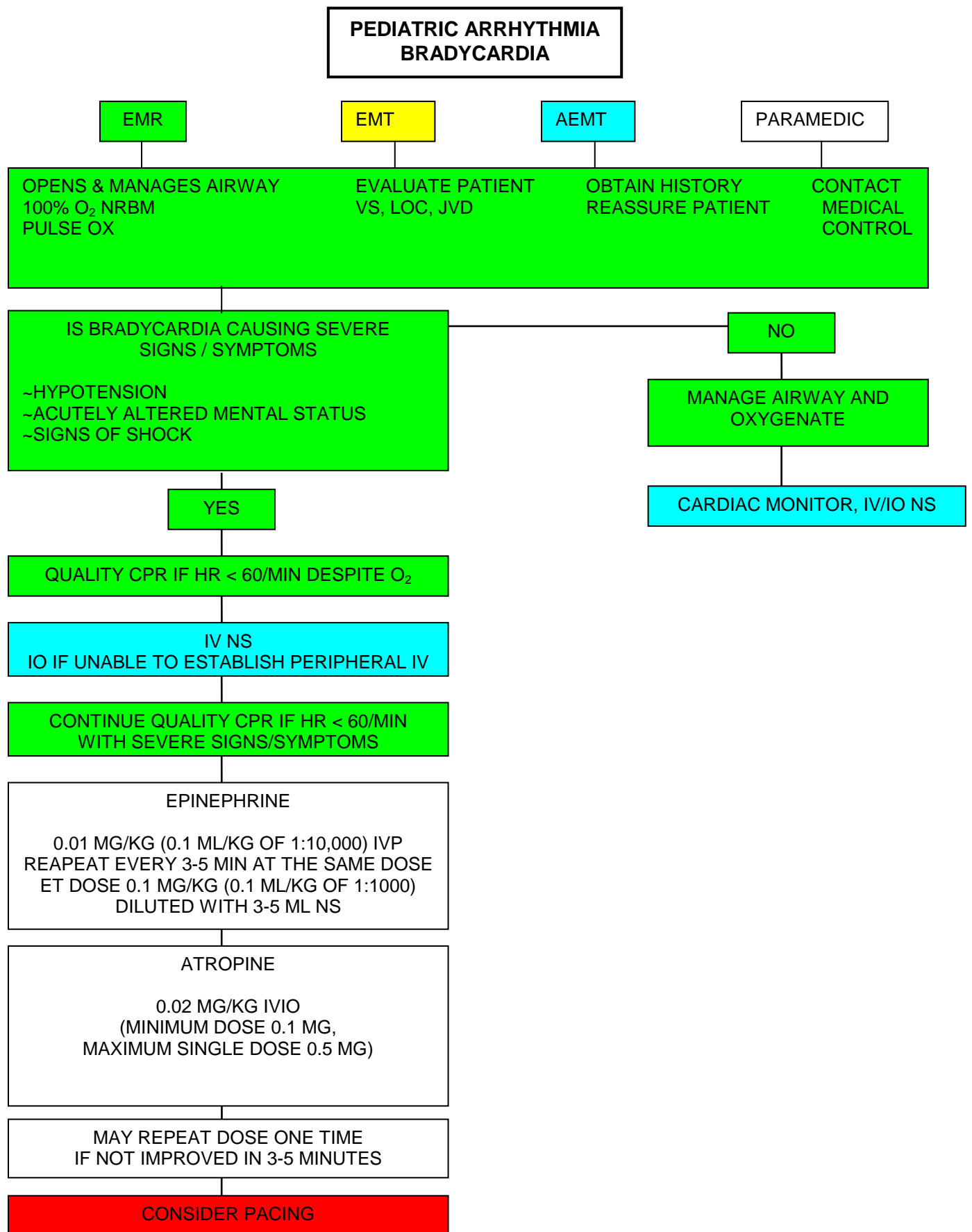
- ii. Consider sedation Valium®/Versed® 0.2 mg/kg IV

- iii. Synchronous cardioversion at:
 - (a) : 0.5-1 joules/kg (monophasic or biphasic)
 - (b) : 2 joules/kg (monophasic or biphasic)
- b. Poor perfusion (with a pulse):
 - i. Prepare for immediate cardioversion
 - ii. Consider sedation Valium®/Versed® 0.2 mg/kg IV
 - iii. Synchronous cardioversion at:
 - (a) : 0.5 joules/kg (monophasic or biphasic)
 - (b) : 2 joules/kg (monophasic or biphasic)
 - iv. Administer an antiarrhythmic

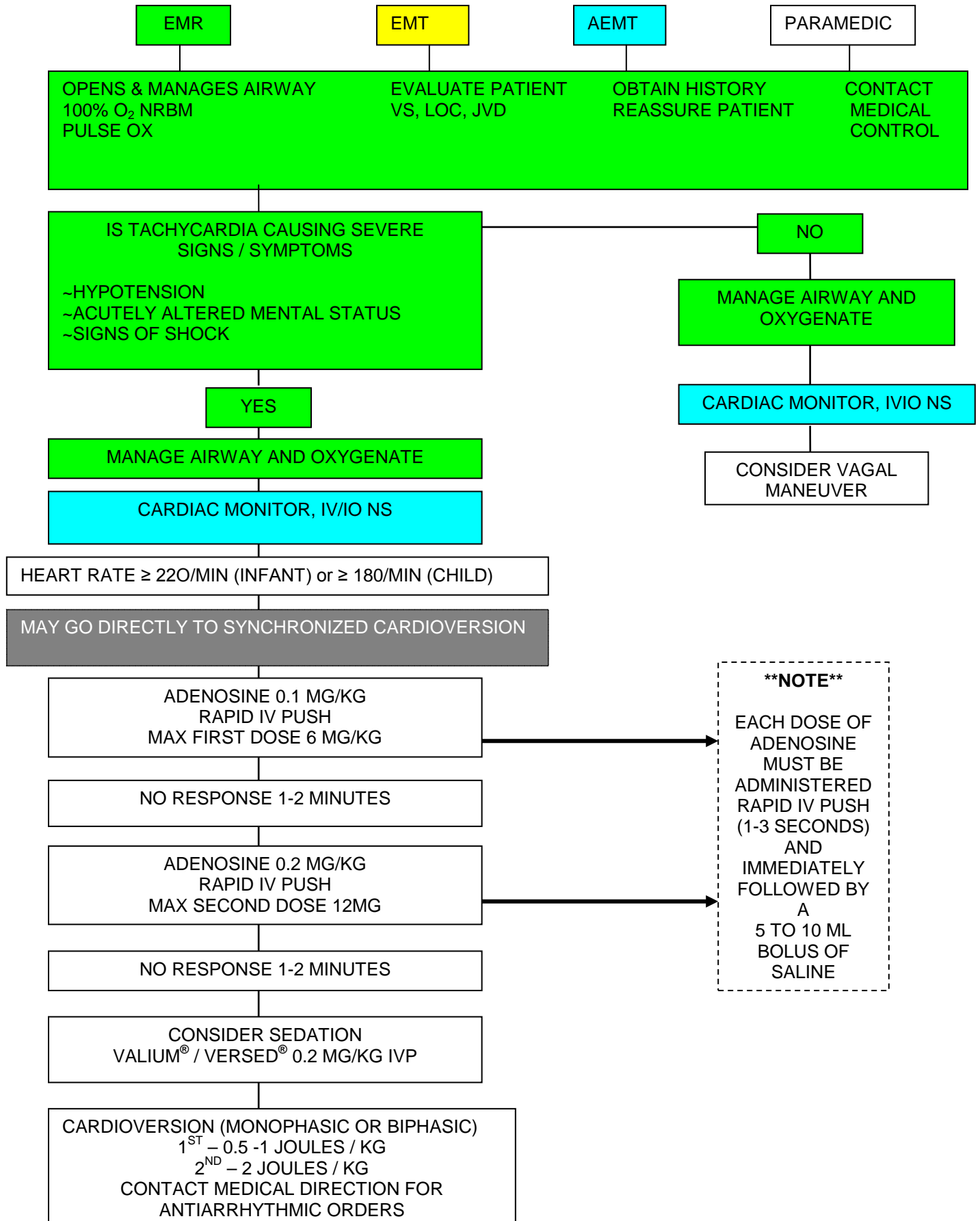
Antiarrhythmics that are indicated for a wide complex tachycardia are amiodarone or procainamide. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization. Do not routinely administer amiodarone and procainamide together. If the patient is stable or has a history of congenital heart disease, please discuss with the medical control physician at the receiving facility prior to administration of an antiarrhythmic. Otherwise, follow these guidelines for administration:

- Amiodarone 5 mg/kg IV over 20-60 minutes
- Procainamide IV infusion of 15 mg/kg over 30-60 minutes
 - Maximum dose is 15 mg/kg
 - Discontinue infusion if hypotension develops, development of a prolonged QRS complex greater than 50%, if the arrhythmia resolves, or the maximum dose of 15 mg/kg has been administered.

****NOTE: Do not administer more than one antiarrhythmic to a patient. The choice of the antiarrhythmic should be predetermined by the Medical Director for your organization.**

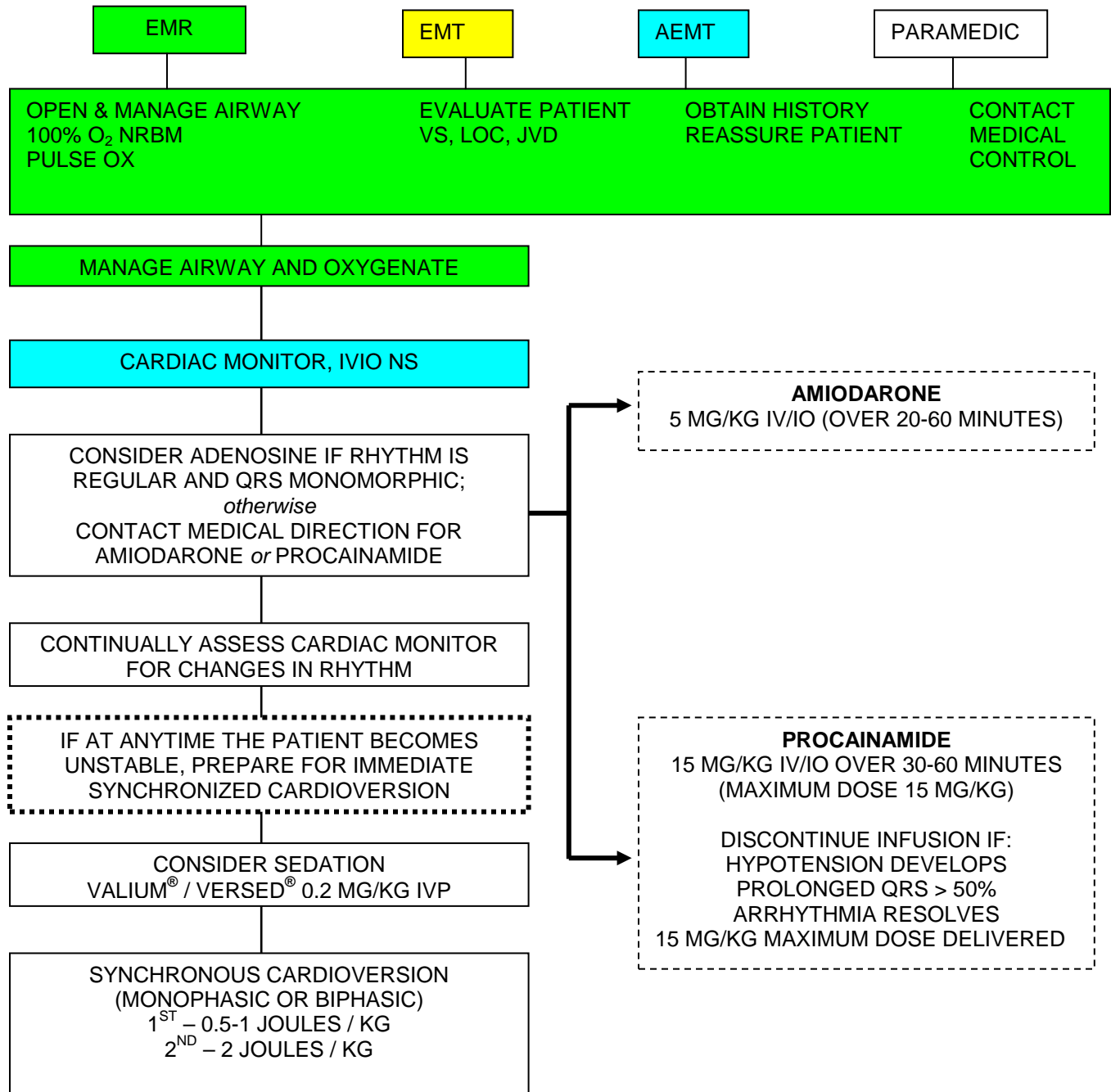


PEDIATRIC ARRHYTHMIA NARROW COMPLEX TACHYCARDIA



**PEDIATRIC ARRHYTHMIAS
STABLE WIDE COMPLEX TACHYCARDIA**

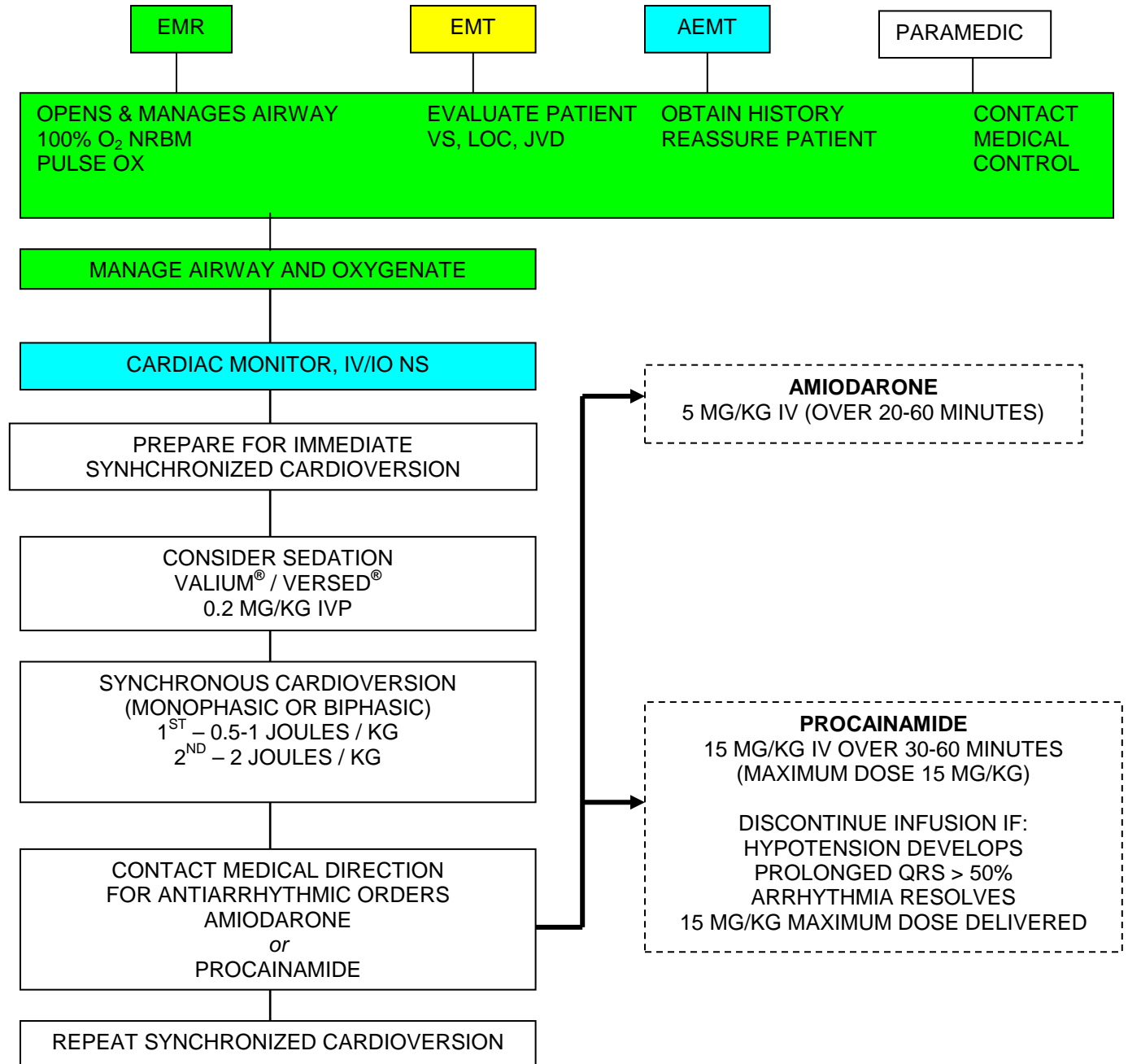
**PATIENTS WITH A GOOD PULSE, FOOD PERFUSION, WHO ARE ALERT AND
ORIENTED ARE CONSIDERED STABLE**



DO NOT ADMINISTER MORE THAN ONE ANTIARRHYTHMIC TO A PATIENT

**PEDIATRIC ARRHYTHMIAS
UNSTABLE WIDE COMPLEX TACHYCARDIAS**

**PATIENTS WITH POOR PERFUSION / SHOCK / HYPOTENSION, RESPIRATORY
DIFFICULTY, PULMONARY CONGESTION, AND/OR ALTERED LOC ARE
CONSIDERED UNSTABLE**



DO NOT ADMINISTER MORE THAN ONE ANTIARRHYTHMIC TO A PATIENT

PEDIATRIC CARDIAC ARREST

GENERAL CONSIDERATIONS

- A. Cardiac arrest in children is primarily due to lack of an adequate airway, resulting in hypoxia
- B. All EMS professionals must concentrate on opening and maintaining the airway and providing 100% oxygen
- C. Quality CPR consists of pushing hard with compression of the chest to $\geq 1/3$ of the anteroposterior diameter of the chest, compressions of at least 100 per minute, and allowing complete chest recoil.
- D. For two-person CPR, the rate of chest compressions without the presence of an advanced airway is 3:1 in newborns with a suspected primary etiology of respiratory compromise, and 15:2 in children and newborns in arrest with a suspected cardiac etiology. If an advanced airway is in place, 8-10 breaths per minute should be administered with continuous chest compressions.
- E. During BVM ventilation or endotracheal intubation, routine cricoid pressure to prevent aspiration is no longer recommended.
- F. Transport IMMEDIATELY when excessive hemorrhage or hypothermia is present. ALS measures should be carried out during transport
- G. If peripheral IVs cannot be established, venous access should be obtained by the intraosseous route
- H. If IV or IO access cannot be established, administer appropriate medications through the ET tube
- I. **NOTE:** AEDs should not be used on patients under one year of age. Pediatric AED pads are preferred for patients between the ages of 1 and 8 years of age. Adult AED pads should be used for patients greater than 8 years of age, but they may be used in patients between the ages of 1 and 8 years of age if pediatric AED pads are unavailable.
- J. If Sudden Infant Death Syndrome (SIDS) is suspected:
 - 1. Initiate basic and advanced life support, unless apparent rigor mortis or signs of lividity are present
 - 2. Communicate with and reassure the parents
 - 3. Encourage family to have friends or neighbors accompany them to the hospital
 - 4. If infant is not resuscitated, refer parents to social services at the nearest appropriate emergency department to initiate counseling
- K. Refer to BROSELOW[®] PEDIATRIC EMERGENCY TAPE when unsure about patient weight, age and/or drug dosage

EMT

- A. Open and maintain airway in sniffing position
- B. Ventilate with 100% oxygen via BVM with oxygen reservoir
- C. Initiate quality CPR in accordance with American Heart Association guidelines
- D. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY unless ALS unit is en route and has an ETA of less than 5 minutes

CARDIAC ARREST (cont'd)

- E. If an Automated External Defibrillator (AED) is available:
1. Assess patient for respirations and cardiac arrest
 2. Apply AED and activate the device.
 3. Start documentation that must include:
 - EMS unit delivering care and ID of EMS professionals
 - Initial call information (i.e. accidental ingestion, drowning, etc.)
 - Initial patient assessment, findings, and impression
 - Care given to this point
 - Ongoing outcomes of care delivered to patient
 - a. "No Shock Advised"
 - i. Continue quality CPR for two minutes
 - ii. Continue ventilation with 100% oxygen via BVM with oxygen reservoir
 - iii. Contact medical control and transport IMMEDIATELY
 - b. "Shock Advised"
 - i. Deliver a single shock
 - ii. Resume quality CPR for two minutes
 - iii. Contact medical control, advise of cardiac arrest, and transport IMMEDIATELY
 - iv. After each two minute cycle of quality CPR, activate AED to assess rhythm and deliver a single shock if indicated
 - v. Resume quality CPR

"TURN AED OFF DURING MOVEMENT OF PATIENT"

AEMT

- A. Assume charge and confer with EMS professionals to patient condition and circumstances
- B. Apply cardiac monitor
- C. If monitor shows ventricular fibrillation or pulseless ventricular tachycardia:
 1. Defibrillate at 2 joules/kg
 2. If no response, Five cycles of quality CPR
 3. Defibrillate at 4 joules/kg
 4. If no response, resume quality CPR and TRANSPORT
- D. Start IV or IO of saline and give 20 ml/kg NS IV bolus. IV access should be accomplished en route to hospital.

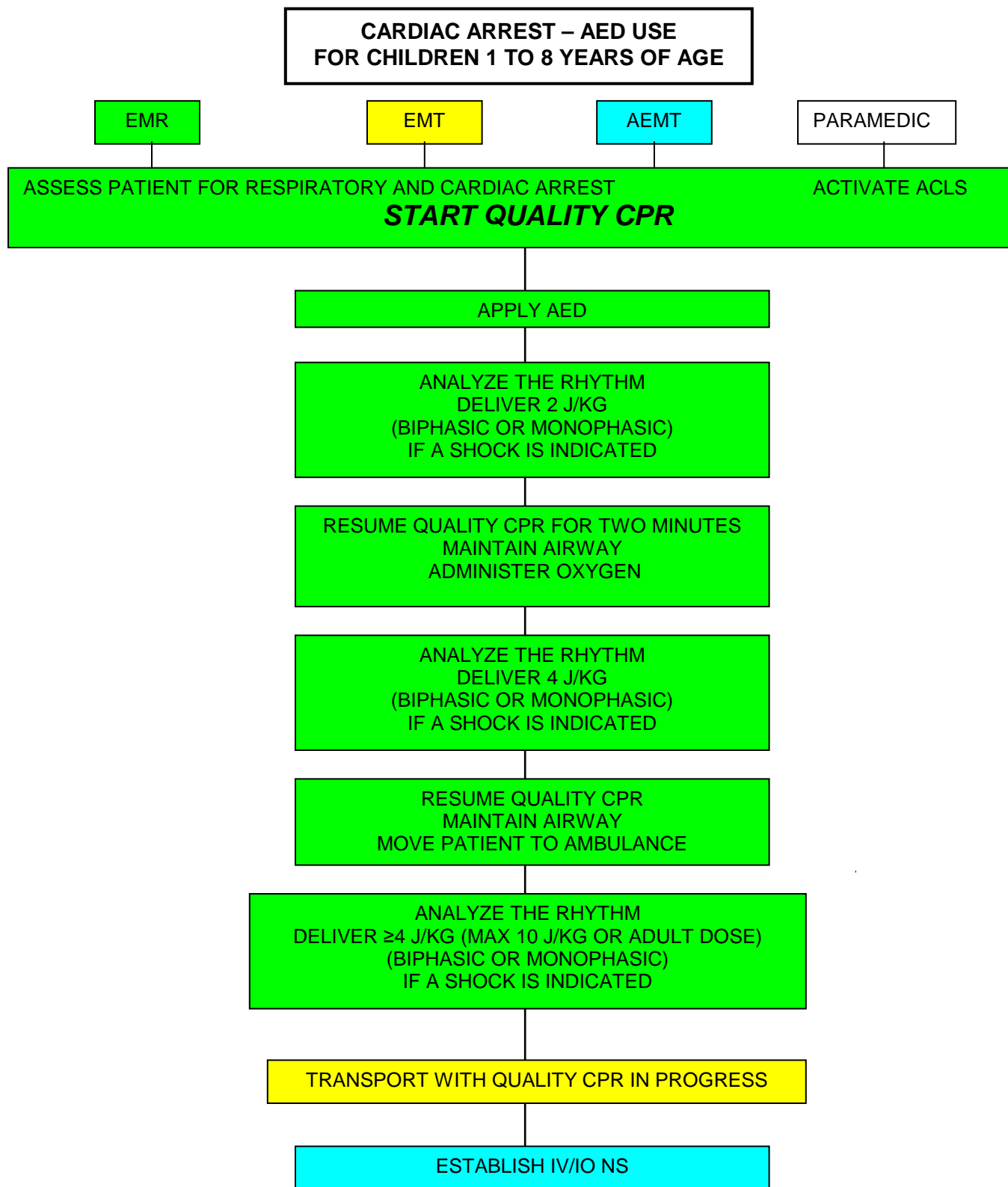
DO NOT DELAY TRANSPORT

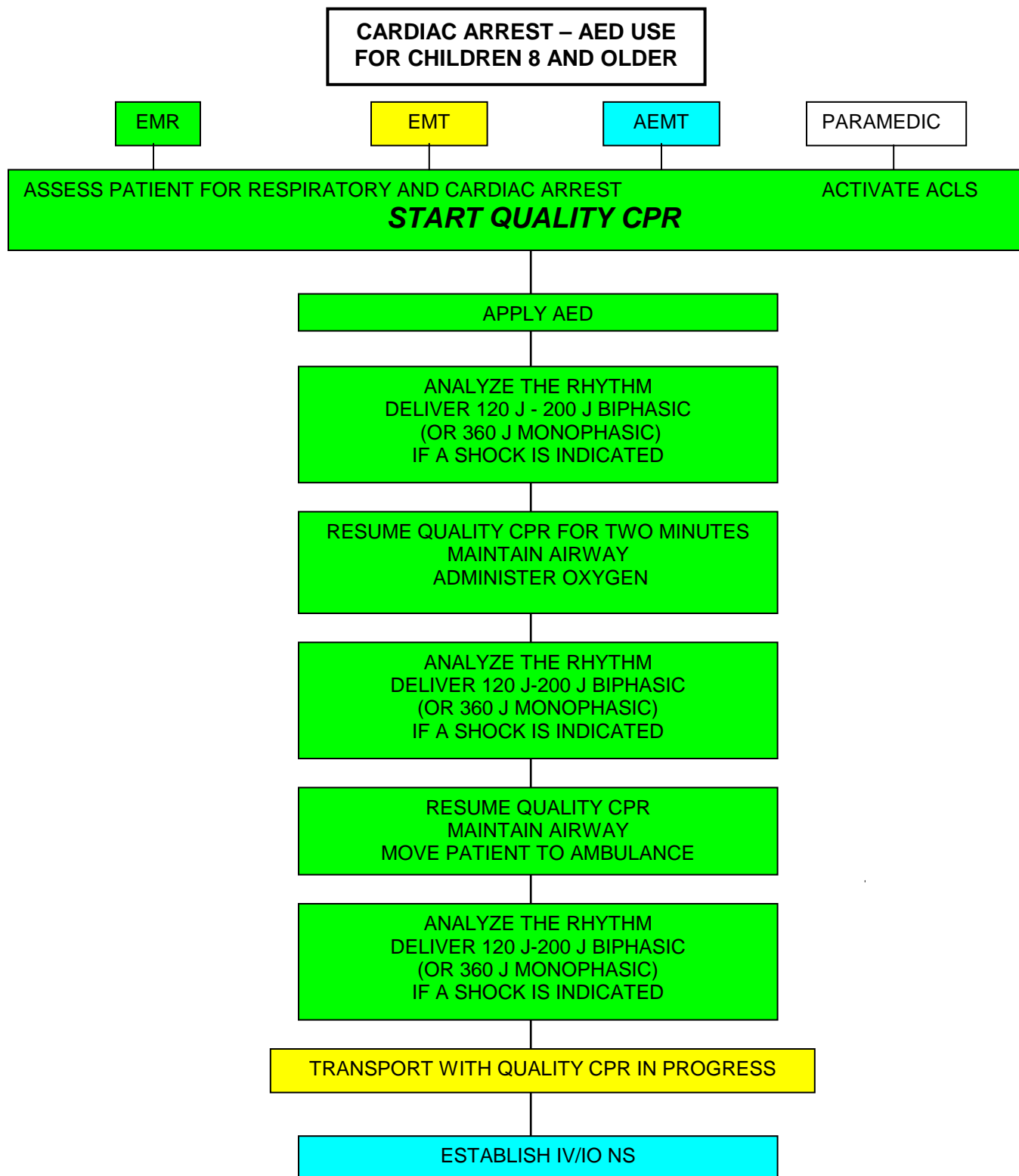
EMT-P

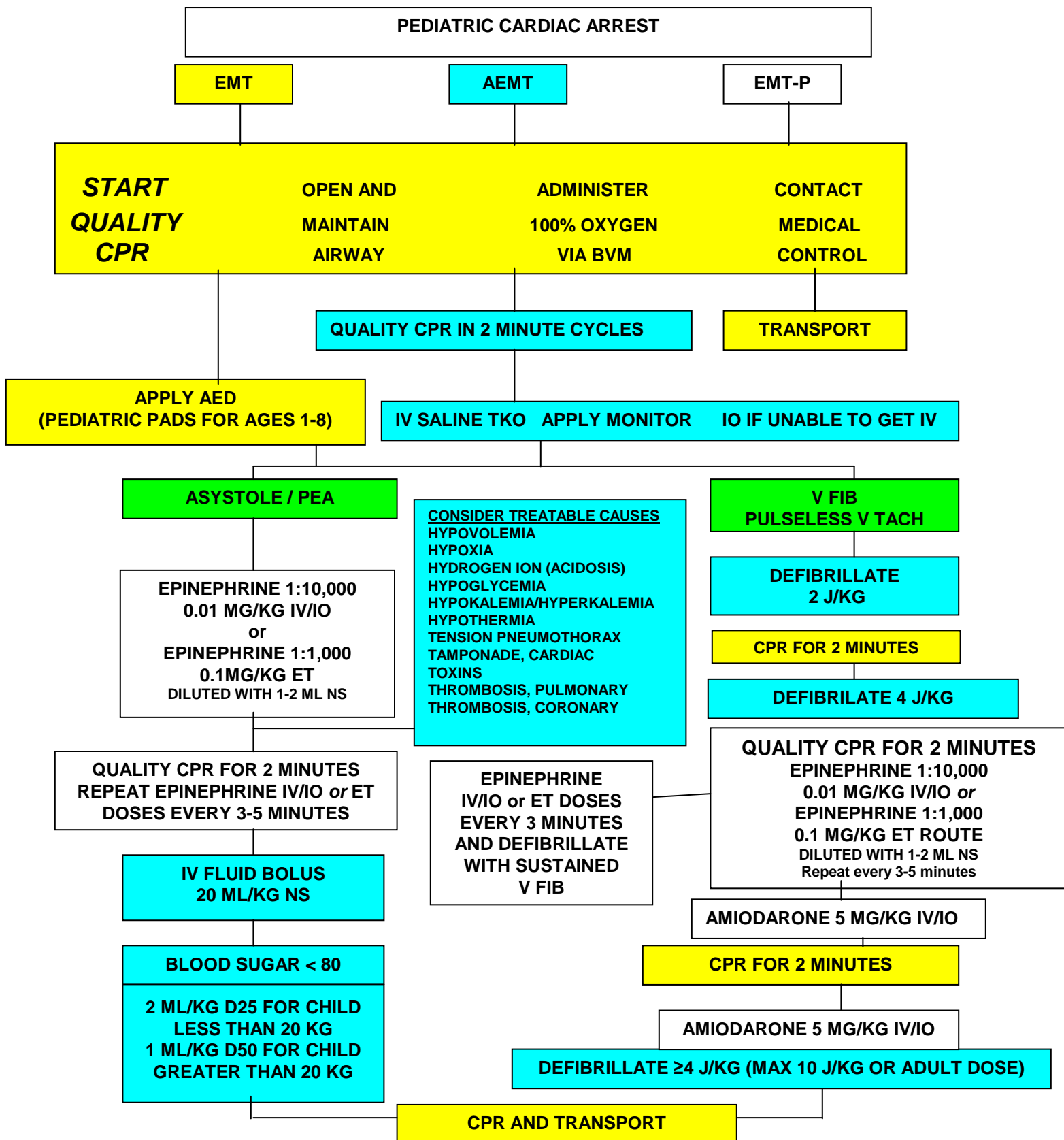
- A. Assume charge and confer with EMS professionals as to patient condition and circumstances
- B. If an AEMT is in a cycle of defibrillation, allow to complete cycle
- C. Assess airway and intubate if needed
- D. Establish IV or IO, whichever is quickest
- E. Apply monitor. If one of the following conditions exists, treat as follows:
 1. Ventricular fibrillation or pulseless ventricular tachycardia
 - a. Defibrillate at 2 joules/kg
 - b. If no response, quality CPR for two minutes
 - c. Defibrillate at 4 joules/kg
 - d. If no response, continue quality CPR for two minutes
 - e. Administer epinephrine IV, IO or ET every 3-5 minutes
 - IV / IO doses – 0.01 mg/kg of 1:10,000 (0.1 ml/kg)
 - ET tube doses – 0.1 mg/kg of 1:1,000 (0.1 ml/kg) diluted with 1-2 ml of saline
 - f. If no response, defibrillate at ≥ 4 joules/kg to a maximum of 10 joules/kg or the adult dose
 - g. If no response, continue quality CPR for two minutes
 - h. Administer one antiarrhythmic
 - Amiodarone 5 mg/kg IV/IO, may repeat dose up to 2 times for refractory ventricular fibrillation or pulseless ventricular tachycardia
 - i. If no response, continue quality CPR and TRANSPORT
 - j. Consider the treatment of reversible causes
 - Hypovolemia: administer 20 ml/kg NS IV fluid boluses
 - Hypoxia
 - Hydrogen ion (acidosis)
 - Hypoglycemia: administer 2 ml/kg of D25 IV/IO for children under 20 kg or 1 ml/kg of D50 IV/IO for children over 20 kg if the blood glucose is less than 80
 - Hypokalemia/hyperkalemia
 - Hypothermia
 - Tension pneumothorax
 - Tamponade, cardiac
 - Toxins
 - Thrombosis, pulmonary
 - Thrombosis, coronary
 2. Asystole / Pulseless Electrical Activity (PEA)
 - a. Begin quality CPR immediately
 - b. Obtain IV/IO access

CARDIAC ARREST (cont'd)

- c. Continue quality CPR for two minutes and administer epinephrine IV, IO or ET every 3-5 minutes
 - i. IV/IO doses – 0.01 mg/kg of 1:10,000 (0.1 ml/kg)
 - ii. ET tube doses – 0.1 mg/kg of 1:1,000 (0.1 ml/kg) diluted with 1-2 ml of saline
- c. Confirm asystole in two different leads
- d. If rhythm is unclear and possibly ventricular fibrillation, follow ventricular fibrillation/pulseless ventricular tachycardia guideline
- e. Consider treatable causes:
 - Hypovolemia: administer 20 ml/kg NS IV boluses
 - Hypoxia
 - Hydrogen ion (acidosis)
 - Hypoglycemia: administer 2 ml/kg of D25 IV/IO for children under 20 kg or 1 ml/kg of D50 IV/IO for children over 20 kg if the blood glucose is less than 80
 - Hypokalemia/hyperkalemia
 - Hypothermia
 - Tension Pneumothorax
 - Tamponade, cardiac
 - Toxins
 - Thrombosis, pulmonary
 - Thrombosis, coronary
- f. If no response, continue quality CPR and TRANSPORT







**AFTER AN ADVANCED AIRWAY IS PLACED
RESCUERS NO LONGER DELIVER "CYCLES"
OF CPR. GIVE CONTINUOUS CHEST
COMPRESSIONS WITHOUT PAUSES FOR
BREATHS. GIVE 8 TO 10 BREATHS/MINUTE.
CHECK RHYTHM EVERY TWO MINUTES.**

CHILD ABUSE / NEGLECT

GENERAL CONSIDERATIONS

- A. Child abuse or neglect are widespread enough that nearly all EMS professionals will see these problems at some time. The first step in recognizing abuse or neglect is to accept that they exist and to learn the signs and symptoms.
- B. Initiate treatment as necessary for situation using established protocols.
- C. If possible remove child from scene, transporting to hospital even if there is no medical reason for transport.
- D. If parents refuse permission to transport, notify law enforcement for appropriate disposition. If patient is in immediate danger, let law enforcement handle scene.
- E. Advise parents to go to hospital. **AVOID ACCUSATIONS** as this may delay transport. Adult with child may not be the abuser.
- F. Carefully document findings and report to physicians at the hospital. An EMS professional must also report or assure that actual or suspected child abuse/neglect is reported to the local law enforcement agency or the Children's Services Board.

DOCUMENT THIS NOTIFICATION

DO NOT JEOPARDIZE YOUR SAFETY

SIGNS AND SYMPTOMS

The incidence of child abuse and neglect has no socioeconomic, racial, cultural, or religious boundaries. Child abuse and neglect occurs in all segments of our population. Prehospital personnel are in a unique position in their ability to make the initial identification of these victims. EMS professionals should always believe what the child says, document the exact statements on the prehospital care report, and communicate them clearly to the healthcare providers upon arriving to the receiving facility.

The signs and symptoms of child abuse and neglect may include the following:

Physical Abuse

- A. Bruises
 - i. Infants rarely bruise accidentally
 - ii. Active children normally sustain bruises on the front of the body (knees, shins, elbows, foreheads)
 - iii. Bruises in recognizable shape of an object are suspicious
 - iv. Multiple bruises in different stages of healing are suspicious
- B. Skin injuries-cuts, scrapes, bruises, burns, bites, redness, swelling

C. Burns

- i. Scald burns are common
- ii. Immersion burns characterized by clear lines of demarcation (accidental burns are more likely to have a splash pattern due to the child's withdrawal from the heat source)
- iii. Inflicted contact burn (recognizable by a shape of the object used to produce it)
- iv. Burns in less exposed or unexposed areas, deeper or larger burns

D. Bites

- i. Adult human bite marks
- ii. Multiple, random, or well-defined bite marks
- v. Multiple defined tooth marks (differ from animal bites)

E. Fractures

- i. Suspected fractures discovered "accidentally" by the guardian
- ii. Skeletal injury inconsistent with history
- iii. Multiple fractures in different stages of healing
- iv. Suspected fractures accompanied by other injuries

F. Reported or alleged falls

- i. Falls from a standing position or low object (less than child's height) rarely result in serious injuries
- ii. Falls from greater than child's height are usually required to sustain serious injury

G. Injuries to face and head

- i. Unintentional injuries usually involve the front of body
- ii. Injuries to the side of the face, the cheeks, or the ears are suspicious for abuse
- iii. Direct blows to the mouth usually results in lip injuries, possibly with fractures to the jaw or teeth
- iv. Considerable force is required to cause severe head trauma

H. Hair loss

- i. Can be sign of child abuse from dragging by the hair
- ii. May simply be the result of excessive force during hair brushing or from certain types of hair braiding
- iii. May be self-inflicted to relieve stress
- iv. Blood may be seen at the surface or beneath the scalp

I. Shaken baby syndrome

- i. Most common in children less than 2 years old
- ii. There may be no external evidence of trauma
- iii. Possible signs include decreased consciousness, seizures, vomiting,
- iv. other signs of head injury, unusual cry
- v. Altered mental status may be the only sign
- vi. Recognition of the possibility of this syndrome should trigger suspicion of abuse

Sexual Abuse

- A. Signs of recent abuse may include pain, bleeding, or discharge from urethra, vagina, or rectum
- B. Signs of chronic or concealed abuse occurring over weeks or months may include nonspecific abdominal pain, vaginal inflammation, or painful urination
- C. The physical examination is normal in most cases

Emotional Abuse

- A. A component of all forms of child abuse
- B. Most cases are mild, but early recognition is important
- C. Signs
 - i. Encouragement of destructive or antisocial behaviors
 - ii. Verbal assault of the child or verbal attacks on the child's development of self and social competence
 - iii. Humiliation of the child
 - iv. Ignoring the child

CHILD ABUSE/NEGLECT (cont'd)

- v. Isolation of the child
- vi. Rejection of the child's needs and requests

Neglect

- A. Most common form of child abuse, yet it is the most under-recognized and under-reported form of child abuse
- B. Signs
 - i. Inadequate care, including inadequate provision of food, clothing, or shelter
 - ii. Inadequate medical attention, including delay in seeking care for known illness
 - iii. Poor personal hygiene
 - iv. Unsanitary conditions
 - v. Inadequate sleeping arrangements
 - vi. Lack of supervision
 - vii. Evidence of substance abuse
 - viii. Structural, fire, environmental hazards

FEVER

GENERAL CONSIDERATIONS

- A. If febrile, remove excess clothing, but take great care to avoid shivering. Consider environment and temperature of vehicle.
- B. DO NOT sponge child unless treating for heat exposure. (This includes use of moist towels to “cool” the child)
- C. Transport all infants < 8 weeks of age with a reported temperature > 100.4° F (38° C) or < 96° F (35.5° C)

PEDIATRIC FLUID AND DRUG ADMINISTRATION

AEMT

- A. Peripheral venous access, in the form of an IV or an IO, will be the first route for fluid and drug administration for any life or limb threatening emergency situation.
- B. Unless there are compelling factors, no more than two attempts at peripheral access should be made in the pediatric patient.
- C. In a **life-threatening situation** where venous access appears futile, immediately establish intraosseous access.
- D. Intraosseous Infusion
 - 1. The following are guidelines for the UNSTABLE child requiring alternative vascular access AFTER insuring that the airway and ventilations are established:
 - a. **Indications:** Intraosseous access should be established if you cannot rapidly achieve venous access in a patient in decompensated shock or cardiopulmonary arrest.
 - c. **Contraindications:** Recently fractured bone, known bone disorder, previous unsuccessful attempt of IO placement at site.
 - d. **Relative contraindications:** cellulitis or infected burn at site.
 - c. **Equipment:** Bone marrow aspiration needle, iodine and alcohol preps, 5 ml syringe.
- E. Fluid of choice is normal saline or Lactated Ringers, utilizing a macrodrip administration set. If child is less than 2 years old a microdrip set should be used if available.

PARAMEDIC

- A. When peripheral or IO access is not available for administering medications:
 - 1. If an ET tube is in place, the ET tube should be the route of administration for
 - Lidocaine
 - Atropine
 - Narcan[®]
 - Epinephrine
 - 2. Intramuscular (IM) route may be used for Versed[®] or morphine.
 - 3. Rectal route may be used for Valium[®] (diazepam).

MULTIPLE TRAUMA

GENERAL CONSIDERATIONS

- A. The basics of trauma care apply to pediatric patients and should primarily follow the general adult trauma protocol.
- B. Drowning is classified as trauma in Ohio. Victims of drowning or near drowning that could require admission to a hospital should be transferred to the appropriate trauma center.
- C. Areas where special focus should occur:
 - 1. May involve both respiratory failure and shock.
 - 2. Assessment and support of cardiopulmonary function is fundamental.
- D. Common errors of pediatric trauma resuscitation are:
 - 1. Failure to open and maintain the airway.
 - 2. Failure to provide appropriate fluid resuscitation to children with head injury.
 - 3. Failure to recognize and treat internal hemorrhage.
- E. An IO infusion is indicated in the trauma setting when shock needs to be treated and rapid venous access is unobtainable.
- F. The proper size equipment is very important to resuscitation care. Refer to length based drug treatment guide (e.g. BROSELOW[®] PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage and when choosing equipment size.

****NOTE: FOLLOW APPLICABLE REGIONAL
PEDIATRIC TRAUMA TRIAGE PROTOCOL**

NEWBORN RESUSCITATION

GENERAL CONSIDERATIONS

A. The five initial questions to assess in every newborn are as follows:

- Is the baby full term and how many babies are expected?
- Is there THICK meconium present?
- Is the baby breathing or crying?
- Does the baby have good muscle tone?
- Is the baby's color pink?

These questions will help determine the amount of intervention needed. Most term healthy infants do not require ALS intervention. This initial assessment should be completed within 30 seconds.

- B. Body heat must always be maintained. As soon as the baby is born, wipe the baby dry and place in a warm environment. Cover the infant's head, place against mother's skin, and cover both. Use indirect heated, humidified oxygen, if available. Avoid direct application of cold oxygen to infant's face as this may cause respiratory depression. Avoid inducing hyperthermia (elevated body temperature) in babies who may have had a hypoxic-ischemic event.
- C. Position infant in sniffing position (with a 1 inch towel under the shoulders). This will provide an optimally opened airway and adequate drainage of secretions.
- D. Suction secretions with a bulb syringe from the mouth and then nose for newborns who have obvious obstruction to spontaneous breathing or who require positive pressure ventilation.
- E. Open and manage airway
- F. Meconium aspiration is a major cause of death and morbidity among infants. If thick meconium is present and not removed, 60% of these infants will aspirate the meconium. If meconium staining of the amniotic fluid is present, *routine intrapartum oropharyngeal and nasopharyngeal suctioning for infants is not advised*. Endotracheal suctioning for the presence of meconium or meconium staining should be reserved for infants who are not vigorous and should be performed immediately after birth. If thick meconium is present, it may be necessary to visualize the trachea and suction the lower airway. Lower airway suction is achieved by intubating the infant and suctioning directly through the ET tube. Each time this suctioning is done, the infant will have to be re-intubated with a new tube if available. If a new ETT of the appropriate size is not available, the ETT should be flushed with normal saline or sterile water and reused. Watery or thin meconium does not require suctioning of the lower airway. Prolonged and/or unsuccessful attempts at intubation may result in bradycardia. Ventilation with BVM should be considered, particularly if there is persistent bradycardia.
- G. If drying and suctioning has not provided enough stimulation, try rubbing the infant's back or flicking their feet. If the infant still has poor respiratory effort, poor tone or central cyanosis, consider them to be distressed. Most distressed infants will respond quickly to 100% oxygen via BVM or T-piece. Continuous positive airway pressure (CPAP) should be considered for persistent labored breathing, cyanosis, or low pulse oximetry.
- H. The APGAR score should be used in the initial assessment of normal newborns and is a measure of the effectiveness of interventions for the distressed newborn. Scoring must not delay intervention in the distressed newborn. The score is completed at 1 and 5 minutes after delivery. If the 5-minute score is less than 7, repeat every 5 minutes for the next 20 minutes.

APGAR SCORE

Sign	0	1	2
Color	Blue / Pale	Pink Body, Blue Extremities	Completely Pink
Heart Rate	Absent	Below 100	Above 100
Irritability (response to stimulation)	No Response	Grimace	Cries
Muscle Tone	Limp	Flexion of Extremities	Active Motion
Respiratory Effort	Absent	Slow and Regular	Strong Cry

- I. Refer to length-based drug treatment guide (e.g. Broselow[®] Pediatric emergency tape or similar device) when unsure about patient weight or drug dosage.

EMR

- A. The EMR may assist in the management of emergency childbirth.
- B. After delivery of the infant, assess airway and breathing while drying and positioning head down. If thick meconium is present or the infant is not vigorous, suction the oropharynx and nasopharynx with a bulb syringe prior to ventilation and stimulation. Keep infant warm. Wrap in dry blankets.
- C. If infant not breathing, assist ventilations via mouth to mouth using barrier device or a bag valve mask.
- D. If no pulse or pulse < 60 bpm, begin quality CPR.
- E. Keep infant warm. Wrap in dry blankets.

EMT

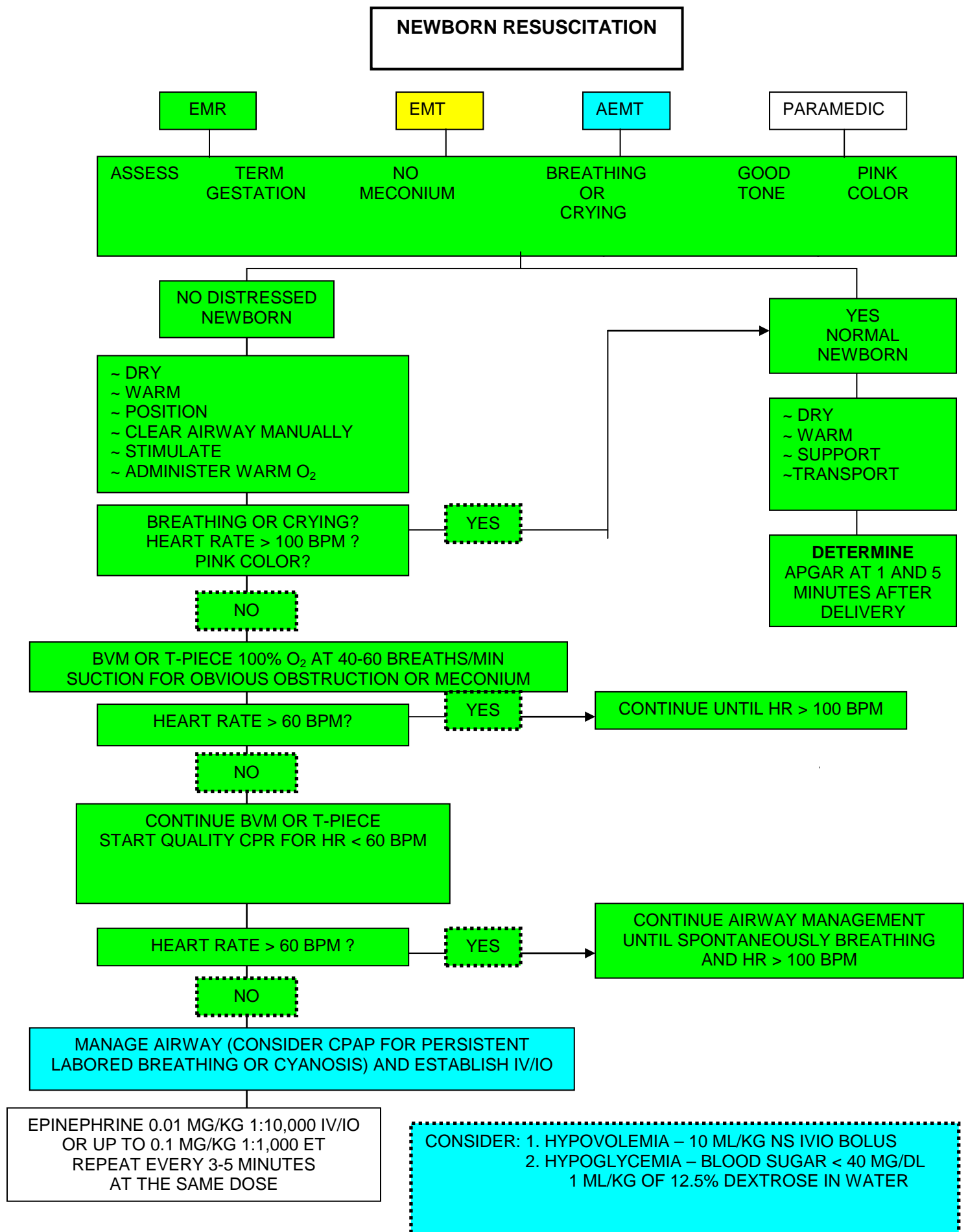
- A. If heart rate is < 100 bpm, BVM or T-piece ventilation is necessary to increase heart rate.
- B. If heart rate is < 60 bpm despite adequate ventilation, quality CPR should be initiated.
- C. BVM or T-piece ventilation is also indicated for apnea and persistent central cyanosis.
- D. BVM or T-piece ventilation rate should be between 40 and 60 breaths per minute. Cardiac compression rate should be at a rate of 120 times per minute with a compression to breath ratio of 3:1.
- E. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.

AEMT

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Intubate patient if thick meconium is present in lower airway; suction through ET tube using a meconium aspirator and re-intubate with new tube.
- C. Apply monitor and check rhythm.
- D. Establish IV or IO.
- E. If infant shows signs of hypovolemia, administer normal saline 10 ml/kg IV/IO over 5 minutes
- F. Narcan[®] administration should not be administered during the initial resuscitation and should be avoided in babies whose mothers are suspected of having had long-term exposure to opiates. Heart rate and oxygenation should be resorted by supporting ventilation.
- G. Check blood sugar level and administer 1 ml/kg of 12.5% dextrose the blood sugar is < 40.
- H. Transport to hospital.

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Intubate patient if thick meconium is present in lower airway; suction through ET tube using a meconium aspirator and re-intubate with new tube.
- C. Apply monitor and check rhythm.
- D. Establish IV or IO.
- E. If asystole or spontaneous heart rate is < 60 bpm despite adequate ventilation:
 - 1. Administer epinephrine 0.01-0.03 mg/kg (0.1-0.3 ml/kg) of 1:10,000 via IV/IO or up to 0.1 mg/kg (0.1 mg/kg) of 1:1,000 ET.
 - 2. If no response, repeat epinephrine administration every 3-5 minutes.
- F. If infant shows signs of hypovolemia, administer normal saline 10 ml/kg IV/IO over 5 minutes
- G. Narcan[®] administration should not be administered during the initial resuscitation and should be avoided in babies whose mothers are suspected of having had long-term exposure to opiates. Heart rate and oxygenation should be resorted by supporting ventilation.
- H. Check blood sugar level and administer 1 ml/kg of 12.5% dextrose if level is < 40.
- I. Transport to hospital.



PEDIATRIC RESPIRATORY DISTRESS

GENERAL CONSIDERATIONS

- A. In children, open airway by using the sniffing position.
- B. In suspected cases of upper airway obstructions, DO NOT attempt to visualize the airway; unless a foreign body is suspected. Keep patient calm and transport upright.
- C. If BVM ventilation is necessary, cricoid pressure can be applied to minimize gastric distention until airway is secured.
- D. Refer to length based drug treatment guide (e.g. BROSELOW® PEDIATRIC EMERGENCY TAPE) when unsure about patient weight, age and/or drug dosage.
- E. Evaluate patient's general appearance, relevant history of condition and determine:

Allergies

Medication

Past Medical History – especially RESPIRATORY

Last Meal

Events leading to present illness

UPPER AIRWAY OBSTRUCTION

Stridor, gagging or choking in the breathing patient with respiratory distress may indicate upper airway obstruction.

EMR

- A. Quickly obtain history and non-invasive respiratory assessment.
 - 1. Total Airway Obstruction/History of foreign body airway.
 - a. Manual clearing only if foreign body is visible - NO BLIND FINGER SWEEP
 - b. Backblows and chest thrust in children less than 1 year of age.
 - c. Abdominal and/or chest thrusts in children over 1 year of age.
 - d. If airway cannot be cleared in 60 seconds:
 - i) Activate the emergency response system for immediate transport immediately to the nearest hospital.
 - ii) Do not take history.
 - iii) Do not make further physical assessment.
 - 2. Partial Airway Obstruction
 - a. DO NOT AGITATE CHILD, DO NOT EXAMINE THROAT.
 - b. Administer oxygen by NRB if tolerated or by “blow-by”.

PEDIATRIC AIRWAY OBSTRUCTION (cont'd)

- B. Allow the child to assume a position of comfort. The child may assume the tripod position. Encourage parent to hold the child in a secure position. Keep child and parent (or caregiver) CALM. Do not agitate child.

EMT

- A. Transport the child in a secure upright position immediately to the nearest appropriate hospital.

AEMT

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Reassess breath sounds and treat as follows:
1. Do not establish IV access unless child is in arrest. DO NOT agitate child.
 2. If foreign body in airway is suspected in unconscious patient with complete obstruction and basic procedures are unsuccessful, try to visualize obstruction with laryngoscope.
 3. Do not attempt invasive airway unless child has respiratory arrest. Bag-valve mask ventilation is acceptable.
 4. If foreign body in airway is suspected in unconscious patient with complete obstruction, and basic procedures are unsuccessful, try to visualize obstruction with laryngoscope and remove with Magill forceps.

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Reassess breath sounds and treat as follows:
1. If cause of upper airway obstruction is unknown and child is calm, a normal saline aerosol may be administered. DO NOT further agitate child.
 2. Do not attempt invasive airway unless child has respiratory arrest. Bag-valve mask ventilation is acceptable.
 3. If foreign body in airway is suspected in unconscious patient with complete obstruction, and basic procedures are unsuccessful, try to visualize obstruction with laryngoscope and remove with Magill forceps.
 4. If airway is completely obstructed, a needle, or surgical cricothyrotomy may be life saving. Contact medical control. If patient has a tracheostomy tube, see page 40.

LOWER AIRWAY OBSTRUCTION

Wheezing in the breathing patient with respiratory distress indicates lower airway disease, which may come from a variety of causes. The patient with severe lower airway disease may have altered LOC, be unable to talk, may have absent or markedly decreased breath sounds and severe retractions with accessory muscle use.

EMR

- A. Place child in position of comfort, encourage parent to hold child secure position. Keep child and parent CALM.
- B. Quickly obtain history and non-invasive respiratory assessment.
- C. Administer 100% oxygen in the least threatening manner.
- D. If respiratory effort is insufficient or patient is becoming unconscious, assist ventilations with bag-valve-mask.
 - 1. If allergic reaction is suspected:
 - a. Secure airway and support with oxygen.
 - b. If the patient has been prescribed an epinephrine auto-injector for these situations and requests assistance, assist with the administration of the epinephrine auto-injector or verbally contact on-line medical direction for orders to administer EMS-provided epinephrine.
 - c. Activate the emergency response system immediately.

EMT

- A. IF MEDICATION IS NOT AVAILABLE- Transport immediately, unless ALS unit is enroute and has an ETA of less than 5 minutes
- B. Ask patient or bystanders if a bronchial dilator by inhaler has been prescribed for these situations. If they have the medication with them, assist with the administration of medication per protocol, then transport patient.

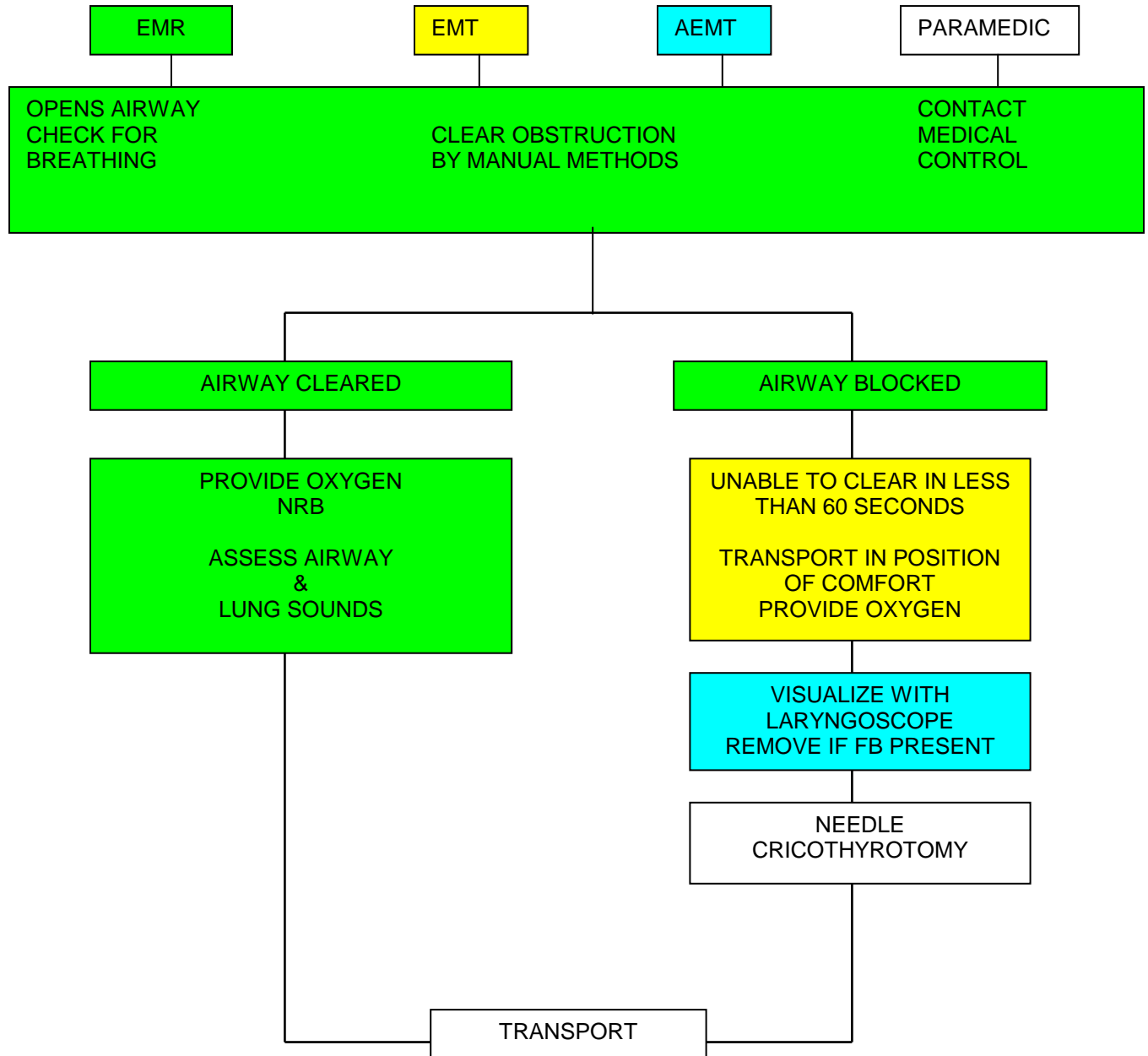
AEMT

- A. Assume charge of situation.
- B. Reassess breath sounds.
- C. DO NOT establish IV access unless child is in arrest. Do not agitate child.
 - 1. If allergic reaction is suspected.
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml))
 - 2. For other causes of wheezing:
 - a. Administer 2.5 mg albuterol aerosol with 6 l/min oxygen over 10-15 minutes. Observe and document child's response. If no improvement, notify receiving facility or Medical Control.
 - b. DO NOT attempt invasive airway unless child has respiratory arrest.

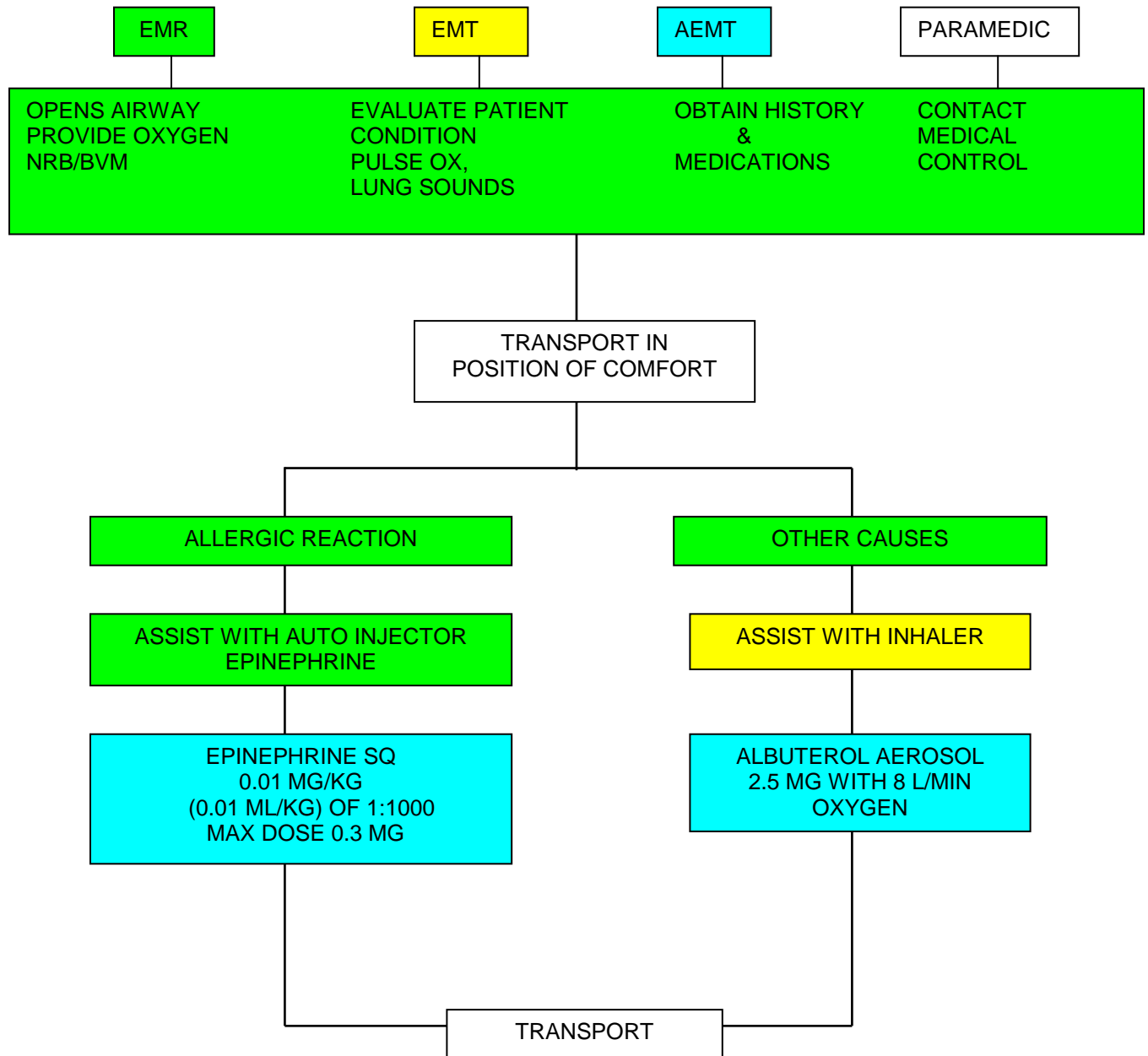
PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situations.
- B. Reassess breath sounds and treat as follows
 - 1. If allergic reaction is suspected:
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose 0.3 mg (0.3 ml)) as the primary treatment of symptoms of anaphylaxis or as the secondary treatment following Benadryl[®] administration for worsening symptoms of an allergic reaction
 - b. Administer Benadryl[®] (diphenhydramine) 1 mg/kg IM or IV (maximum dose 50 mg)
NOTE: This is especially indicated when drug reactions are suspected.
 - 2. For other causes of wheezing:
 - a. Administer 2.5 mg albuterol aerosol with 6 l/min oxygen over 10-15 minutes. Observe and document child's response. If no improvement, notify receiving facility or Medical Control.
 - b. DO NOT attempt invasive airway unless child has respiratory arrest.

**PEDIATRIC RESPIRATORY DISTRESS
UPPER AIRWAY OBSTRUCTION**



**PEDIATRIC RESPIRATORY DISTRESS
LOWER AIRWAY DISEASE**



PEDIATRIC SEIZURE

GENERAL CONSIDERATIONS

- A. The seizure may be stopped by the time the EMS professionals arrive. The patient will normally be in the postictal state.
- B. The basic rule with seizures is to "protect and support" the patient.
- C. Aspiration precautions should include:
 - 1. Coma position: a left side-lying position with the head lowered 15 to 30 degrees.
 - 2. Suction readily available.
 - 3. Clear mouth of foreign bodies (food, gum, etc.)
- D. Febrile Seizures (seizures with fever) are common in children and should be treated like other seizures.

EMR

- A. Place patient away from objects on which they might injure themselves; protect but do not restrain them.
- B. Clear and maintain airway; consider cervical spine injury.
- C. Administer 100% oxygen with NRB as needed for ventilation.
- D. Obtain history from family and/or bystanders:
 - 1. Seizure history
 - 2. Description of onset of seizure
 - 3. Medication
 - 4. Other known medical history, especially fever, head trauma, diabetes, drugs
- E. Evaluate any evidence of injury, especially head trauma.

EMT

- A. Bring any medications with child to the hospital.
- B. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.
- C. Check blood sugar level.

AEMT

- A. Assist EMS professionals, obtain patient condition and circumstances.
- B. Apply cardiac monitor and check rhythm.
- C. If seizure activity persists:
 - 1. Establish airway
 - 2. Start IV

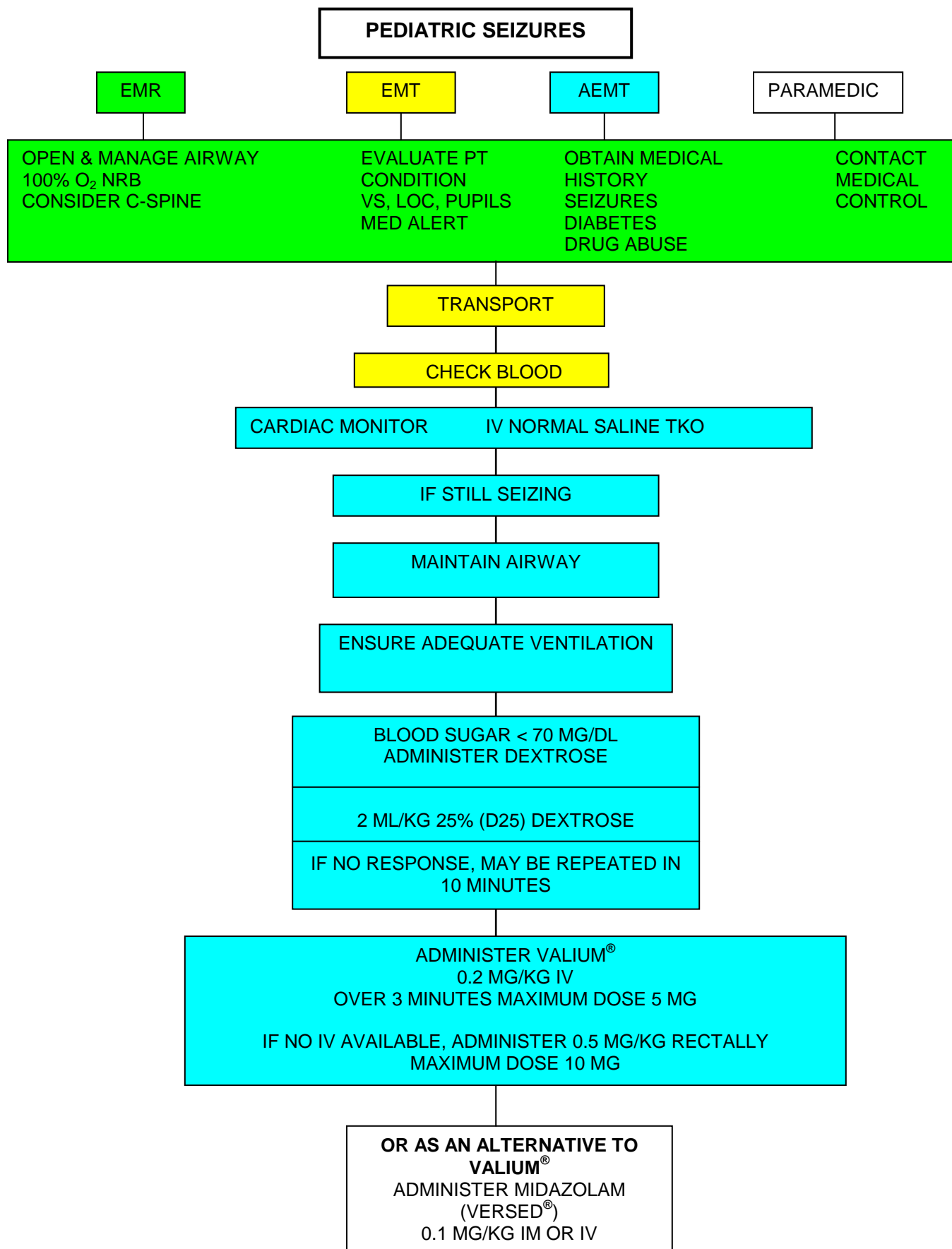
PEDIATRIC SEIZURE (cont'd)

D. Check blood sugar level.

1. If the blood sugar less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose for children
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl
2. Administer Valium[®], 0.2 mg/kg, slow IV push over three minutes, to a maximum dosage of 5 mg.
 - a. If no IV is available, administer Valium[®] rectally, 0.5 mg/kg, to a maximum dose of 10 mg.

PARAMEDIC

- A. Assume charge of the situation and confer with EMS professionals about patient and situation
- B. Make sure patient has good airway. In some cases intubation may be necessary.
- C. If seizure activity persists, determine blood sugar level and treat accordingly
 1. Blood sugar less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose for children
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl
 2. Administer midazolam (Versed[®]) 0.1 mg/kg IM **OR**, administer Valium[®], 0.2 mg/kg, slow IV push over three minutes, to a maximum dosage of 5 mg.
 - a. If no IV is available, administer Valium[®] rectally, 0.5 mg/kg, to a maximum dose of 10 mg.



PEDIATRIC SHOCK

GENERAL CONSIDERATIONS

- A. Shock is not only caused by blood loss. The EMS professional must evaluate for fluid loss from other causes such as excessive vomiting and/or diarrhea, heat exposure, severe infection, severe allergic reaction (anaphylaxis), spinal trauma, and heart failure.
- B. Do not use only the patient's blood pressure in evaluating shock; also look for lower body temperature, poor capillary refill, decreased level of consciousness, increased heart rate, and/or poor skin color or turgor. **Tachycardia is often the first sign of shock.**

NOTE: Do NOT depend on blood pressure.

- C. Transport should not be delayed. The airway must be secured and then transport immediately. It is preferable IVs and/or IOs be done during transportation.

EMR

- A. Open and maintain the airway with sniffing position and the use of an oral airway if needed.
- B. Control all external bleeding and evaluate for internal hemorrhage and/or dehydration.
- C. Provide 100% oxygen through NRB mask, and if needed assist ventilations with a BVM.
- D. Obtain vital signs: pulse and respirations.
- E. For anaphylactic shock, the EMR may assist the patient with the administration of an epinephrine auto-injector prescribed for the patient with a written protocol upon request of the patient or the patient's legal guardian. The EMR may assist with the administration of an EMS-provided epinephrine auto-injector with verbal medical direction.

EMT

- A. Establish communications with Medical Control and advise of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.

AEMT

- A. Assist EMS professionals, obtain patient condition and circumstance.
- B. Hypovolemic, neurogenic or septic shock:
 - 1. Start IV of normal saline and apply cardiac monitor during transport to the hospital.

DO NOT DELAY TRANSPORT FOR IV

- 2. Administer IV fluid bolus of 20 ml/kg of NS if signs of hypoperfusion or dehydration are present

PEDIATRIC SHOCK (cont'd)

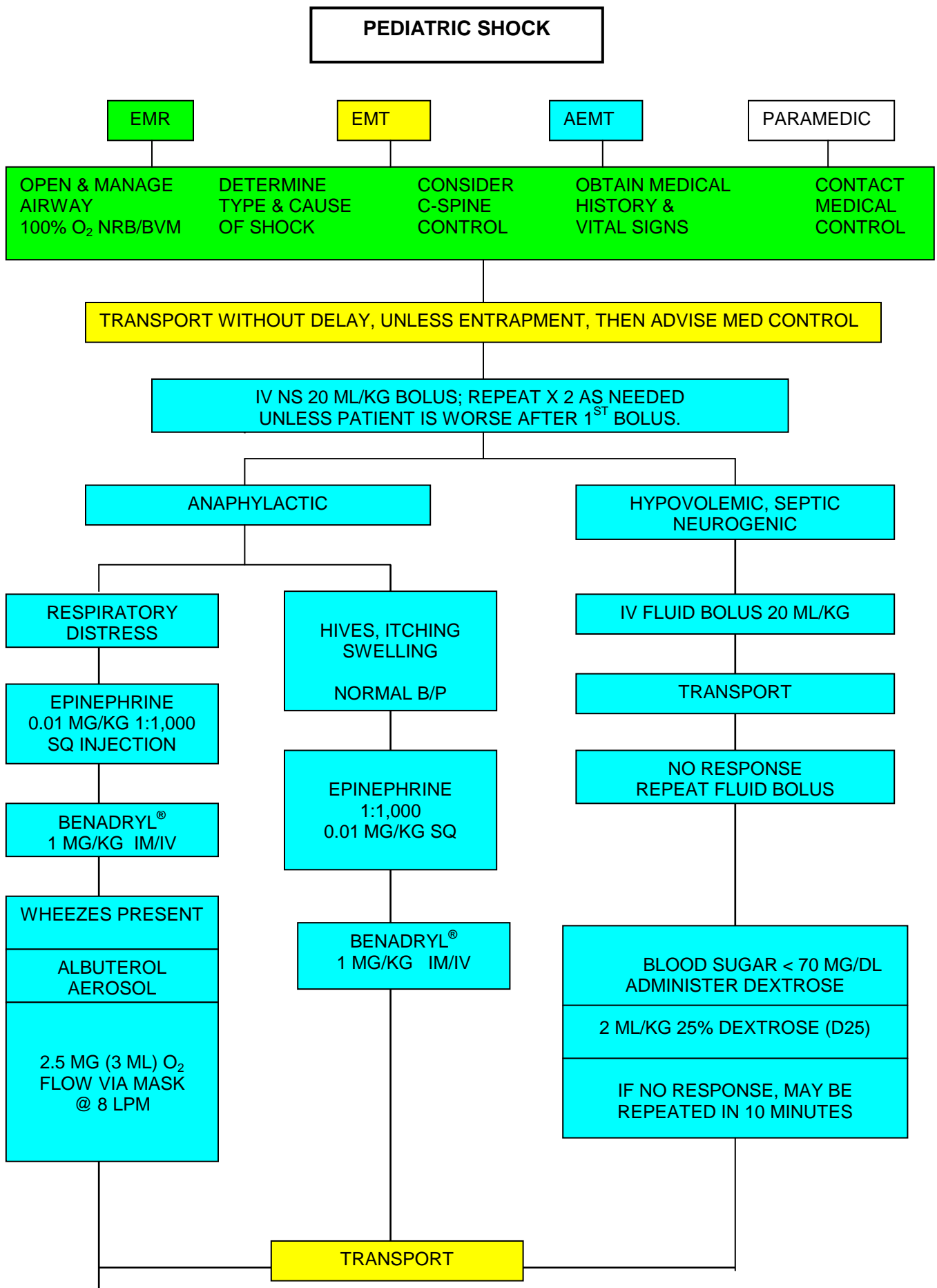
3. Transport. Repeat bolus during transport if patient does not respond to first bolus.
 4. Check blood sugar; if less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose (D25).
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl.
- C. Anaphylactic shock:
1. Respiratory distress
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
 - b. Administer Benadryl® (diphenhydramine) to be administered 1 mg/kg IM or IV (maximum dose 50 mg). NOTE: This is especially indicated when drug reactions are suspected.
 - c. When wheezes are present and not cleared by epinephrine, provide albuterol breathing treatment: 1 unit dose, 2.5 mg (3 ml), by child aerosol mask over 10-15 minutes.
 2. Hives, itching, and/or swelling with normal blood pressure:
 - a. Administer epinephrine 1:1,000 0.01 ml/kg (0.01 mg/kg) SQ (maximum dose 0.3 mg (0.3 ml)).
 - b. Administer Benadryl® (diphenhydramine) to be administered 1 mg/kg IM or IV (maximum dose 50 mg). NOTE: This is especially indicated when drug reactions are suspected.
 3. If breathing difficulty with low blood pressure establish IV saline during transport.
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
 4. Hives, itching, and/or swelling:
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
- D. Apply monitor and check rhythm.

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Apply monitor and follow protocol for arrhythmias.
- C. Identify type of shock and treat as follows:
 1. Hypovolemic, neurogenic, septic:
 - a. Start IV or IO and administer NS fluid bolus of 20 ml/kg if sign of hypoperfusion or dehydration are present (low BP, tachycardia, poor capillary refill, poor skin turgor)
 - b. Repeat bolus during transport

PEDIATRIC SHOCK (cont'd)

- c. Check blood sugar; if less than 70 mg/dl , administer IV bolus:
 - i. 2 ml/kg of 25% dextrose (D25).
 - ii. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl.
- 2. Anaphylactic:
 - a. Respiratory distress
 - i. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
 - ii. Administer Benadryl® (diphenhydramine) to be administered 1 mg/kg IM or IV (maximum dose 50 mg). NOTE: This is especially indicated when drug reactions are suspected.
 - iii. When wheezes are present and not cleared by epinephrine, provide albuterol breathing treatment: 1 unit dose, 2.5 mg (3 ml), by child aerosol mask over 10-15 minutes.
 - b. Hives, itching, and/or swelling with normal blood pressure:
 - i. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
 - ii. Administer Benadryl® (diphenhydramine) to be administered 1 mg/kg IM or IV (maximum dose 50 mg). NOTE: This is especially indicated when drug reactions are suspected.



EMS and Children with Special Health Care Needs: The TEAM APPROACH

The medically fragile child is one who depends on some form of technology assistance. This can be anything from a nasal cannula to a child who requires total ventilatory support. While such a child may not meet one's definition of "normal", he/she is loved and valued by parents and family. Even though the days are filled with uncertainties and the ride on the emotional roller coaster is unending, we count every day as a gift to enjoy the blessing of these special children.

Caring for a medically fragile child requires a full **TEAM** = **T**rust **E**very **A**vailable **M**ember. Do not be concerned about removing the family from the crisis situation but *inform* them about what you are doing and *include* them in your plan of care. In most cases, the parents and/or home care providers can be of great assistance to the EMS providers. It is vitally important that their knowledge and experience is utilized when treating the child. Parents/caregivers can supply valuable and time saving information. When given direction, they can provide an often needed extra pair of hands (e.g. hold the IV bag, bag ventilate, etc.). Most importantly, they can console, comfort and calm their child.

If at all possible, arrange to meet with families of medically fragile children before an emergency arises. This will allow you to become familiar with the child's needs, baseline condition and the parents' capabilities to provide care prior to your arrival. You will know what to expect and will feel more prepared and confident to treat the child in a crisis situation. This will enhance the **TEAM** approach.

This **TEAM** approach produces an outcome that will always be positive for everyone – the EMS providers, the parents, and most importantly, the child.

Thank you for the privilege of being a part of the EMSC team by serving as the parent advocate for the State of Ohio.

*Linda Eckfeld
Ohio EMSC Parent Advocate*

CHILDREN WITH SPECIAL NEEDS (CSHCN)

SPECIAL CONSIDERATIONS

- A. Treat the ABCs first. Treat the child, not the equipment. If the emergency is due to an equipment malfunction, manage the child appropriately using your own equipment.
- B. Children formerly cared for in hospitals or chronic care facilities are often cared for in homes by parents or other caretakers. These children may have self limiting or chronic diseases. There are a multitude of underlying medical conditions that may categorize children as having special needs. Many are often unstable and may frequently involve the EMS system for evaluation, stabilization, and transport. Special needs children include technology-assisted children such as those with tracheostomy tubes with or without assisted ventilation, children with gastrostomy tubes, and children with indwelling central lines. The most serious complications are related to tracheostomy problems due to the high risk of airway compromise and resultant hypoxia.
- C. CSHCN have many allergies. Children with spina bifida are often allergic to latex. Before treating a patient, ask the caregivers if the children are allergic to latex or have any other allergies. If possible, keep latex-free equipment. (Some regularly used equipment that contains latex includes gloves, oxygen masks, IV tubing BVM, blood pressure cuff, IV catheters, etc.)
- D. Knowing which children in a given area have special needs and keeping a log book is encouraged.
- E. Parents and caretakers are usually trained in emergency management and can be of assistance to EMS personnel. Listen carefully to the caregiver and follow his/her guidance regarding the child's treatment.
- F. Children with chronic illnesses often have different physical development from well children. Therefore, their baseline vital signs may differ from normal standards. The size and developmental level may be different from age-based norms and length based tapes used to calculate drug dosages. Ask the caregiver if the child normally has abnormal vital signs. (i.e. a fast heart rate or a low pulse oxymeter reading)
- G. Some CSHCN may have sensory deficits (i.e. they may be hearing impaired or blind) yet may have age-appropriate cognitive abilities. Follow the caregivers' lead in talking to and comforting a child during treatment and transport. Do not assume that a CSHCN is developmentally delayed.
- H. When moving a special needs child, a slow careful transfer with two or more people is preferable. Do not try to straighten or unnecessarily manipulate contracted extremities as it may cause injury or pain to the child. Certain medical conditions will require special care. Again, consult the child's caregiver.
- I. Caregivers of CSHCN often carry "go bags" or diaper bags that contain supplies to use with the child's medical technologies and additional equipment such as extra tracheostomy tubes, adapters for feeding tubes, suction catheters, etc. Before leaving the scene, ask the caregivers if they have a "go bag" and carry it with you.
- J. Caregivers may also carry a brief medical information form or card. The child may be enrolled in a medical alert program whereby emergency personnel can get quick access to the child's medical history. Ask the caregivers if they have an emergency information form or some other form of medical information for their child.
- K. Caregivers of CSHCN often prefer that their child be transported to the hospital where the child is regularly followed or the "home" hospital. When making the decision as to where to transport a CSHCN, take into account: local protocols, the child's condition, capabilities of the local hospital, caregivers' request, ability to transport to certain locations and the ability to request helicopter transport for distant home hospitals.

EMERGENCIES IN CHILDREN WITH TRACHEOSTOMIES

GENERAL CONSIDERATIONS

- A. The child should be examined for other possible problems. Do not assume the problem is with the tracheostomy tube.

EMR

- A. Examine the child quickly for possible causes of distress which may be easily correctable, such as a detached oxygen source.
- B. Try to establish the child's baseline: the child may never look normal.
- C. If on a ventilator, remove the child from the ventilator and bag the child with a secure oxygen source; there may be a problem with the ventilator or oxygen source.

EMT

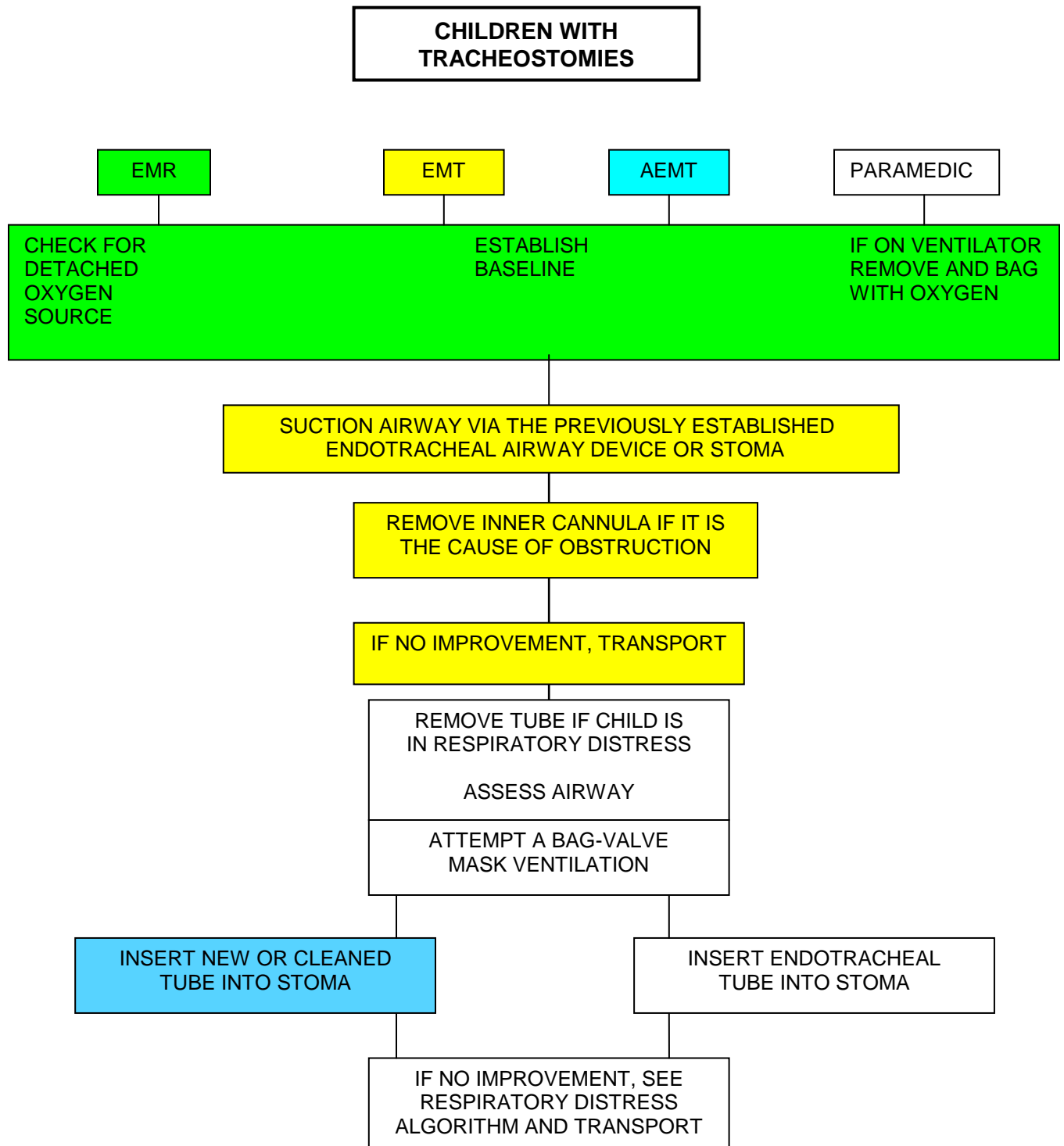
- A. If still no improvement immediately transport to the nearest medical facility; initiate appropriate resuscitation as needed. Suction the child through the previously established endotracheal airway device or stoma as accumulation of debris is a common cause of obstruction.

AEMT

- A. If suctioning does not relieve the obstruction and the tracheostomy tube has a cannula, remove it. If it is the cause of obstruction, there should be immediate improvement. A tracheostomy tube that has been previously removed may be replaced after ensuring that the lumen has been cleaned and all obstructive debris has been cleared from the lumen.

PARAMEDIC

- A. If there is no improvement after suctioning and/or removal of the inner cannula and the child is in severe respiratory distress, an occluded tracheostomy tube should be removed and ventilation via bag valve mask and should be attempted. The removal of endotracheal devices following recent surgical placement should be avoided due to increased potential of airway collapse and resultant respiratory compromise. If an endotracheal or tracheostomy tube is available, insert it into the stoma and resume ventilation (a previously used tracheostomy tube following cleansing and removal of any obstructive debris from the lumen can be inserted.)
- B. If there is still no improvement see the respiratory distress protocol.



EMERGENCIES IN CHILDREN WITH IN-DWELLING CENTRAL LINES

GENERAL CONSIDERATIONS

- A. Children may have central lines in several locations and some complications are due to location; some central lines are located under the skin and can be felt but not seen.
- B. The most common emergencies with central lines include, blockage of the line, complete or partial accidental removal, complete or partial laceration of the line, or possible infection in the central line which may lead to sepsis.

EMR

- A. Always evaluate child for cardiovascular stability as some complications may be life threatening.
- B. Children may be experiencing complications from their underlying medical condition; ask caretakers about the child's condition.

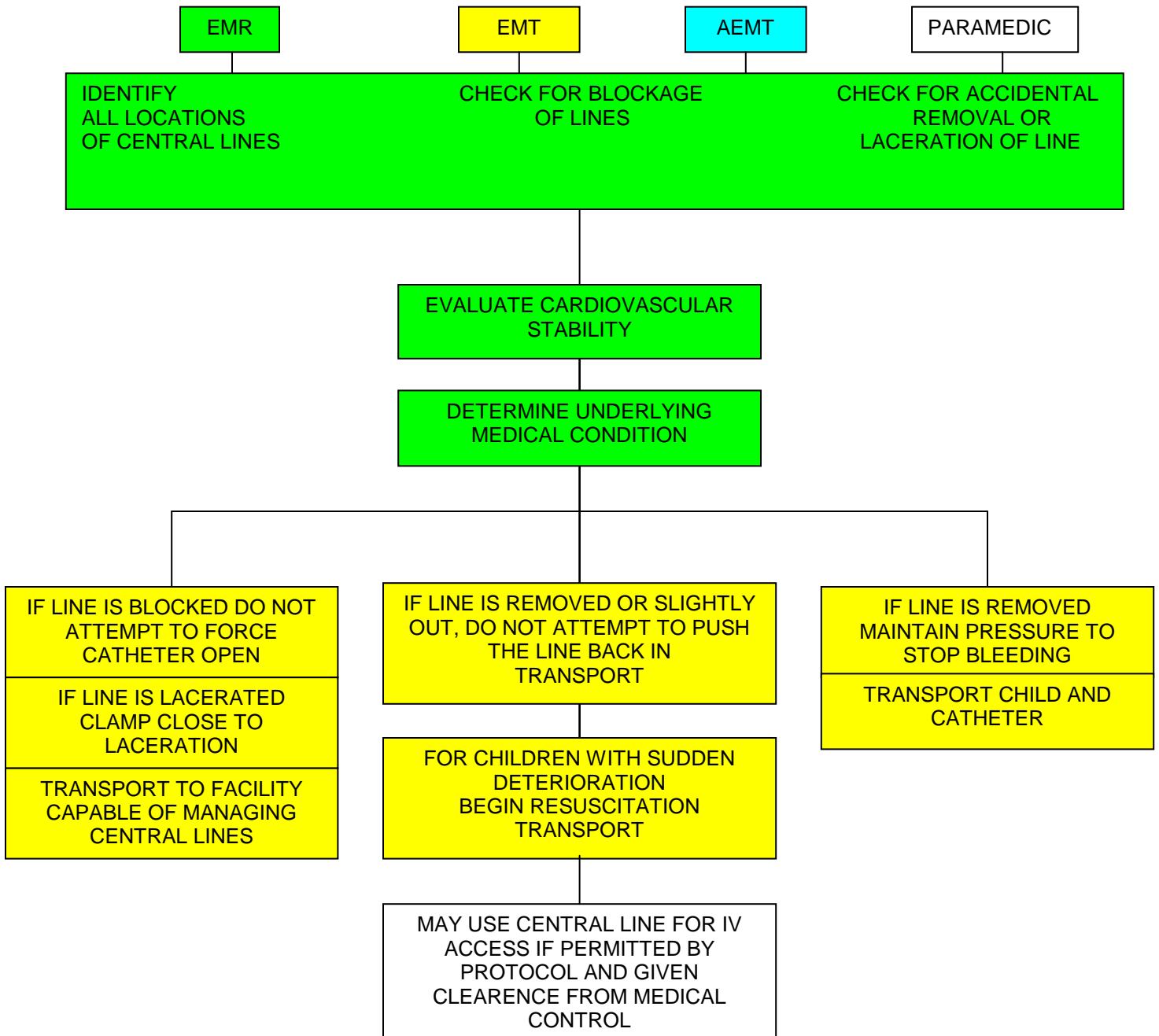
EMT

AEMT

PARAMEDIC

- A. If line is blocked, do not attempt to force the catheter open, transport to a facility capable of managing central lines.
- B. For complete removal, do not attempt to reinsert; transport to the nearest emergency department. Infections are a common complication; don't try to push a line back in, even if it is only slightly out.
- C. For complete removal, maintain pressure on site until bleeding has stopped; transport child and catheter to nearest emergency department (part of the catheter may have broken off.) Always bring the line with you to the hospital.
- D. For partial or complete laceration of the line, clamp proximally to laceration utilizing a padded clamp and transport child and catheter to nearest emergency department.
- E. For children with sudden deterioration begin basic resuscitation and transport to nearest emergency facility (child may have pneumothorax or internal bleeding.)
- F. If there are fluids infusing through the central line, determine the nature of the fluid and the time that the fluid was started.
- G. For paramedic only: May use central line for IV access if permitted by protocol, and given clearance by medical control

EMERGENCIES IN CHILDREN WITH IN-DWELLING CENTRAL LINES



EMERGENCIES IN CHILDREN WITH GASTROSTOMY TUBES

GENERAL CONSIDERATIONS

- A. Children with gastrostomy tubes may have complications of obstruction or dislodgment; obstruction is usually not an emergency but the child may require transport; dislodgment is not life threatening but the tube should be replaced as soon as possible. Both conditions are easily recognized.
- B. The child should be examined for any other possible problems.

EMR

- A. Children who have problems with their tubes may have problems with regurgitation or aspiration.
- B. Be aware of and address any other possible problems from their underlying medical condition.

EMT

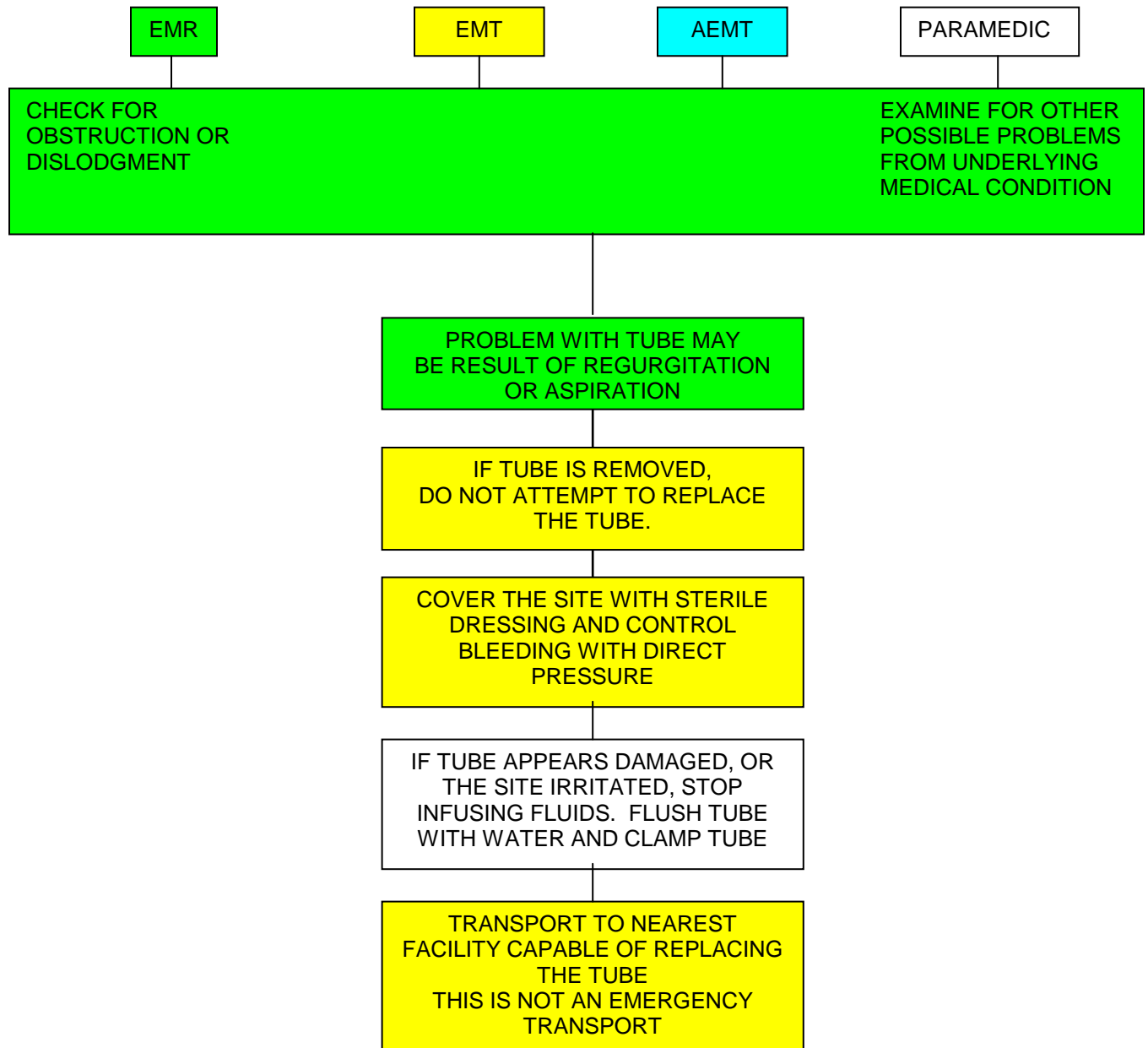
AEMT

- A. Transport the child and the tube to the nearest facility capable of replacing the tube; this is not an emergency transport.
- B. Do not attempt to replace the tube; it is not as easy as it seems and there may be other complications.
- C. Cover the site with a sterile dressing and control any bleeding with direct pressure.

PARAMEDIC

If there are fluids infusing through the feeding tube, determine the nature of the fluids and the time that the fluids were started. If the tube appears damaged, or the site is irritated, stop all infusing fluids, flush the tube with water, and clamp the tube.

EMERGENCIES IN CHILDREN WITH GASTROSTOMY TUBES



EMERGENCIES IN CHILDREN ON VENTILATORS

GENERAL CONSIDERATIONS

- A. Children on mechanical ventilation may exhibit sudden or gradual deterioration, cardiac arrest, increased oxygen demand, increased respiratory rate, retractions, or change in mental status.
- B. Examine the child quickly for possible causes of distress which may be easily correctable (e.g. detached oxygen source) the caretakers will often have done this but double check.
- C. Medications the child is presently taking may be the cause of deterioration.
- D. Try to establish the child's baseline; the child may never look normal.

EMR

- A. Remove the child from the ventilator and bag the child with a secure oxygen source; if the child improves there may be a problem with the ventilator or oxygen source.

EMT

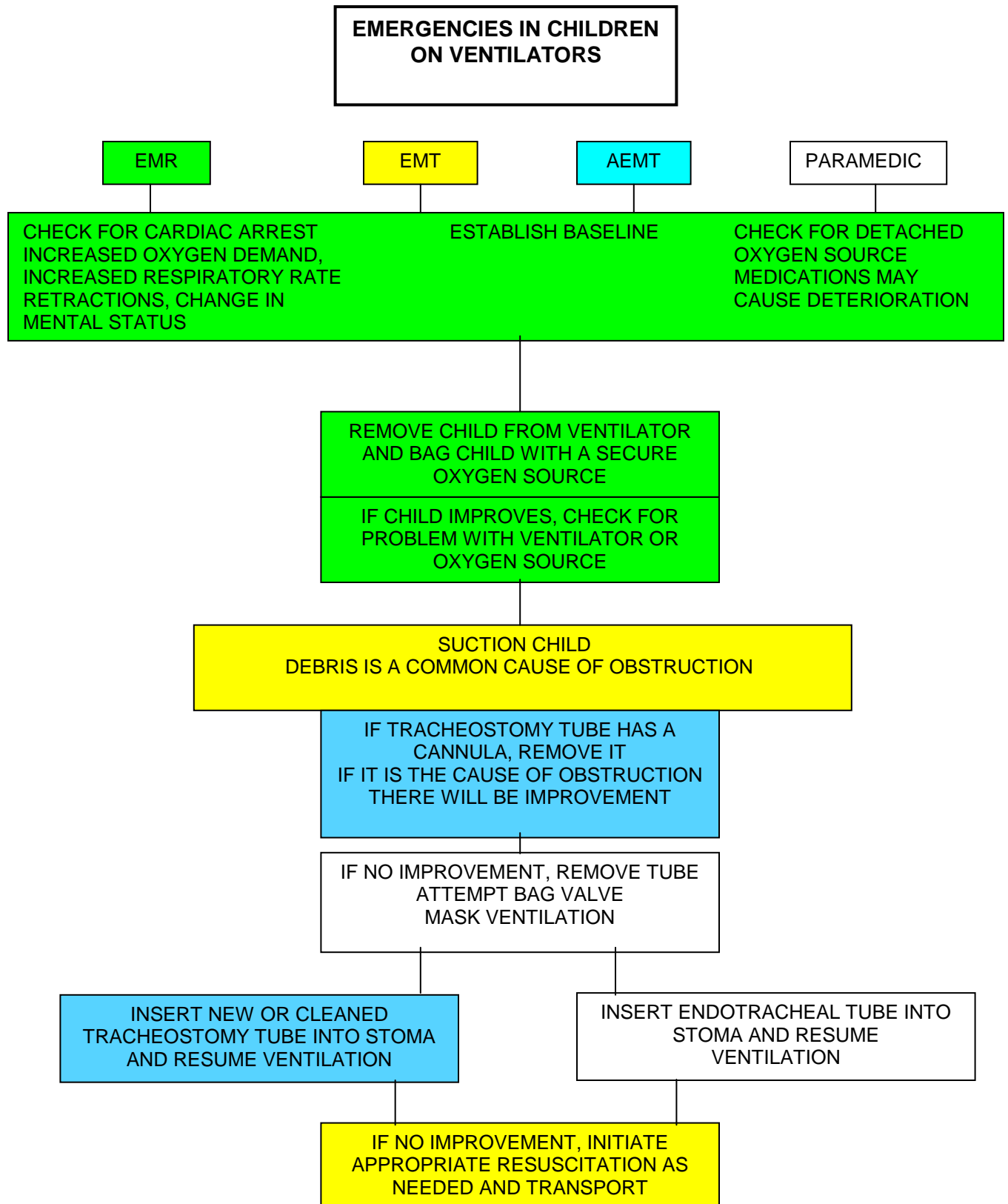
- A. If there is no improvement immediately transport to the nearest medical facility; initiate appropriate resuscitation as needed. Suction the child through a previously established endotracheal device as accumulation of debris is a common cause of obstruction.

AEMT

- A. If suctioning does not relieve the obstruction and the patient has a tracheostomy tube, remove the inner cannula. If it is the cause of obstruction, there should be immediate improvement. A tracheostomy tube that has been previously removed may be replaced after ensuring that the lumen has been cleaned and all obstructive debris has been cleared from the lumen.

PARAMEDIC

- A. If there is no improvement after suctioning and/or removal of the inner cannula and the child is in severe respiratory distress, an occluded endotracheal or tracheostomy tube should be removed and ventilation via bag valve mask and should be attempted. The removal of endotracheal devices following recent surgical placement should be avoided due to increased potential of airway collapse and resultant respiratory compromise. If another endotracheal or tracheostomy tube is available, insert into the stoma and resume ventilation (a previously used tracheostomy tube following cleansing and removal of any obstructive debris from the lumen can be inserted.)
- B. If there is still no improvement see the respiratory distress protocol.



NORMAL PEDIATRIC VITAL SIGNS¹

Age	Pulse	Respiratory Rate	Systolic BP*
Preterm < 1 kg	120-160	30-60	36-58
Preterm 1 kg	120-160	30-60	42-66
Preterm 2 kg	120-160	30-60	50-72
Newborn	126-160	30-60	60-70
Up to 1 year	100-140	30-60	70-80
1-3 years	100-140	20-40	76-90
4-6 years	80-120	20-30	80-100
7-9 years	80-120	16-24	84-110
10-12 years	60-100	16-20	90-120
13-14 years	60-90	16-20	90-120
15 years and older	60-90	14-20	90-130

- Blood pressure is a late and unreliable indicator of shock in children

PEDIATRIC COMA SCORING²

	<u>Glasgow</u>	<u>Glasgow Modified for Infant</u>	
Eye opening	Spontaneous To voice To pain None	Spontaneous To voice To pain None	4 3 2 1
Verbal response	Oriented Confused Inappropriate Garbled speech None	Coos, babbles Irritable cry, inconsolable Cries to pain, Moans to pain None	5 4 3 2 1
Motor response*	Obeys commands Localizes pain Withdraws to pain Flexion Extension Flaccid	Normal movements Withdraws to touch Withdraws to pain Flexion Extension Flaccid	6 5 4 3 2 1

*** NOTE: MOTOR RESPONSE IS MOST INDICATIVE OF LEVEL OF INJURY**

¹ Reference: Children's Hospital Pediatric Reference Code Card, Columbus, Ohio, 1999

² A score of < 8 is generally an indication to hyperventilate the child.

PEDIATRIC PREHOSPITAL MEDICATIONS

<u>Medication</u>	<u>Dose</u>	<u>Route</u>	<u>Remarks</u>
• Acetaminophen (Tylenol®)	10 mg/kg	PO	Useful for musculoskeletal pain and fever control
• Activated charcoal	1 gm/kg	PO	Do not give to child with altered level of consciousness
• Adenosine	0.1 mg/kg	IV, IO	Indicated for SVT. First dose 6mg, second dose 6mg. Max dose 12mg
• Albuterol	2.5 mg	Aerosol	Indicated for wheezing as per protocol
• Amiodarone	5 mg/kg	IV, IO	Over 20-60 minutes, maximum 15 mg/kg per day. For shock-refractory pulseless VT/VF: 5 mg/kg rapid IV/IO
• Atropine	0.02 mg/kg	IV, IO, ET	Minimum dose 0.1 mg; max dose for child 0.5 mg; max dose for adolescent 1.0 mg; may repeat x1; Also useful before intubating children < 5 years old, blocks bradycardia due to vagal nerve stimulation
• Dextrose 25%	2 ml/kg	IV, IO	Try to obtain bedside glucose level before administering ----administer if blood glucose < 60; dilute 50% 1:1 with sterile water; consult Medical Control if infant < 1 month as solution may need to be further diluted.
• Diazepam (Valium®)	0.2-0.3 mg/kg	IV	Indicated for uncontrolled seizure activity; anticipate respiratory depression. Max. dose 10 mg.
• Diazepam (Valium®)	0.5 mg/kg	Rectal	Indicated for uncontrolled seizure activity; anticipate respiratory depression. Max. dose 10 mg.
• Diphenhydramine (Benadryl®)	1 mg/kg	IV	Useful in allergic reactions and anaphylaxis. Max dose 50 mg
• Epinephrine (1:10,000)	0.1 ml/kg (0.01 mg/kg)	IV, IO	Commonly used in cardiac arrest rhythms as first dose. Increase second dose 10 X (may use 1:1,000 solution).
• Epinephrine (1:1,000)	0.1 ml/kg (0.1 mg/kg)	ET, IV, IO	Commonly used in cardiac arrest rhythms. Use for all ET doses, and second and subsequent IV/IO doses. *The ET route has limited absorption, use IV/IO route whenever possible
	0.01ml/kg	IM or SQ	Used for anaphylaxis. Max dose is 0.3 ml
• Morphine	0.1 mg/kg	IV/IM	Useful for moderate pain, may cause respiratory depression. Hypotension and reflex bradycardia may develop from histamine release
• Midazolam (Versed®)	0.1 mg/kg	IV/IO/IM	Indicated for uncontrolled seizure activity; anticipate respiratory depression Useful to facilitate advanced airway management in combative patients
• Naloxone (Narcan®)	0.1 mg/kg	IV, IO, ET	Useful for unknown unconscious, known narcotic overdoses
• Procainamide	15 mg/kg	IV	Over 30-60 minutes. Alternative treatment for recurrent or refractory VT, SVT.

ET = endotracheal IM = intramuscular injection IO = intraosseous IV = Intravenous SQ = subcutaneous injection

Notice of changes to trauma triage rules

This document details the changes have been made to the portions of the Ohio Administrative Code (OAC) that cover trauma triage. These changes, based on research performed by the State Board of Emergency Medical Services, create a definition of ‘geriatric trauma patient’ and create specific criteria for the triaging of geriatric trauma patients.

Summary of changes to trauma triage rules (OAC 4765-14)

4765-14-01 Definitions

- Added (H), definition of “body regions”
- Added (I), definition of “evidence of traumatic brain injury”

4765-14-02 Determination Of A Trauma Victim

- Changed (A) to define “adult trauma victim” as being between 16 and 69 years of age
- Added (C) to define “geriatric trauma victim”

4765-14-03 Enforcement Of State Or Regional Trauma Triage Protocols

- No changes or additions

4765-14-04 Education Of State And Regional Trauma Triage Protocols

- No changes or additions

4765-14-05 Exceptions To Mandatory Transport

- No changes or additions

4765-14-06 Amendments Affecting Regional Protocols

- New rule describing how amendments to triage rules affect regional triage variants

Note on formatting of this document:

New language added to this rule is in underline format.
Geriatric criteria that are different from adult criteria are in **bold** format.

4765-14-01 Definitions.

(A) As used in this chapter and section 4765.01 of the Revised Code, "trauma" or "traumatic injury" means severe damage to or destruction of tissue that satisfies both of the following conditions:

(1) It creates a significant risk of any of the following:

- (a) Loss of life;
- (b) Loss of a limb;
- (c) Significant, permanent disfigurement;
- (d) Significant, permanent disability; and

(2) It is caused by any of the following:

- (a) Blunt or penetrating injury;
- (b) Exposure to electromagnetic, chemical, or radioactive energy;
- (c) Drowning, suffocation, or strangulation;
- (d) A deficit or excess of heat.

(B) "Evidence of poor perfusion" means physiologic indicators of hemorrhage or decreased cardiovascular function, which may include any of the following symptoms:

- (1) Weak, distal pulse;
- (2) Pallor;
- (3) Cyanosis;
- (4) Delayed capillary refill;
- (5) Tachycardia.

(C) "Evidence of respiratory distress or failure" means physiologic indicators of decreased ventilatory function, which may include any of the following symptoms:

- (1) Stridor;
- (2) Grunting;
- (3) Retractions;
- (4) Cyanosis;
- (5) Hoarseness;
- (6) Difficulty speaking.

(D) "Evidence of hemorrhagic shock" means physiologic indicators of blood loss that may include any of the following symptoms:

- (1) Delayed capillary refill;
- (2) Cool, pale, diaphoretic skin;
- (3) Decreased systolic blood pressure with narrowing pulse pressure;
- (4) Altered level of consciousness.

(E) "Seatbelt sign" means abdominal or thoracic contusions and abrasions resulting from the use of a seatbelt during a motor vehicle collision.

(F) "Signs or symptoms of spinal cord injury" means physiologic indicators that the spinal cord is damaged, including, but not limited to, paralysis, weakness, numbness, or tingling of one or more extremities.

(G) "Evidence of neurovascular compromise" means physiologic indicators of injury to blood vessels or nerves including, but not limited to, pallor, loss of palpable pulses, paralysis, paraesthesia, or severe pain.

(H) “Body region” means a portion of the trauma victim’s body divided into the following areas:

- (1) Brain
- (2) Head, face and neck
- (3) Chest
- (4) Abdomen and pelvis
- (5) Extremities
- (6) Spine

(I) “Evidence of traumatic brain injury” means signs of external trauma and physiologic indicators that the brain has suffered an injury caused by external force including, but not limited to:

- (1) Decrease in level of consciousness from the victim’s baseline
- (2) Unequal pupils
- (3) Blurred vision
- (4) Severe or persistent headache
- (5) Nausea or vomiting
- (6) Change in neurological status

4765-14-02 Determination Of A Trauma Victim.

Emergency medical service personnel shall use the criteria in this rule, consistent with their certification, to evaluate whether an injured person qualifies as an adult trauma victim, geriatric trauma victim, or pediatric trauma victim, in conjunction with the definition of trauma in section 4765.01 of the Revised Code and this chapter.

(A) An adult trauma victim is a person between the ages of sixteen and sixty-nine years of age inclusive exhibiting one or more of the following physiologic or anatomic conditions:

(1) Physiologic conditions

- (a) Glasgow coma scale less than or equal to thirteen;
- (b) Loss of consciousness greater than five minutes;
- (c) Deterioration in level of consciousness at the scene or during transport;
- (d) Failure to localize to pain;
- (e) Respiratory rate less than ten or greater than twenty-nine;
- (f) Requires endotracheal intubation;
- (g) Requires relief of tension pneumothorax;
- (h) Pulse greater than one hundred twenty in combination with evidence of hemorrhagic shock;
- (i) Systolic blood pressure less than ninety, or absent radial pulse with carotid pulse present;

(2) Anatomic conditions

- (a) Penetrating trauma to the head, neck, or torso;
- (b) Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;
- (c) Injuries to the head, neck, or torso where the following physical findings are present:
 - (i) Visible crush injury;
 - (ii) Abdominal tenderness, distention, or seatbelt sign;
 - (iii) Pelvic fracture;
 - (iv) Flail chest;
- (d) Injuries to the extremities where the following physical findings are present:

- (i) Amputations proximal to the wrist or ankle;
- (ii) Visible crush injury;
- (iii) Fractures of two or more proximal long bones;
- (iv) Evidence of neurovascular compromise;

- (e) Signs or symptoms of spinal cord injury;
- (f) Second degree or third degree burns greater than ten per cent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway.

(B) A pediatric trauma victim is a person under sixteen years of age exhibiting one or more of the following physiologic or anatomic conditions:

(1) Physiologic conditions

- (a) Glasgow coma scale less than or equal to thirteen;
- (b) Loss of consciousness greater than five minutes;
- (c) Deterioration in level of consciousness at the scene or during transport;
- (d) Failure to localize to pain;
- (e) Evidence of poor perfusion, or evidence of respiratory distress or failure.

(2) Anatomic conditions

- (a) Penetrating trauma to the head, neck, or torso;
- (b) Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;
- (c) Injuries to the head, neck, or torso where the following physical findings are present;

- (i) Visible crush injury;
- (ii) Abdominal tenderness, distention, or seatbelt sign;
- (iii) Pelvic fracture;
- (iv) Flail chest;

- (d) Injuries to the extremities where the following physical findings are present:

- (i) Amputations proximal to the wrist or ankle;
- (ii) Visible crush injury;
- (iii) Fractures of two or more proximal long bones;
- (iv) Evidence of neurovascular compromise.

- (e) Signs or symptoms of spinal cord injury;
- (f) Second or third degree burns greater than ten per cent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway.

(C) A geriatric trauma victim is a person seventy years of age or older exhibiting one or more of the following causes of injury or physiologic or anatomic conditions:

(1) Physiologic conditions

(a) Glasgow coma scale less than or equal to fourteen in a trauma patient with a known or suspected traumatic brain injury

- (b) Glasgow coma score less than or equal to thirteen;
- (c) Loss of consciousness greater than five minutes;
- (d) Deterioration in level of consciousness at the scene or during transport;
- (e) Failure to localize to pain;
- (f) Respiratory rate less than ten or greater than twenty-nine;
- (g) Requires endotracheal intubation;

- (h) Requires relief of tension pneumothorax;
- (i) Pulse greater than one hundred twenty in combination with evidence of hemorrhagic shock;
- (j) **Systolic blood pressure less than one-hundred**, or absent radial pulse with carotid pulse present;

(2) Anatomic conditions

- (a) Penetrating trauma to the head, neck, or torso;
- (b) Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;

(c) Injuries to the head, neck, or torso where the following physical findings are present:

- (i) Visible crush injury;
- (ii) Abdominal tenderness, distention, or seatbelt sign;
- (iii) Pelvic fracture;
- (iv) Flail chest;

(d) Injuries to the extremities where the following physical findings are present:

- (i) Amputations proximal to the wrist or ankle;
- (ii) Visible crush injury;
- (iii) Fracture of one proximal long bone sustained as a result of a motor vehicle crash;**
- (iv) Fractures of two or more proximal long bones;
- (v) Evidence of neurovascular compromise.

- (e) Signs or symptoms of spinal cord injury;
- (f) Second degree or third degree burns greater than ten per cent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway;
- (g) Injury sustained in two or more body regions.**

(3) Cause of injury

- (a) Pedestrian struck by a motor vehicle**
- (b) Fall from any height, including standing falls, with evidence of a traumatic brain injury**

(D) Emergency medical service personnel shall also consider mechanism of injury and special considerations, as taught in the EMT-basic, EMT-intermediate, or EMT-paramedic curriculum, when evaluating whether an injured person qualifies as a trauma victim.

4765-14-03 Enforcement Of State Or Regional Trauma Triage Protocols.

(A) EMS medical directors shall be responsible for enforcing state or regional trauma triage protocols for EMS personnel under their medical direction through a performance improvement or peer review process.

(B) EMS medical directors may request assistance from the RPABs to address issues related to quality improvement and peer review of state or regional trauma triage protocols.

(C) The board shall investigate all complaints regarding violations of state or regional trauma triage protocols consistent with its current procedures for investigations.

4765-14-04 Education of State and Regional Trauma Triage Protocols.

The board shall consult with the state trauma committee, emergency medical service organizations and personnel, regional directors and regional physician advisory boards, emergency medical service instructors, and persons who regularly provide medical direction to emergency medical service personnel in this state for assistance in developing and implementing educational opportunities regarding state and regional trauma triage protocols. The board may also enlist the assistance of the division of EMS or direct the division of EMS to participate in developing and implementing educational opportunities regarding state and regional trauma triage protocols in a manner to be determined by the board.

4765-14-05 Exceptions to Mandatory Transport.

(A) Emergency medical service personnel shall transport a trauma victim, as defined in section 4765.01 of the Revised Code and this chapter, directly to an adult or pediatric trauma center that is qualified to provide appropriate adult or pediatric care, unless one or more of the following exceptions apply:

- (1) It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an adult or pediatric trauma center;
 - (2) It is unsafe or medically inappropriate to transport the victim directly to an adult or pediatric trauma center due to adverse weather or ground conditions or excessive transport time;
 - (3) Transporting the victim to an adult or pediatric trauma center would cause a shortage of local emergency medical service resources;
 - (4) No appropriate adult or pediatric trauma center is able to receive and provide adult or pediatric trauma care to the trauma victim without undue delay;
 - (5) Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than eighteen years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient.
-

4765-14-06 Amendments Affecting Regional Protocols

If the state trauma triage protocols are amended to include criteria that do not appear in a region's protocols, such amendments will automatically be applied to the region's protocols until such time as the region amends their protocols, in accordance with section 4765.40 of the Revised Code.

Metrics Work Group of Trauma Visionary Committee

Ohio Trauma System Scorecard: (timeframe)

	Ohio Trauma Care Delivery		Goals		2013 July-Dec	2014 Jan-June	2014 July-Dec	2015 Jan-June
Category	Measure	Goal	2013 Goal	Long Term Goal				
Structure	Access							
	% of Ohio population which live within 60 minutes by ground transport to a Level I, II or III Trauma Center	↑						
	% of Ohio population which live in non-metro area within 60 minutes by ground transport to trauma center	↑						
	% of Ohio population which live within 60 minutes by ground transport to an accredited burn treatment facility	↑						
	% of Ohio population which live within 60 minutes by ground transport to a pediatric trauma center	↑						
	% of Ohio population with access to enhanced 911	↑						
	Transport Availability							
	% of trauma patients where inter-facility transport wait time for air transport is less than 30 minutes	↑						
	% of trauma patients where inter-facility transport wait time for ground transport is less than 30 minutes	↑						
	Reporting of Data							
	% of hospitals with compliance of timely reporting of state trauma data	↑						
	% of rehabilitation facilities with compliance of timely reporting of rehabilitation data	↑						
	% of EMS agencies with compliance of timely reporting of EMS run data	↑						

Metrics Work Group of Trauma Visionary Committee

	Prevention								
	% of safety belt usage for all motor vehicle related deaths	↑							
	% of safety belt usage for injured patients in a motorized vehicle crash	↑							
	% of safety helmet usage for all motorcycle deaths	↑							
	% of car seat / booster usage for children 8 years or younger involved in a motor vehicle related crash	↑							
	% of helmet usage for all bicycle deaths								
	Coroner								
	% of injury deaths that undergo that underwent an autopsy	↑							
	% of injury deaths that undergo a complete autopsy	↑							
	% of in-hospital injury deaths which were eligible and donated any type of organ	↑							
	Finance								
	% of uncompensated care (yearly)	↓							
	Total cost of care for injured patients in Ohio (yearly)								
	Hospital cost of care for injured patients in Ohio (yearly)								
	HRSA Model Trauma System								
Process	% of indicators 3 and greater	↑							
	Triage								
	% of EMS runs for injured trauma patients with less than 20 minutes at the scene (exclude all with prolonged extrication)	↑							

Metrics Work Group of Trauma Visionary Committee

% of adult patients with ISS ≥ 15 that reach a definitive care trauma center within 2 hours of injury	↑								
% of pediatric patients with an ISS ≥ 15 that reach a pediatric trauma center within 2 hours of injury	↑								
Under-triage									
% of patients with ISS ≥ 10 and discharged from an acute care hospital	↓								
% of patients who meet state trauma triage criteria who were taken to an acute care hospital when a trauma center was regionally available	↓								
% of patients who meet state trauma triage criteria and who were admitted to an acute care hospital when a trauma center was regionally available	↓								
Over-triage									
% of patients transferred to an Level I, II, or III adult trauma center discharged from the ED within 24 hours with an ISS ≤ 9 .	↓								
Facility Transfer									
% of adult trauma patients with two or more transfers prior to final hospital discharge	↓								
% of pediatric trauma patients with two or more transfers prior to final hospital discharge	↓								
% of hospitals (excluding Level I) that have transfer guidelines to higher level of care.	↑								
% of hospitals that have protocols for the initial treatment of the injured patient	↑								

Metrics Work Group of Trauma Visionary Committee

	Trauma Center									
	% of patients with ISS ≥ 15 treated in Level I / II/ III trauma centers	↑								
Outcome	% trauma patients less than 16 years with ISS ≥ 10 treated at a pediatric trauma center	↑								
	Mortality									
	% overall mortality rate	↓								
	% of injured patients who die in a trauma center between 4 and 24 hours after the time of injury	↓								
	% injured patients who die in an acute care hospital between 4 and 24 hours after the time of injury	↓								
	% of pediatric patients that die in a non-pediatric trauma center	↓								
	% of admitted patients that die at an acute care hospital (exclude DNR)	↓								
	% of patients who die with a probability of survival using ICISS of > 0.50	↓								
	% of patients who live with a possibility of survival using ICISS of < 0.50	↑								
	% patients that die within 2 hours of reaching a trauma center	↓								
	% patients that die within 2 hours of reaching an acute care hospital	↓								
	Disability									
	% of patients discharged from a certified rehab center to a long term care facility.	↓								

Currently meets goal

Goal is 75% met

Goal is $< 75\%$ met

Ohio Child Fatality Review Twelfth Annual Report

Mission:
To reduce the incidence of preventable
child deaths in Ohio

September 30, 2012

Ohio Department of Health Ohio Children's Trust Fund



Ohio Child Fatality Review Twelfth Annual Report

*This report includes reviews of child deaths that occurred in 2010
and aggregate reviews for 2006-2010.*

MISSION

To reduce the incidence of preventable child deaths in Ohio

SUBMITTED SEPTEMBER 30, 2012, TO

John R. Kasich, Governor, State of Ohio
William G. Batchelder, Speaker, Ohio House of Representatives
Thomas E. Niehaus, President, Ohio Senate
Armond Budish, Minority Leader, Ohio House of Representatives
Eric Kearney, Minority Leader, Ohio Senate
Ohio Child Fatality Review Boards
Ohio Family and Children First Councils

SUBMITTED BY

Ohio Department of Health
Ohio Children's Trust Fund



TABLE OF CONTENTS

Dedication and Acknowledgements	4
Letter from the Directors	5
Executive Summary and Key Findings	6
Prevention Initiatives	10

REVIEWS FOR 2010 DEATHS

2012 Data Reporting	16
Reviews by Demographic Characteristics	17
Reviews by Manner of Death and by Cause of Death	18
Deaths from Medical Causes	19
Deaths from External Causes	23
Reviews by County Type	26

REVIEWS FOR 2006-2010 DEATHS

Summary of Reviews	29
Trends over Five Years	33
Deaths to Hispanic Children, All Ages	35
Poisoning Deaths, All Ages	37
Homicide, All Ages	39
Suicide, All Ages	42
Child Abuse and Neglect, All Ages	44
Reviews by Age Group	
Infant Deaths from All Causes	46
Deaths in Sleep Environments	52
Deaths to Children 1 to 4 Years Old	57
Deaths to Children 5 to 9 Years Old	60
Deaths to Children 10 to 14 Years Old	63
Deaths to Children 15 to 17 Years Old	66
Preventable Deaths	69
Conclusion	71

APPENDICES

I.	Overview of Child Fatality Review Program	72
II.	Child Fatality Review Advisory Committee Members	74
III.	Child Fatality Review Program Staff	76
IV.	2012 Local Child Fatality Review Board Chairs	77
V.	ICD-10 Codes	83
VI.	2010 Ohio County Type Designations	84
VII.	Data Tables	
1.	Reviews of 2010 Deaths by Manner of Death by Age, Race and Gender	85
2.	Reviews of 2010 Deaths: All Causes by Age	86
3.	Reviews of 2010 Deaths: All Causes by Race	87
4.	Reviews of 2010 Deaths: All Causes by Gender	88
5.	2010 Child Population, Child Deaths and Reviews by County Type	88
6.	Reviews of 2006-2010 Deaths by Manner of Death by Age, Race and Gender	89
7.	Reviews of 2006-2010 Deaths: All Causes by Age	90
8.	Reviews of 2006-2010 Deaths: All Causes by Race	91
9.	Reviews of 2006-2010 Deaths: All Causes by Gender	92
10.	Reviews of 2006-2010 Deaths by Year by Age, Race and Gender	93
11.	Reviews of 2006-2010 Deaths by Year by Causes, Circumstances and Preventability	94
12.	Reviews of 2006-2010 Deaths by County Type by Age, Race and Gender	95
13.	Reviews of 2006-2010 Deaths by County Type by Causes, Circumstances and Preventability	96
VIII.	References	97

DEDICATION

This report reflects the work of many dedicated professionals in every community throughout the State of Ohio who have committed themselves to gaining a better understanding of how and why children die. Their work is driven by a desire to protect and improve the lives of young Ohioans. Each child's death represents a tragic loss for the family, as well as the community. We dedicate this report to the memory of these children and to their families.

ACKNOWLEDGEMENTS

This report is made possible by the support and dedication of more than 500 community leaders who serve on Child Fatality Review (CFR) boards throughout the State of Ohio. Acknowledging that the death of a child is a community problem, members of the CFR boards step outside zones of personal comfort to examine all of the circumstances that lead to child deaths. We thank them for having the courage to use their professional expertise to work toward preventing future child deaths.

We also extend our thanks to the Ohio Child Fatality Review Advisory Committee members. Their input and support in directing the development of CFR in Ohio has led to continued program improvements.

We acknowledge the generous contributions of other agencies in facilitating the CFR program including the Ohio Children's Trust Fund; the Ohio Department of Health (ODH), divisions of Family and Community Health Services and Prevention, and Office of Healthy Ohio; state and local vital statistics registrars; and the National Center for the Review and Prevention of Child Death.

The collaborative efforts of all of these individuals and their organizations ensure Ohio children can look forward to a safer, healthier future.

Dear Friends of Ohio Children:

We respectfully present the Twelfth Annual Ohio Child Fatality Review (CFR) Report containing information from reviews of child deaths that occurred in calendar year 2010, as well as a summary of the data for deaths that occurred during the five-year period from 2006 to 2010. In facts and figures, this report tells the story of why Ohio children are dying and outlines the work of the CFR program and local and state efforts to prevent these deaths. We hope this report will lead to a reduction in the incidence of the untimely and preventable deaths of Ohio children.

Established by the Ohio General Assembly in July 2000, the CFR program works to examine the factors contributing to Ohio children's deaths. It is only through careful review of child deaths that we are better prepared to prevent future deaths. This report was created to raise awareness of preventable child deaths and understanding of prevention initiatives to ensure the health and well-being of our state's children.

In 2010, 1,580 Ohio children died and 98 percent of these deaths were reviewed by local CFR boards. The CFR process begins at the local level where local boards consisting of professionals from public health, children's services, recovery services, law enforcement and health care review the circumstances surrounding every child death in their county. Through their collective expertise and collaborative assessment, solutions are identified and local prevention initiatives created.

All of us must work together to prevent future child deaths by:

- Educating families, children, neighbors, organizations and communities on preventable child deaths.
- Encouraging community and individual involvement in recognizing and preventing risk factors that contribute to child deaths.
- Assisting and supporting families to achieve healthy parenting practices through education and resources.
- Empowering individuals to intervene in situations where violence and neglect harm children.
- Improving systems of care so all children receive optimal health care before and after birth and throughout their lives.

We encourage you to consider the facts, analysis and recommendations presented in this report and make a commitment to create a safer and healthier Ohio for our children. Only *together* can we eliminate preventable child deaths.

Sincerely,

Theodore E. Wymyslo, MD
Director of Health
Ohio Department of Health

Kristen Rost
Executive Director
Ohio Children's Trust Fund

Ohio Child Fatality Review

EXECUTIVE SUMMARY

The 2012 Child Fatality Review (CFR) Annual Report presents information from the reviews of deaths that occurred in 2010, as well as a summary of the data for deaths that occurred from 2006 to 2010.

Every child's death is a tragic loss for the family and community. Through careful review of these deaths, we are better prepared to prevent future deaths.

The Ohio CFR program was established in 2000 by the Ohio General Assembly in response to the need to better understand why children die. The law mandates CFR boards in each of Ohio's counties (or regions) to review the deaths of all children younger than 18. Ohio's CFR boards are composed of multidisciplinary groups of community leaders. Their careful review process results in a thorough description of the factors related to child deaths.

In 2005, Ohio CFR boards began using a new case report tool and data system developed by the National Center for Child Death Review. The tool and data system underwent slight revisions in 2007, 2010 and 2011, based on feedback from users. As a result, the revised tool more clearly captures information about the factors related to each child death and better documents the often complex conversations that happen during the review process.

The comprehensive nature of the case report tool and the functionality of the data system have allowed more complete analysis for all groups of deaths. Each section of this report contains detailed data regarding the circumstances and factors related to child deaths. The sections offer in-depth information about identified groups of deaths by age group and by special circumstances such as suicides, homicides and child abuse deaths, demonstrating the potential of data analysis combined with the review process to identify risk factors and to give direction for prevention activities.

CFR does make a difference. This report highlights many of the local initiatives that have resulted from the CFR process. These collaborations, partnerships and activities are proof that communities are aware that knowledge of the facts about a child death is not sufficient to prevent future deaths. The knowledge must be put into action.

The mission of CFR is to reduce the incidence of preventable child deaths in Ohio. Through the process of local reviews, communities and the state acknowledge that the circumstances involved in most child deaths are too complex and multidimensional for responsibility to rest with a single individual or agency. The CFR process has raised the collective awareness of all participants and has led to a clearer understanding of agency responsibilities and possibilities for collaboration on all efforts addressing child health and safety. It is only through continued collaborative work that we can hope to protect the health and lives of our children.

Key Findings

A total of 1,546 reviews of 2010 child deaths were reported by Ohio's 88 local CFR boards. Of these, 1,542 reviews were complete for manner and cause of death and were used for analysis. This represents 98 percent of all 1,580 child deaths for 2010 reported in data from Ohio vital statistics. Deaths that were not reviewed include cases still under investigation or involved in prosecution and out-of-state deaths reported too late for thorough reviews.

Black children and boys died at disproportionately higher rates than white children and girls for most causes of death. Thirty-one percent (482) of deaths reviewed were to black children and 56 percent (864) were to boys. Their representation in the general population is 17 percent for black children and 51 percent for boys.

Reviewed cases are categorized by manner and by cause of death. Manner of death is a classification of deaths based on the circumstances surrounding a cause of death and how the cause came about. The five manner of death categories on the Ohio death certificate are natural, accident, homicide, suicide or undetermined/pending/unknown.

- Natural deaths accounted for 73 percent (1,128) of all deaths reviewed.
- Accidents (unintentional injuries) accounted for 15 percent (223) of the deaths.
- Homicides accounted for 3 percent (53) of the deaths.
- Suicides accounted for 2 percent (28) of the deaths.
- Seven percent (110) of deaths reviewed were of an undetermined, pending or unknown manner.

Seventy-two percent (1,130) of the deaths reviewed were due to medical causes.

- Seventy-eight percent (882) of deaths due to medical causes were to infants less than 1 year of age.
- The most frequent medical cause of death was prematurity (512).

Twenty-two percent (334) of all deaths reviewed resulted from external causes.

- Vehicular crashes were the leading cause of death from external injuries. Vehicular deaths accounted for 6 percent (88) of all deaths reviewed. Of the 59 deaths that occurred in cars, trucks, vans or SUVs, only 34 percent (20) of the children killed were reported to be using appropriate restraints.
- Five percent (78) of all deaths reviewed were from asphyxia, including suffocation, strangulation and choking. More than half of the deaths (46) were children less than 1 year of age, many of which occurred in a sleep environment. Of the 24 asphyxia deaths to children 10-17 years old, 67 percent (16) were suicides.
- Weapons, including body parts used as weapons, accounted for 4 percent (54) of all deaths reviewed. Fifty-two percent (28) were youth 10 to 17 years of age and 48 percent (26) were black children. The manner of death was accident for only one of the weapons deaths.
- Fire, burn and electrocution accounted for 2 percent (30) of all deaths reviewed. Eighty-three percent (25) of victims were less than 5 years old.
- Less than two percent (28) of all deaths reviewed were from drowning and submersion. Fifty percent (14) of the drowning deaths were to children under 5 years of age.
- Poisoning deaths represented 1 percent (16) of all deaths reviewed. Seventy-five percent (12) of poisoning deaths occurred to children 15-17 years old.

Deaths to infants younger than 1 year accounted for 68 percent (1,044) of the reviews.

- Infants less than 1 month old accounted for 69 percent (717) of all infant deaths and 46 percent of

all deaths reviewed.

- Prematurity was the most frequent cause of infant deaths, accounting for 49 percent (509).
- Congenital anomalies accounted for 13 percent (140) of all infant deaths.
- For 810 reviews where gestational age was known, 70 percent (568) of the infants were born preterm (before 37 weeks gestation).
- Sleep-related deaths (including sudden infant death syndrome or SIDS) accounted for 14 percent (148) of the 1,044 total reviews for infant deaths in 2010, more than any single cause of death except prematurity. Forty-six percent (68) of sleep-related deaths were to black infants, which is disproportionate to their representation in the Ohio child population (17 percent). Sixty-two percent (91) of the sleep-related deaths occurred in locations considered unsafe such as in adult beds and on couches. Fifty-five percent (81) occurred to infants who were sharing a sleeping surface (bedsharing) with someone else at the time of death.
- SIDS accounted for 3 percent (28) of the 1,044 total reviews for infant deaths. At least fifty-four percent (15) of SIDS victims were exposed to smoke in utero.

Three percent (53) of all deaths reviewed resulted from homicide.

- Homicide deaths to boys (72 percent) and black children (53 percent) were disproportionately higher than their representation in the general population (51 percent for boys and 17 percent for black children).
- Fifty-one percent (27) of homicide deaths were to children younger than 5 years. Thirty-six percent (19) were to children 15-17 years old.

Two percent (28) of all deaths reviewed resulted from suicide.

- Suicides represent 12 percent of all reviews for children ages 10 to 17.
- Suicide deaths among boys (86 percent) were disproportionately higher than their representation in the general population (51 percent).
- Twenty-nine percent (8) of the suicide deaths reviewed were from suburban counties, which is disproportionately higher than the proportion of children living in those counties (18 percent).

Local CFR boards reviewed 24 deaths to children resulting from child abuse and neglect in 2010. These represent less than 2 percent of all 1,542 deaths reviewed.

- Eighteen of the 24 reviews indicated that physical abuse caused or contributed to the death, while eight reviews indicated that neglect caused or contributed to the death.
- All but two of the reviews were for children younger than 10 years.

Of the 1,542 deaths reviewed, CFR boards determined 22 percent (340) were probably preventable.

- Eighty-seven percent (193) of accidental deaths were deemed probably preventable.
- Fifty-six percent (76) of deaths to children 15 to 17 years of age were deemed probably preventable.

For the five-year period 2006-2010, 8,247 deaths were reviewed, which represents 96 percent of the 8,554 child deaths reported by Ohio vital statistics.

- The mortality rate for Ohio children has decreased from 65 deaths per 100,000 population in 2006 to 58 in 2010.
- The percentage of deaths from external causes due to vehicular crashes decreased from 28 percent in 2006 to 23 percent in 2009, then increased to 26 percent in 2010.
- The percentage of deaths from external causes due to asphyxia has increased from 26 percent in 2006 to 29 percent in 2009, then decreased to 23 percent in 2010.

The reviews for the five-year period were analyzed by age group.

- Fifty-eight percent (309) of the infant deaths due to external causes were due to asphyxia.
- Vehicular crashes were the leading external cause of death for children older than 1 year.
 - Nineteen percent (68) of the 353 reviews for external causes for children 1 to 4 years old were due to vehicular crashes.
 - Thirty-eight percent (66) of the 176 reviews for external causes for children 5 to 9 years old were due to vehicular crashes.
 - Thirty-five percent (89) of the 255 reviews for external causes for children 10 to 14 years old were due to vehicular crashes.
 - Forty-three percent (288) of the 670 reviews for external causes for children 15 to 17 years old were due to vehicular crashes.

Local CFR boards continue to make numerous recommendations for prevention and share their recommendations and findings with others in the community. More than half of the 88 counties shared information about local prevention initiatives and activities that have resulted from the CFR process in 2010.

Limitations

Calculation of rates is not appropriate with Ohio's CFR data because not all child deaths are reviewed. Instead of rates, CFR statistics have been reported as a proportion of the total reviews. This makes analysis of trends over time difficult, as an increase in the proportion of one factor will result in a mathematical decrease in the proportion of other factors. Complex analysis is needed to determine if such changes in proportion represent true trends in the factors of child deaths.

For this report, cases with multiple races indicated were assigned to the race that represents the least proportion of the general child population of Ohio. For example, if a case indicated both black and Asian, the case was assigned to Asian, because the proportion of Asian children is less than the proportion of black children in Ohio.

The CFR case report tool and data system record Hispanic ethnicity as a variable separate from race. A child of any race may be of Hispanic ethnicity.

The ICD-10 codes used for classification of vital statistics data in this report were selected to most closely correspond with the causes of death indicated on the CFR Case Report Tool and may not match the codes used for some causes of death in other reports or data systems. The codes used for this report can be found in the appendices.

Since the inception of statewide data collection in 2001, Ohio CFR has used two different data systems, and the latest system has undergone improvements and revisions. Because of the differences in data elements and classifications, data in this annual report may not be comparable to data in previous reports. In-depth evaluation of contributing factors associated with child deaths is limited in some cases by small cell numbers and lack of access to relevant data.

Of the 1,580 deaths of Ohio children in 2010, 2 percent (28) occurred out-of-state. The first step of the review process, identification of a child death, is difficult when the death occurs out-of-state. Death certificates are recorded in the state where the death occurs and a process is not in place to routinely notify the county of residence for a timely review. This is a particular problem in rural Appalachian counties, where 8 percent (18) of the 233 deaths occurred outside Ohio. By contrast, less than 1 percent (8) of the 913 deaths to children of metropolitan counties died out-of-state. The state coordinator continues to work with the Ohio Vital Statistics to improve the timely notification of out-of-state deaths.

PREVENTION INITIATIVES

Within the 2000 law that established the Ohio Child Fatality Review (CFR), goals for local CFR boards include making recommendations and developing plans for implementing local service and program changes for prevention of future deaths. Recommendations become initiatives only when resources, priorities and authority converge to make change happen. Again this year, more than half of the counties reported over 100 examples of successful implementation of CFR recommendations. This means that CFR boards have shared their findings and recommendations and engaged partners for change. What follows is a sample of the initiatives and activities taking place across Ohio.

SIDS and Sleep-related Deaths

The largest number of initiatives deal with reducing the risk of sudden infant death syndrome (SIDS) and other sleep-related deaths. A variety of programs target minority families, grandparents, caregivers, health professionals and the whole community with risk reduction messages that include Back to Sleep and the risks of inappropriate bedding and bedsharing. Many of these initiatives are on-going, being incorporated into existing programs such as prenatal clinics, Help Me Grow (HMG) and Special Supplemental Food Program for Women, Infants and Children (WIC). Efforts to reach the whole community include the use of billboards, displays at fairs and festivals and distribution of educational materials at popular sites for families, such as zoos, playgrounds and family restaurants.

- In **Clark** County, funding was secured from a local foundation to provide a one-piece infant garment with a safe sleep message to each new baby born at the local birthing center.
- The **Cuyahoga** County CFR board and board of health provides education to the medical and nursing staff in the maternity hospitals. The education stresses the importance of role modeling safe sleep practices in the hospital and engaging parents and family members in a discussion of safe sleep.
- Clients of programs throughout the health department in **Erie** County were provided infant safe sleep information, based on a survey of knowledge and practices that was conducted the previous year. The health department also provided education and a safe crib display at the county fair.
- The **Franklin** County Infant Safe Sleep and SIDS Risk Reduction Task Force created a public service announcement focusing on the “ABC’s of Safe Sleep.” The video was featured on the health department’s website, partner websites and YouTube.
- The **Franklin** County CFR board partnered with the police department, health department, childrens’ protective services, coroner’s office and ODH to conduct a statewide infant death investigation training to encourage agencies to conduct scene investigations for all unexplained infant deaths. The training promoted the use of CDC’s Sudden Unexplained Infant Death Investigation form to collect the necessary information during the investigation. More than 100 professionals from 29 counties participated in the hands-on training.
- Findings from the **Fulton** County CFR helped secure an ODH Child and Family Health Services grant to fund a safe sleep campaign, including billboards and movie theater advertisements.
- **Hamilton** County’s innovative partnership with the Cincinnati Police Department has expanded to include the Fire Department. Police and firefighters have been trained in the importance of safe sleep and reducing risks through safe sleep arrangements. A referral process was developed for families who do not have cribs or who need other kinds of social service assistance.
- A pamphlet about infant safe sleep and risk reduction practices was developed and is being distributed to clients of the **Jefferson** County Children’s Services.
- Information on reducing the risk of SIDS and providing a safe sleep environment was presented to parents of newborns in **Lucas** County. Families in need are referred to Cribs 4 Kids[®], which provided cribs to 276 families in 2010.
- In **Mahoning and Trumbull Counties**, the United Way of Youngstown and the Mahoning Valley Health and Wellness Vision Council/Infant Mortality Task Force are collaborating on an initiative to

promote safe sleep education. Discharge teaching instructions at one local hospital were evaluated to insure consistent education of new parents at the time of discharge. The unit nursing staff were educated on sleep positioning and bedding, communication to families, and role modeling. An on-line infant safe sleep continuing education course for nurses was developed.

- The impact of an ongoing safe sleep campaign in **Montgomery** County is being evaluated. Over 12,000 one-piece infant garments imprinted with a safe sleep message were distributed through the prenatal, child health and Special Supplemental Food Program for Women, Infants and Children (WIC) clinics. Changes in knowledge, attitudes and behavior are measured through pre- and post-surveys.
- The **Stark** County Safe Sleep Task Force is a Cribs 4 Kids® provider. In addition to providing cribs to needy families who participate in a 90-minute class on safe sleep practices the task force teaches classes on infant sleep safety to various groups, including local high schools and prenatal support groups.
- The **Summit** County CFR board contacted community agencies that collect and distribute donated cribs with information about crib safety and recall information regarding drop-side cribs. CFR data and safe sleep guidelines were shared during grand rounds at the children's hospital and through a press conference and an article in the local newspaper.

Child Abuse and Neglect

The CFR process can identify opportunities for improvement in programs and policies to prevent child abuse and neglect. Responsibility for prevention activities is shared among all the member agencies.

- A community program developed by Children's Services in **Allen** County to address child abuse at the hands of a parent's significant other is now in its third year. With community and professional input, a parenting curriculum "Choose Your Partner Carefully; Your Child's Life Depends on It" has been developed and shared with other organizations to use with staff and clients. **Jackson** and **Ross** Counties are using a similar campaign.
- A task force of 30 professionals from a wide variety of social service and legal fields in **Cuyahoga** County developed recommendations focusing on decision points during the family reunification process, permanency and use of evidence-based practice. Many recommendations are now being implemented.
- Using findings from the CFR process, **Muskingum** County Children's Services and the prosecuting attorney's office developed public service announcements to increase awareness and prevention of shaken baby syndrome.
- As a result of the CFR process, the **Harrison** County Help Me Grow (HMG) is soliciting referrals of at-risk pregnant women and those with children under age 3 years. The HMG curriculum includes discussion of caregiver issues.
- The **Montgomery** County Children's Services is reviewing and revising practices regarding closing cases, in an effort to avoid children and families being lost to follow-up or without needed prevention and supportive services from other agencies.
- The **Montgomery** County prosecutor's office and police jurisdictions have implemented a new search warrant template to be used during child death investigations when there is probable cause to believe that the caregiver was under the influence of alcohol or drugs.
- Children taken into protective services in **Wood** County are provided health services such as immunizations, physicals and developmental screenings. Services are funded by the county health levy.

Suicide

The need for youth suicide prevention is also being addressed as a result of the CFR process. In many counties, such as **Lucas, Allen, Franklin and Coshocton**, CFR findings are shared with county suicide

prevention coalitions and task forces to focus on awareness of suicide and develop strategies to reduce the factors that increase the risk of suicide, identify youth at risk and increase the availability of mental health services.

- In an effort to better review and understand youth suicide, **Clermont** County CFR board with the help of the mental health and recovery board looked at recent research on key factors for youth suicide, including impulsiveness.

Vehicular Injuries

Vehicular crashes continue to be a leading cause of injury and death to children. Many local CFR boards were involved in efforts to pass Ohio's Distracted Driving law which took effect in August, 2012. Boards are active in educating families about the new law, in addition to Ohio's Booster Seat law and Graduated Driver License law. In addition to continued efforts in most counties to improve teen driver education and infant car seat programs, local CFR boards are addressing specific issues regarding vehicular deaths in their community.

- A teen driving summit sponsored by the **Clermont** County Safe Communities program encouraged and empowered teen leaders to develop programs for their schools to get peers to slow down, buckle up and eliminate cell phone use while driving.
- The **Clinton** County CFR is researching prevention strategies for all-terrain vehicular injuries, using the recommendations of the American Academy of Pediatrics.
- Using Partnerships for Success Grant funding, the **Fulton** County "Parents Who Host" campaign continues to educate parents and the community about underage drinking and driving.
- Several counties, including **Fulton, Greene and Butler**, sponsor 4-H CarTeens, a traffic safety program conducted by 4-H for juvenile traffic offenders. 4-H CarTeens goals include reducing the number of repeat juvenile traffic offenders, decreasing the number of teen traffic offenders, and increasing teen awareness of traffic/vehicular safety.
- A school district in **Lucas** County changed its policy so that students no longer must cross the street when exiting or entering the bus if the speed limit is 35 miles per hour or more. In addition, the district is testing the use of video cameras mounted on four buses to document activity on the driver's side, including the license plate number of vehicles passing the buses illegally. During the 2010-2011 school year, 39 citations were issued.

Infant Deaths

In response to needs identified through the reviews of infant deaths, collaborative groups have been organized and continue in many counties, such as **Allen, Cuyahoga, Fulton, Hamilton and Lucas**, to promote early prenatal care and healthy lifestyles for pregnant women and to educate women to be as healthy as possible before becoming pregnant. Typical partners include HMG, WIC, Child and Family Health Services projects, local physicians, schools and other health and social service providers.

- **Hardin** County is using Facebook and agency websites to promote early prenatal care.
- **Scioto** County is investigating screening all newborns for exposure to drugs.
- An infant death scene investigation task force has begun in **Trumbull** County.

Substance Abuse

The misuse and abuse of prescription drugs and other substances harms youth and children, who suffer intentional or accidental overdose and prenatal exposure as well as inadequate care and supervision when adults use. Local CFR boards have joined with other community agencies to combat this epidemic and protect children.

- The CFR process in **Allen** County prompted discussion of the impact of "bath salts," which led to a regional summit attended by participants from ten surrounding counties. Post-summit activities are increasing education and awareness of the dangers.

- A growing concern with prescription drug use among teens in **Clark** County resulted in the formation of Cole's Warriors, a coalition to address the problem.
- **Vinton** County is improving inter-agency communication and referrals to identify high-risk children in families with drug use, violence or criminal activity.
- The **Fairfield** CFR board is seeking more information on prenatal use of drugs and alcohol by mothers who experience an infant death due to prematurity, so preventive services can be developed.

General Health and Safety

Countywide collaborations and partnerships produced many programs to increase the general health and safety of children.

- A collaboration between the Child and Family Health Services and the **Fulton** County Safety Task Force distributed best practice-materials for improving safety for young children by ensuring entrances and exits from the home are child-proofed and pools and ponds are gated or blocked.
- Activities in **Holmes, Lawrence, Perry** and **Richland** Counties are addressing fire safety education and distribution and proper use of smoke alarms, especially in mobile homes.
- General home and child safety information is shared by the **Hardin** County CFR via the health department's website and Facebook. The dangers of unstable televisions and tall furniture were featured.

Systems Improvements

One of the goals set by Ohio law for CFR is to promote cooperation, collaboration and communication among all groups that serve families and children. The CFR process continues to have a positive impact on participating agencies. Many boards report an increase in cooperation and understanding between participating agencies and some have developed written policies to facilitate communication. The review process stimulates discussion about existing services in communities, identifying gaps in services, access to service barriers, the need to maximize use of existing services and opportunities for increased collaboration.

- The **Franklin** County CFR board invited local, state and federal elected officials to a meeting to learn more about the CFR process and how they can support efforts to prevent child deaths.
- The **Montgomery** County CFR board has been working with the legal representatives from the local hospitals, health department and prosecutor's office to form an agreement for all county hospitals to participate in the CFR process. This is an effort to improve the sharing of information.
- Several counties including **Wood** and **Logan**, have identified a need for bereavement services and are forming partnerships to improve services.
- The **Clermont** County CFR published its first report to the community. The goal was to increase awareness of preventable deaths by making the data from the past five years more public. Geographic Information System (GIS) analysis was included.

Ohio Children's Trust Fund

The Ohio Children's Trust Fund (OCTF) is Ohio's sole public funding source for child abuse and neglect prevention. OCTF was created in Ohio law in 1984 and is governed by a board of 15 members representing a broad public-private partnership. The board consists of representatives from children's services agencies, education, law enforcement and the pediatric community. Eight members are appointed by the Governor to represent the citizens of Ohio, four members are legislative appointees and three members are agency directors (ODH, ODJFS and the Ohio Department of Alcohol and Drug Addiction Services). The Board supervises the policies and programs of the Trust Fund and the ODJFS serves as the administrative agent for procurement and budgeting purposes.

OCTF receives revenues from surcharges on birth and death certificates and divorce and dissolution decrees. As provided under Ohio law, OCTF invests this revenue in three areas: county allocations, statewide prevention programs and initiatives, and child advocacy centers (CACs). OCTF also receives federal dollars through the Community Based Child Abuse Prevention (CBCAP) Grant. The purpose of the grant is to fund community based primary and secondary child abuse prevention programs with statewide significance.

In 2011, OCTF became the Ohio Chapter of Prevent Child Abuse America. The OCTF and Prevent Child Abuse America share a common mission and the OCTF Board was excited for the opportunity to align Ohio's statewide prevention efforts under one entity and to further the work of Prevent Child Abuse Ohio.

In transforming OCTF into Ohio's leader and authority on child maltreatment prevention, the 2009 – 2014 strategic plan incorporates three critical areas: child maltreatment as a public health problem, promoting protective factors, and investing in evidence informed practices. It is through these three areas that OCTF works to fulfill its mission of preventing child abuse and neglect through investing in strong communities, healthy families, and safe children. In addition, the 2009–2014 strategic plan shifts OCTF from focusing solely on funding prevention programs to prioritizing increased attention to consumer education, social marketing and public policy initiatives.

2012 DATA REPORTING

By April 1 of each year, local Child Fatality Review (CFR) boards must submit to ODH the following information with respect to each child death reviewed:

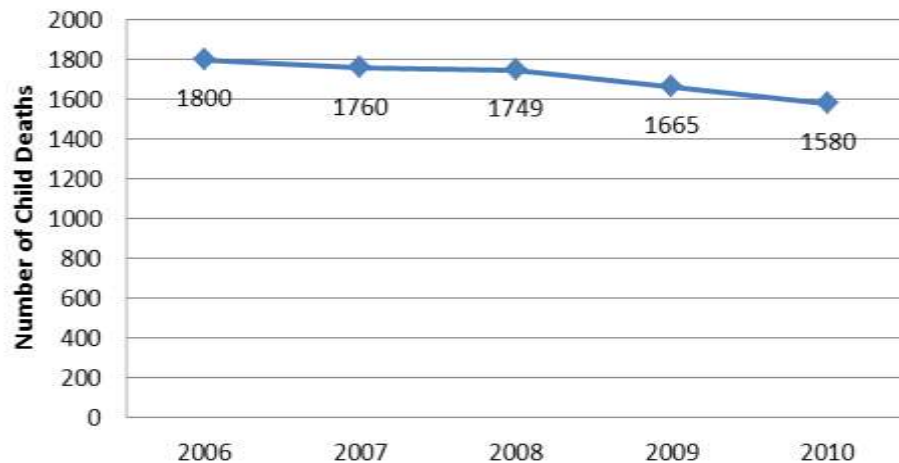
- Cause of death.
- Factors contributing to death.
- Age.
- Gender.
- Race.
- Geographic location of death.
- Year of death.

In addition to the case review information, the local boards submit a report of their activities and recommendations for actions that might prevent future deaths. This report contains no case-identifying information and is a public record.

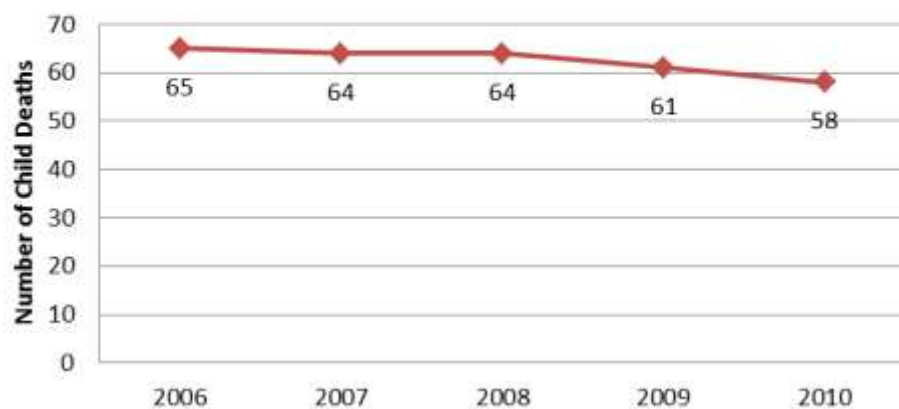
There were a total of 1,546 reviews of 2010 child deaths reported by April 1, 2012. Of these, 1,542 were complete for manner and cause of death and used for analysis. This represents 98 percent of all child deaths (1,580) in Ohio for 2010, based on data from Ohio vital statistics. All 88 counties submitted reports, although not all counties reported reviews. More than 200 recommendations for prevention were submitted. More than half of the 88 counties shared information about local prevention initiatives and activities that have resulted from the CFR process.

According to Ohio Vital Statistics, the number of Ohio child deaths has decreased from 1,800 in 2006, when 1,708 reviews (95 percent) were completed, to 1,580 in 2010. The child mortality rate has decreased from 65 deaths per 100,000 children in 2006 to 58 in 2010.

Ohio Child Deaths by Year, 2006-2010



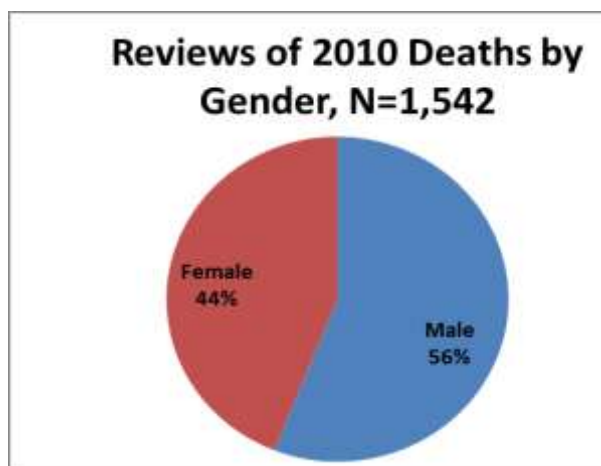
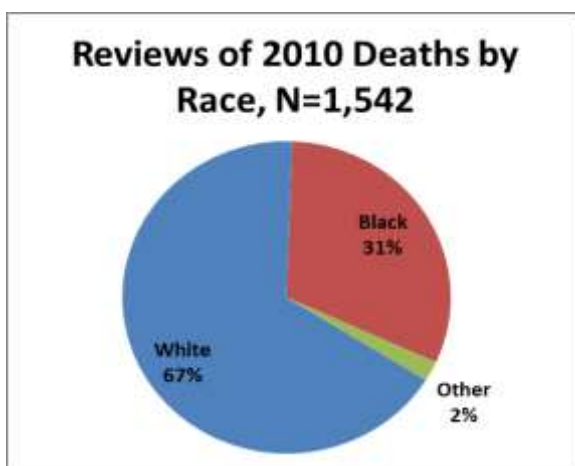
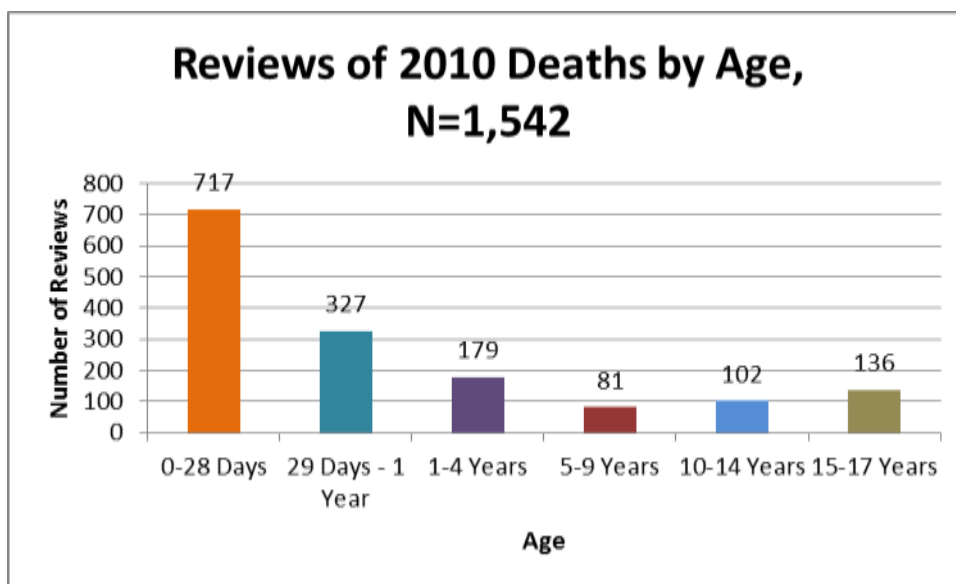
Ohio Child Mortality Rate by Year, 2006-2010



REVIEWS FOR 2010 DEATHS

Reviews by Demographic Characteristics

Local child fatality review (CFR) boards reviewed the deaths of 1,542 children who died in 2010. Sixty-eight percent (1,044) of the reviews were for children less than 1 year of age. There were greater percentages of reviews among boys (56 percent) and among black children (31 percent) relative to their representation in the general Ohio child population (51 percent for boys and 17 percent for black children, per U.S. Census data¹). Five percent (75) of all reviews were for children of Hispanic ethnicity, which closely compares to their representation in the general Ohio child population (5 percent).



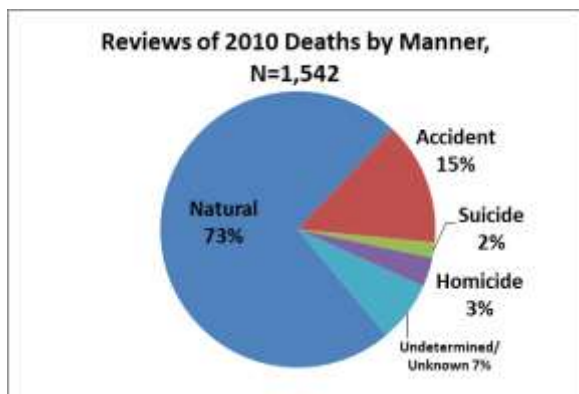
*37 cases with multiple races indicated were assigned to the minority race.

Reviews by Manner of Death

Manner of death is a classification of deaths based on the circumstances surrounding a cause of death and how the cause came about. The five manner-of-death categories on the Ohio death certificate are natural, accident, homicide, suicide and undetermined. For deaths being reviewed, CFR boards report the manner of death as indicated on the death certificate. For deaths that occurred in 2010, the 1,542 reviews were classified as follows:

- Seventy-three percent (1,128) were natural deaths.
- Fifteen percent (223) were accidents.
- Three percent (53) were homicides.
- Two percent (28) were suicides.
- Seven percent (110) were of an undetermined or unknown manner.

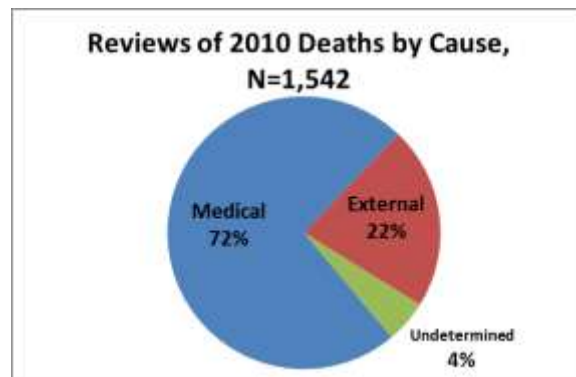
Since 2004, the proportional distribution of reviews across the manners has changed very little. See Appendix V for additional tables including manner of death by demographic information.



Reviews by Cause of Death

The CFR case report tool and data system implemented in 2005 classify causes of death by medical or external causes. Medical causes are further specified by particular disease entities. External causes are further specified by the nature of the injury. In 2010, the 1,542 reviews were classified as follows:

- Seventy-two percent (1,130) were due to medical causes.
- Twenty-two percent (334) were due to external causes.
- In 78 reviews, the cause of death could not be determined as either medical or external.



DEATHS FROM MEDICAL CAUSES

Background

Deaths from medical causes are the result of a natural process such as disease, prematurity or congenital defect. A death due to a medical cause can result from one of many serious health conditions.

Many of these conditions are not believed to be preventable in the same way accidents are preventable. But with some illnesses such as asthma, infectious diseases and screenable genetic disorders, under certain circumstances, fatalities may be prevented. Many might be prevented through better counseling during preconception and pregnancy, earlier or more consistent prenatal care and smoking cessation counseling. While some conditions cannot be prevented, early detection and prompt, appropriate treatment can often prevent deaths.

Vital Statistics

Ohio vital statistics reported 1,224 children who died of medical causes in 2010. For further information on the ICD-10 codes used to produce vital statistics data, see Appendix V.

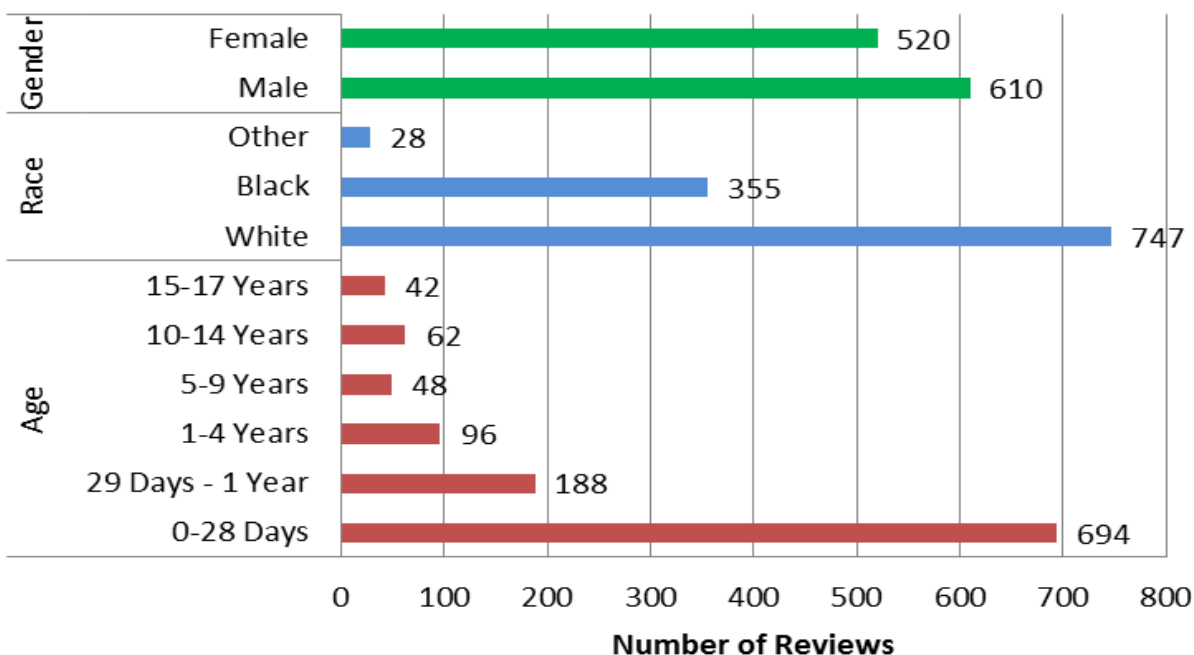
CFR Findings

Seventy-two percent (1,130) of the 1,542 reviews for 2010 deaths were from medical causes.

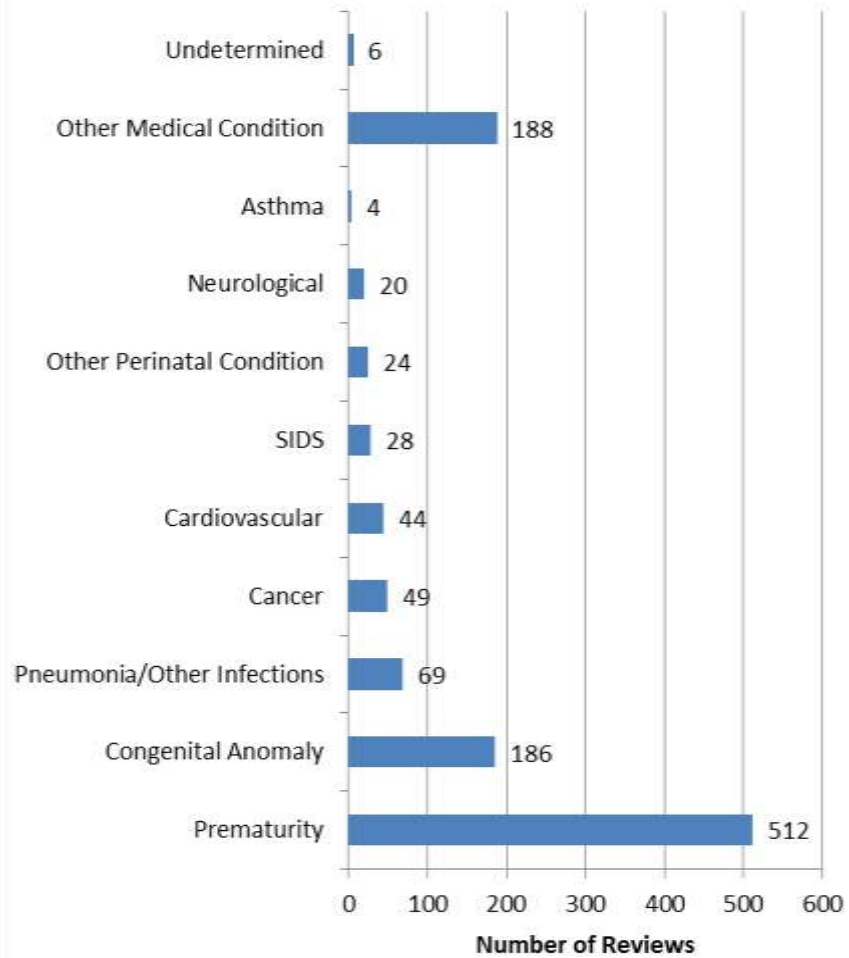
- Seventy-eight percent (882) of the 1,130 reviews for medical causes were to infants under the age of 1 year.
- Fifty-four percent (610) of the 1,130 reviews for medical causes were to male children.
- Thirty-one percent (355) of the 1,130 reviews for medical causes were to black children, which is disproportionate to their representation in the Ohio child population (17 percent).
- The CFR data system provides a list of 15 medical conditions in addition to an “Other” category for classifying deaths from medical causes more specifically. Prematurity, congenital anomalies and pneumonia/other infections were the three leading medical causes of death.
 - Forty-five percent (512) of the deaths from medical causes were due to prematurity.
 - Sixteen percent (186) were due to congenital anomalies.
 - Six percent (69) were due to pneumonia and other infectious conditions.
 - Sudden infant death syndrome (SIDS) is a medical cause of death. Two percent (28) of the deaths from medical causes were due to SIDS.
- The leading medical cause of death for children older than 1 year was cancer. Nineteen percent (48) of 248 deaths from medical causes to children older than 1 year were due to cancer.

For additional tables including all medical causes of death by demographic information, please see Appendix VII.

Reviews of 2010 Deaths from Medical Causes, N=1,130



Reviews of 2010 Deaths from Medical Causes, N=1,130



Three Leading Medical Causes of Death, by Age, Race and Gender						
	Prematurity (N=512)		Congenital Anomalies (N=186)		Pneumonia/ Other Infections (N=69)	
Age	#	%	#	%	#	%
1-28 Days	475	93	100	54	10	14
29 – 364 Days	34	7	40	22	31	45
1-4 Years	2	<1	28	15	13	19
5-9 Years	1	<1	4	2	3	4
10-14 Years	-	-	8	4	9	13
15-17 Years	-	-	6	3	3	4
Unknown	-	-	-	-	-	-
Missing	-		-	-	-	
Race	#	%	#	%	#	%
White	297	58	130	70	54	78
Black	208	41	51	27	13	19
Other	7	1	5	3	2	3
Unknown	-	-	-	-	-	-
Missing	-		-	-	-	
Gender	#	%	#	%	#	%
Male	286	56	92	49	38	55
Female	226	44	94	51	31	45
Unknown	-	-	-	-	-	-
Missing	-		-		-	
Total	512		186		69	
Percents may not total 100 due to rounding.						

DEATHS FROM EXTERNAL CAUSES

Background

External causes of death are injuries, either unintentional or intentional, resulting from acute exposure to forces that exceed a threshold of the body's tolerance, or from the absence of such essentials as heat or oxygen.²

Vital Statistics

Ohio vital statistics reported 356 children who died of external causes in 2010. For further information on the ICD-10 codes used to produce Vital Statistics data, see Appendix V.

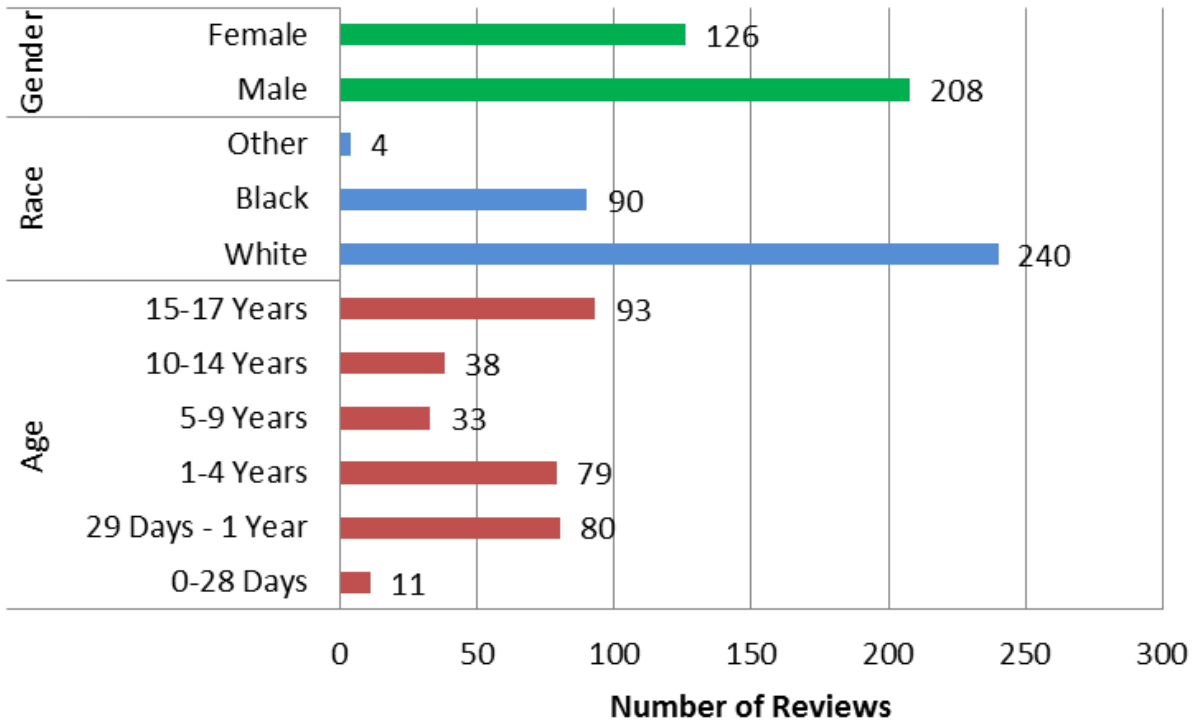
CFR Findings

Twenty-two percent (334) of the 1,542 reviews for 2010 deaths were due to external causes.

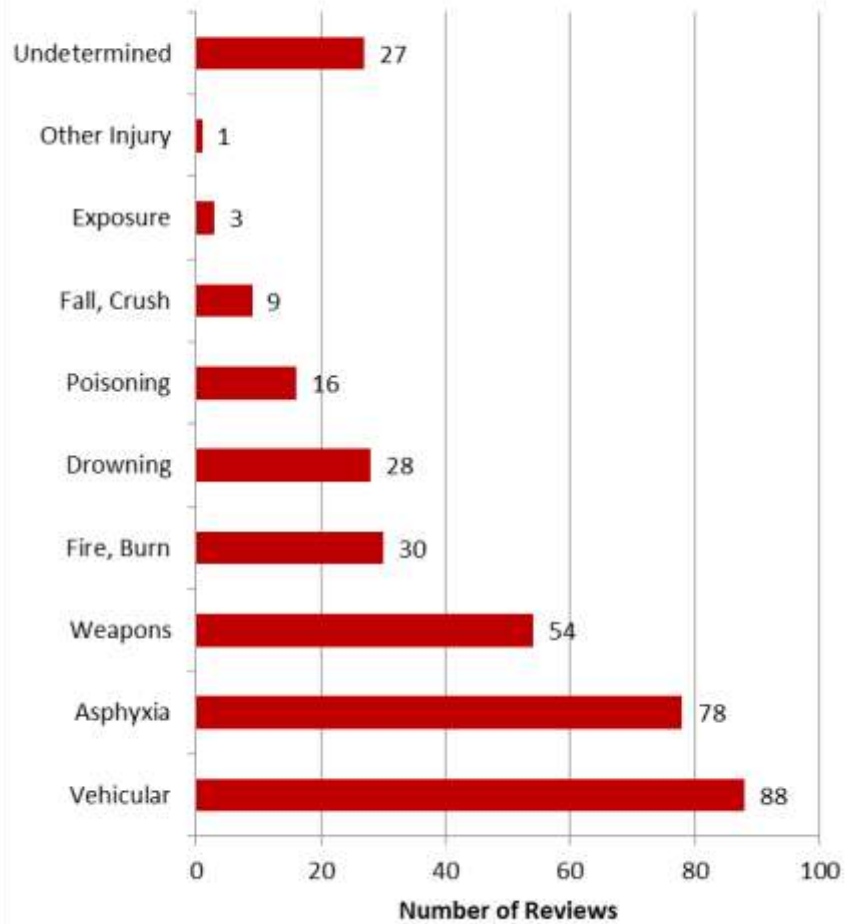
- Twenty-eight percent (93) of the 334 reviews of deaths from external causes were for children ages 15 to 17 years.
- Twenty-seven percent (90) of the 334 reviews for external causes were for black children, which is disproportionate to their representation in the Ohio child population (17 percent).
- Sixty-two percent (208) of the 334 reviews for external causes were for boys, which is disproportionate to their representation in the population (51 percent).
- Vehicular injuries, asphyxia, and weapons injuries were the three leading external causes for the 334 reviews. In 2008 and 2009, asphyxia was the leading external cause of death.
 - Twenty-six percent (88) were due to vehicular injuries.
 - Twenty-three percent (78) were due to asphyxia.
 - Sixteen percent (54) were due to weapons injuries, including the use of body parts as weapons.

For additional tables including all external causes of death by demographic information, please see Appendix VII.

Reviews of 2010 Deaths from External Causes, N=334



Reviews of 2010 Deaths from External Causes, N=334



REVIEWS BY COUNTY TYPE

Background

ODH categorizes Ohio's 88 counties into four county-type designations (rural Appalachian, rural non-Appalachian, suburban and metropolitan) based on similarities in terms of population and geography. The current county type designations originated with the Ohio Family Health Survey in 1988 and are based on the U.S. Code and U.S. Census information. See Appendix VI for a map of Ohio counties by county type.

To analyze the CFR data by county type, the computer-assigned case number was used to determine the county of review. In nearly all cases, the county of review is the county of the child's residence.

In 2010, Ohio's child population was distributed as follows:

- 12 percent rural Appalachian;
- 15 percent rural non-Appalachian;
- 18 percent suburban;
- and 55 percent metropolitan.³

According to Ohio vital statistics, the 2010 child deaths were distributed as follows:

- 15 percent rural Appalachian;
- 13 percent rural non-Appalachian;
- 14 percent suburban;
- and 58 percent metropolitan.⁴

The percentage of all deaths that were reviewed varied by county type:

- 94 percent rural Appalachian;
- 99 percent rural non-Appalachian;
- 91 percent suburban;
- and 100 percent metropolitan.

For an explanation of deaths not reviewed, please see "Limitations" on page 9 and "Overview of Ohio Child Fatality Review Program" on page 72.

It is known that many factors related to child deaths are not evenly distributed across the county types. Complex analysis is needed to determine the significance of the CFR county-type findings.

CFR Findings

The 1,542 reviews of deaths that occurred in 2010 were distributed as follows:

- Fourteen percent of reviews (218) were from rural Appalachian counties.
- Thirteen percent of reviews (206) were from rural non-Appalachian counties.
- Thirteen percent of reviews (206) were from suburban counties, which is disproportionately lower than the proportion of children living in suburban counties (18 percent).
- Sixty percent of reviews (912) were from metropolitan counties, which is disproportionately higher than the proportion of children living in metropolitan counties (55 percent).

Manner of Death by County Type

- Sixty-one percent (689) of natural deaths reviewed were from metropolitan counties, which is disproportionately higher than the proportion of children living in metropolitan counties (55 percent).
- Twenty-five percent (56) of reviews for accidental deaths were from rural Appalachian, which is disproportionately higher than the proportion of children living in those counties (12 percent).

- Twenty-eight percent (8) of suicide deaths reviewed were from suburban counties, which is disproportionately higher than the proportion of children living in those counties (18 percent).
- The percentage of reviews for homicide deaths was higher in metropolitan (67 percent) and in rural Appalachian (19 percent) counties than the proportion of children living in those counties (55 percent and 12 percent).

Manner of Death by County Type, N=1,542									
	Rural Appalachian		Rural Non-Appalachian		Suburban		Metro-politan		Total
	#	%	#	%	#	%	#	%	#
Natural	139	12	154	14	146	13	689	61	1,128
Accident	56	25	35	16	40	18	92	41	223
Suicide	3	11	3	11	8	29	14	50	28
Homicide	10	19	5	9	3	6	36	67	54
Undetermined/Unknown	10	9	9	8	9	8	82	75	110
Total	218	14	206	13	206	13	912	59	1,542

Percents may not total 100 due to rounding.

Medical Causes of Death by County Type

- Sixty-one percent (687) of the reviews of deaths from medical causes were from metropolitan counties, which is disproportionately higher than the proportion of children living in metropolitan counties (55 percent). Reviews of deaths due to prematurity were particularly over-represented in metropolitan counties. Seventy-two percent (368) of deaths due to prematurity were from metropolitan counties. In contrast, only 11 percent (54) of the deaths due to prematurity were from suburban counties, which is disproportionately less than the proportion of children living in suburban counties (18 percent).

Medical Causes of Death by County Type, N=1,130									
	Rural Appalachian		Rural Non-Appalachian		Suburban		Metro-politan		Total
	#	%	#	%	#	%	#	%	#
Prematurity	46	9	44	9	54	11	368	72	512
Congenital Anomaly	28	15	28	15	23	12	107	58	186
Pneumonia/Other Infection	9	13	13	19	12	17	35	51	69
All Other Medical Causes	60	17	68	19	58	16	177	49	363
Total	143	13	153	14	147	13	687	61	1,130

Percents may not total 100 due to rounding.

External Causes of Death by County Type

- Twenty-eight percent (25) of vehicular deaths were from rural Appalachian counties, which is disproportionately higher than the proportion of children living in rural Appalachian counties (12 percent).
- Fifty-three percent (16) of fire and burn deaths reviewed were from rural Appalachian counties, which is disproportionately higher than the proportion of children living in those counties (12 percent).

External Causes of Death by County Type, N=334									
	Rural Appalachian		Rural Non-Appalachian		Suburban		Metro-politan		Total
	#	%	#	%	#	%	#	%	#
Vehicular	25	28	18	21	13	15	32	36	88
Asphyxia	11	14	6	8	18	23	43	55	78
Fire/Burn	16	53	4	13	3	10	7	23	30
All Other External Causes	19	14	17	12	19	14	83	60	138
Total	71	21	45	14	53	16	165	49	334

Percents may not total 100 due to rounding.

Reviews of Special Interest

The distribution of the 148 reviews for sleep-related deaths varies from the population distribution by county type.

- Seven percent of reviews (10) were from rural Appalachian counties.
- Seven percent of reviews (11) were from rural non-Appalachian counties.
- Nine percent of reviews (13) were from suburban counties.
- Seventy-seven percent of reviews (114) were from metropolitan counties.

The distribution of the 24 reviews for child abuse and neglect deaths also varies from the population distribution by county type. Fifty-eight percent (14) of the reviews were from metropolitan counties.

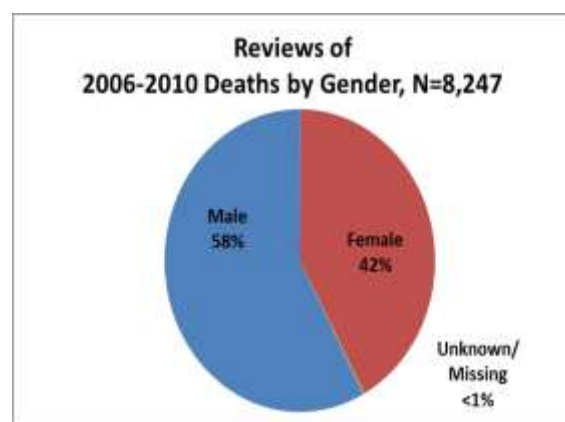
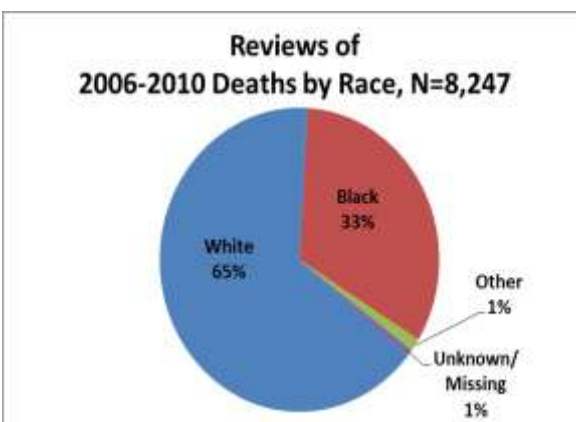
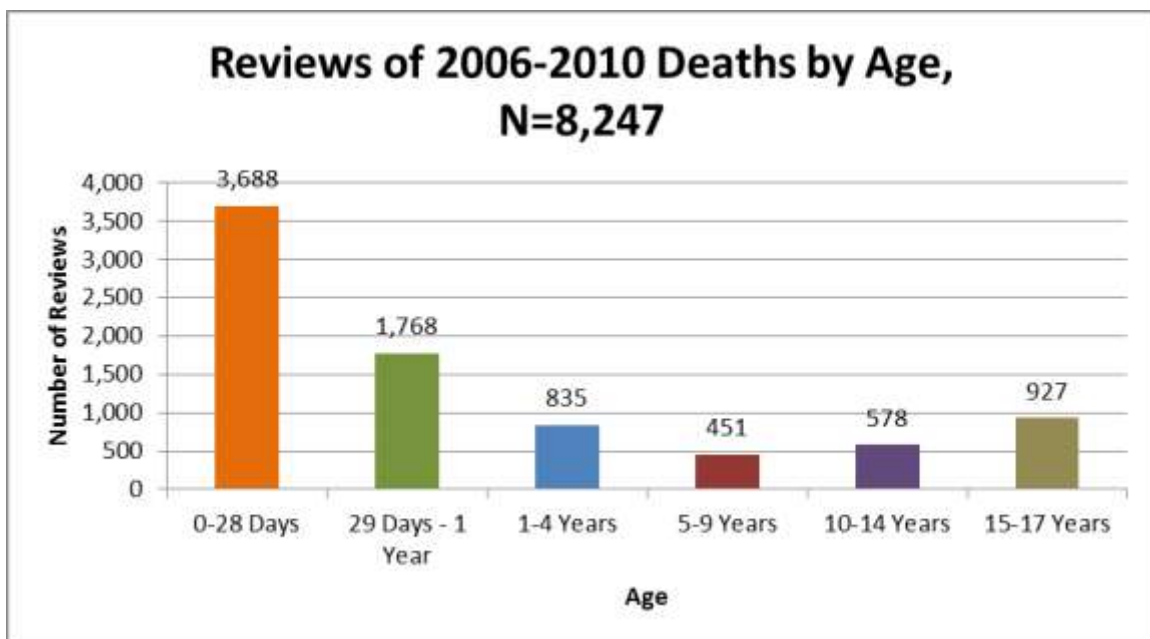
For more data regarding reviews of 2010 deaths, see Appendix VII.

REVIEWS FOR 2006-2010 DEATHS

SUMMARY OF REVIEWS

To gain more understanding of the factors related to child death, data have been analyzed for the five-year year-of-death period 2006-2010. For the five-year period, Ohio CFR boards have completed 8,247 reviews, which represent 96 percent of the 8,554 child deaths reported by Ohio vital statistics.

- Sixty-six percent (5,456) of the reviews were for children less than 1 year of age.
- There were greater percentages of reviews among boys (58 percent) and among black children (33 percent) relative to their representation in the general Ohio population (51 percent for boys and 17 percent for black children, per U.S. Census data⁵).
- Five percent (381) of all reviews were for children of Hispanic ethnicity.

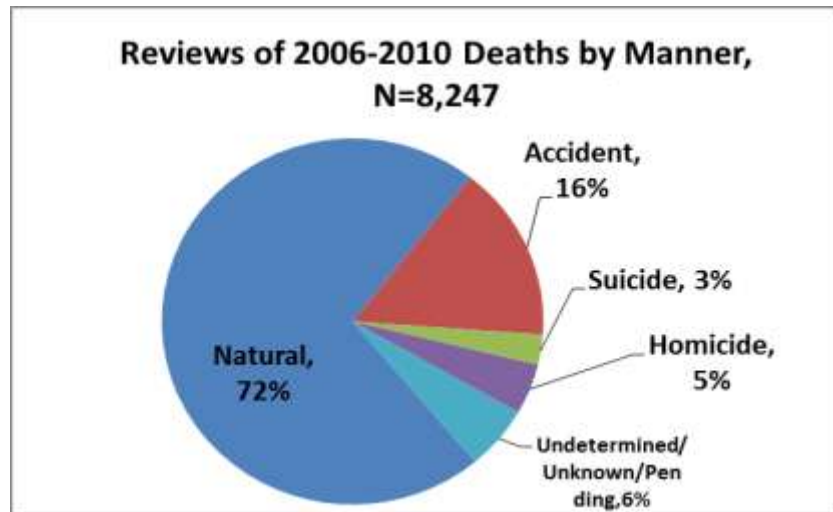


* 173 cases with multiple races were assigned to the minority race.

Reviews by Manner of Death

For the five-year period 2006-2010, the 8,247 reviews were classified as follows:

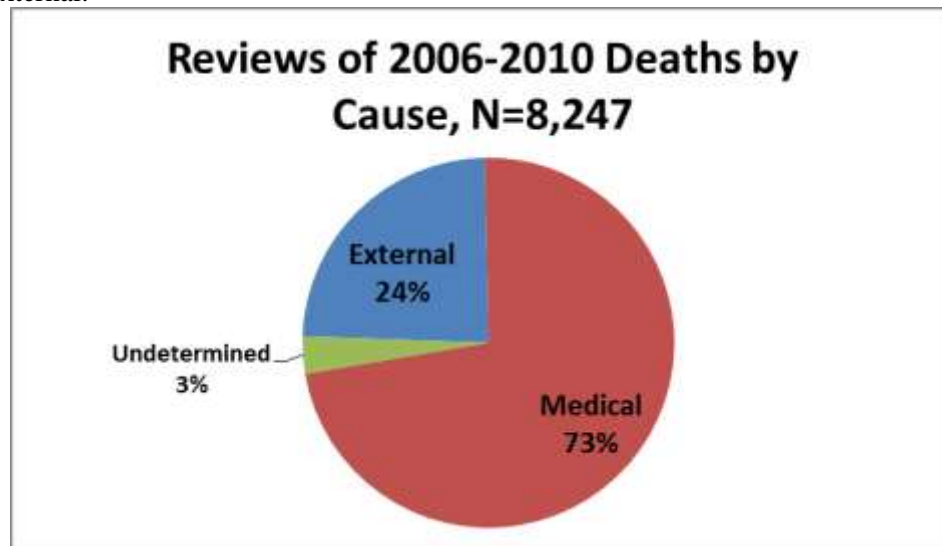
- Seventy-two percent (5,912) were natural deaths.
- Sixteen percent (1,284) were accidents.
- Five percent (367) were homicides.
- Three percent (220) were suicides.
- Six percent (464) were of an undetermined or unknown manner.



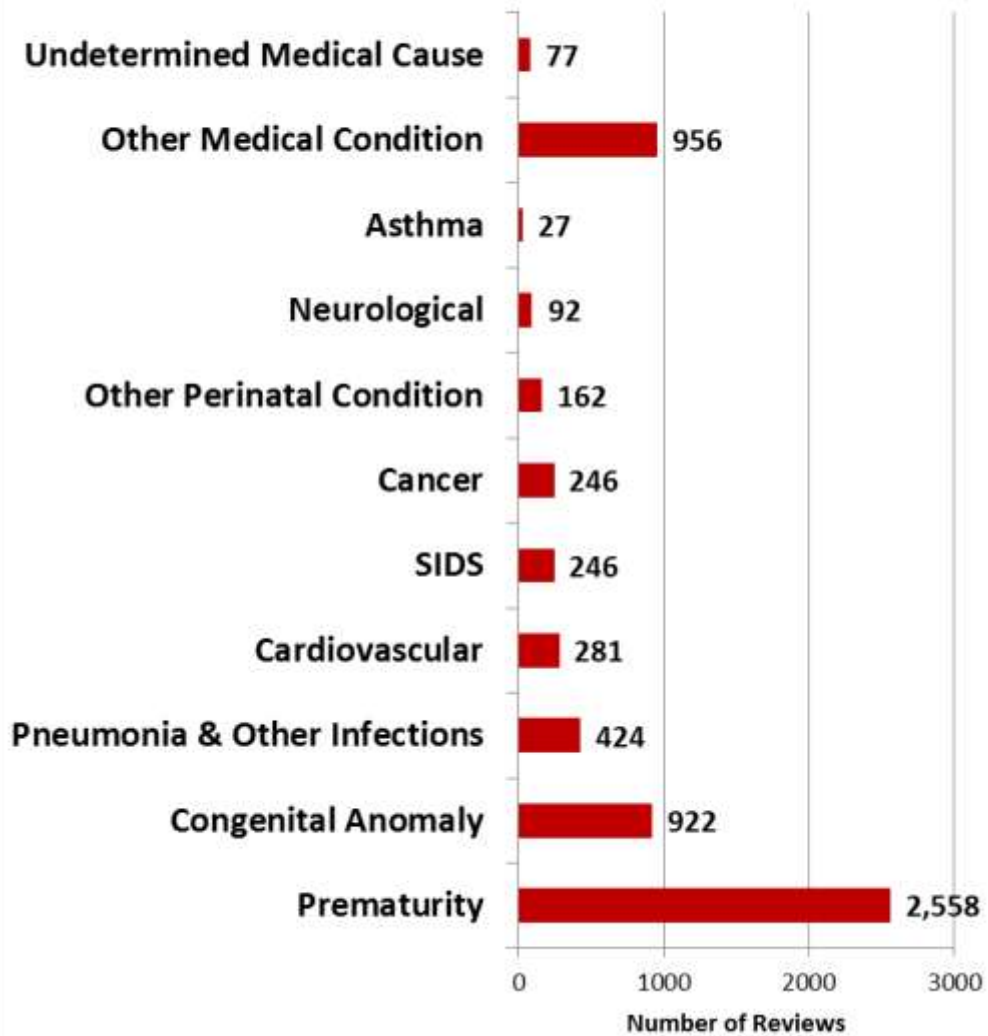
Reviews by Cause of Death

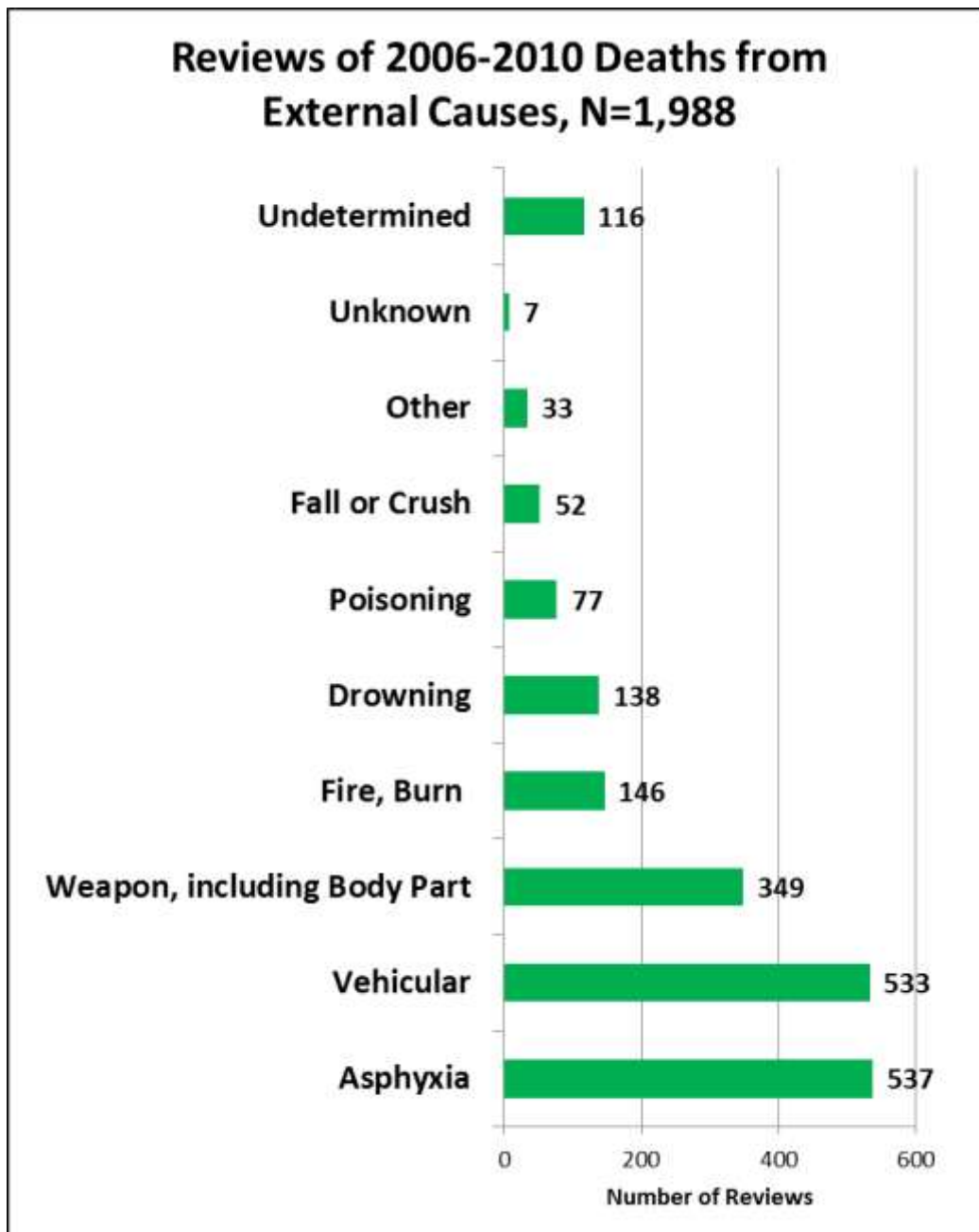
The CFR case report tool and data system implemented in 2005 classify causes of death by medical or external causes. Medical causes are further specified by particular disease entities. External causes are further specified by the nature of the injury. For the five-year period 2005-2009, the 8,247 reviews were classified as follows:

- Seventy-three percent (5,991) were due to medical causes.
- Twenty-four percent (1,988) were due to external causes.
- For three percent (268) of the cases, the cause of death could not be determined as either medical or external.



Reviews of 2006-2010 Deaths from Medical Causes, N=5,991



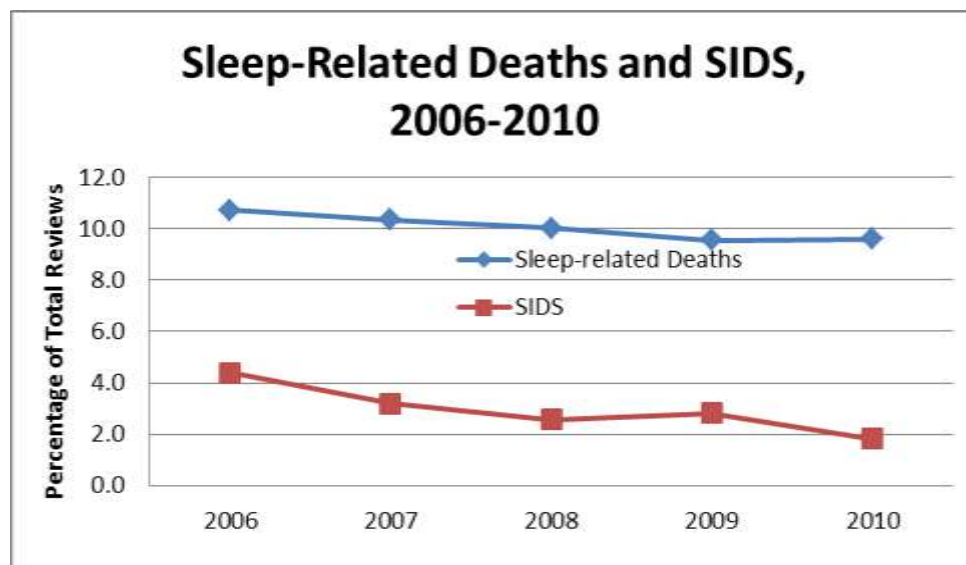


See Appendix VII for additional review information regarding demographics for 2006-2010 deaths.

TRENDS OVER FIVE YEARS

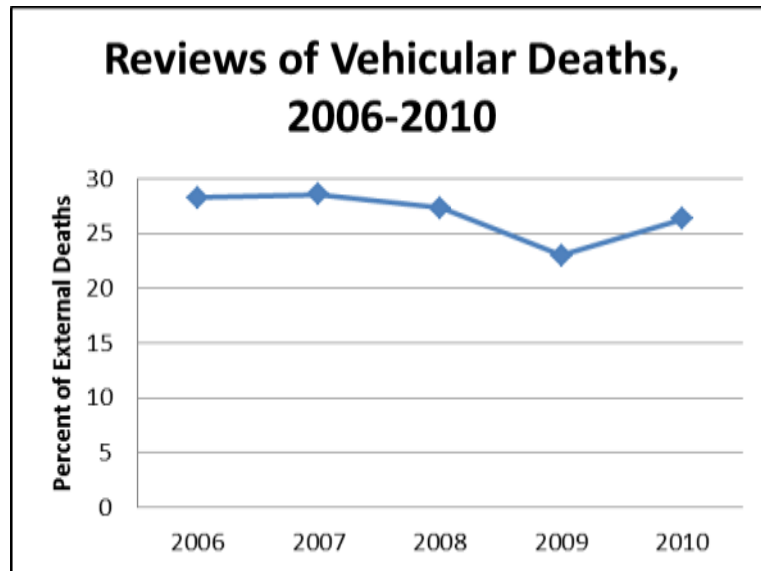
For the five-year period 2006-2010, the proportional distribution of reviews across many factors, such as manner of death, age, race, gender and preventability, has changed very little.

- Seventy-two percent (5,912) of the reviews were natural manner of death. The percentage changed little over the period, from a high of 73 percent in 2007 to a low of 70 percent in 2008.
- Sixty-six percent (5,456) of the reviews were for infants less than 1 year old. The percentage has increased slightly each year, from 65 percent in 2006 to 68 percent in 2010. The increase is likely due to improved processes to identify and review these deaths.
- Fifty-eight percent (4,770) of the reviews were for boys. The percentage changed little over the period, from a high of 59 percent in 2006 and 2007 to a low of 56 percent in 2010.
- Thirty-three percent (2,714) of the reviews were for black children. The percentage has changed little over the period, from 33 percent in 2006 to 35 percent in 2008 and 31 percent in 2010.
- Twenty-three percent of the deaths reviewed were deemed probably preventable. The percentage changed little over the period, from a high of 24 percent in 2006 and 2008 to a low of 22 percent in 2007, 2009 and 2010.
- Reviews for sleep-related infant deaths account for 10 percent (830) of all reviews. The percentage was 11 in 2006 and remained at 10 for the rest of the five-year period.

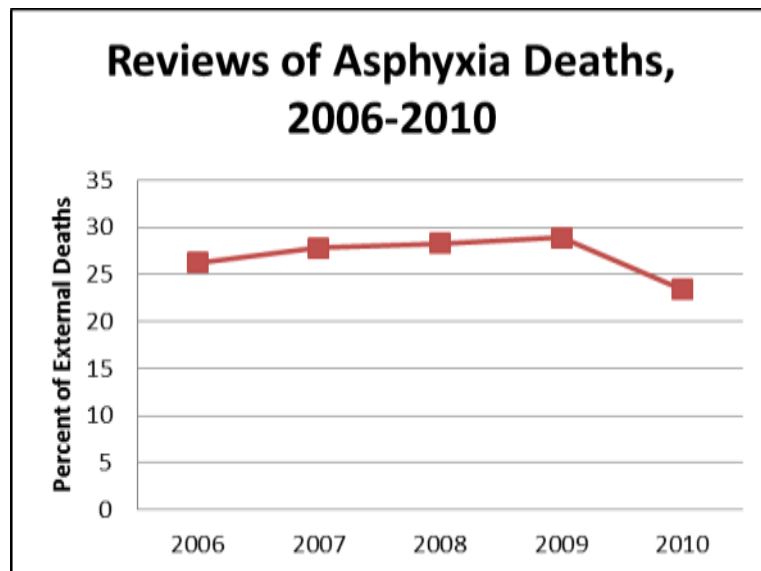


Over the five-year period, changes were noted in the percentage of reviews for some groups of death, particularly vehicular injuries and asphyxia.

- Seven percent (533) of all reviews were due to vehicular crashes. This is 27 percent of the 1,988 reviews for deaths from external causes. The percentage of deaths from external causes due to vehicular crashes has decreased from 28 percent in 2006 to 23 percent in 2009, before increasing to 26 percent in 2010. The overall five year trend is a decrease in the percentage of deaths due to vehicular crashes. White boys ages 15 – 17 years accounted for 30 percent (158) of all vehicular deaths.



- Seven percent (537) of all reviews were due to asphyxia. This is 27 percent of the 1,988 reviews for deaths from external causes. The percentage of deaths from external causes due to asphyxia increased from 26 percent in 2006 to 29 percent in 2009, before decreasing to 23 percent in 2010. Each year, the largest numbers of asphyxia deaths are suffocation deaths to infants less than 1 year old. Forty-eight percent (260) of the asphyxia deaths were sleep-related infant deaths.



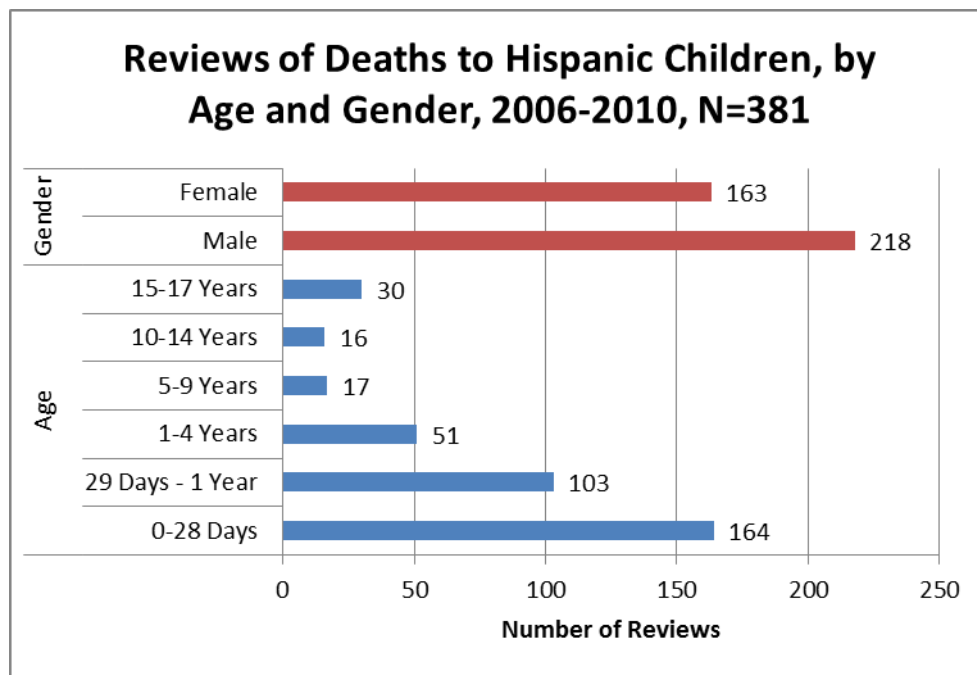
The comprehensive nature of the case report tool and the functionality of the data system have allowed more complete analysis for all groups of deaths. The following sections of this report offer in-depth information about reviews of deaths to Hispanic children, poisoning deaths, deaths by special circumstances, such as suicides, homicides and child abuse deaths, and by age group. Each section contains detailed data regarding the circumstances and factors related to child deaths.

DEATHS TO HISPANIC CHILDREN, ALL AGES

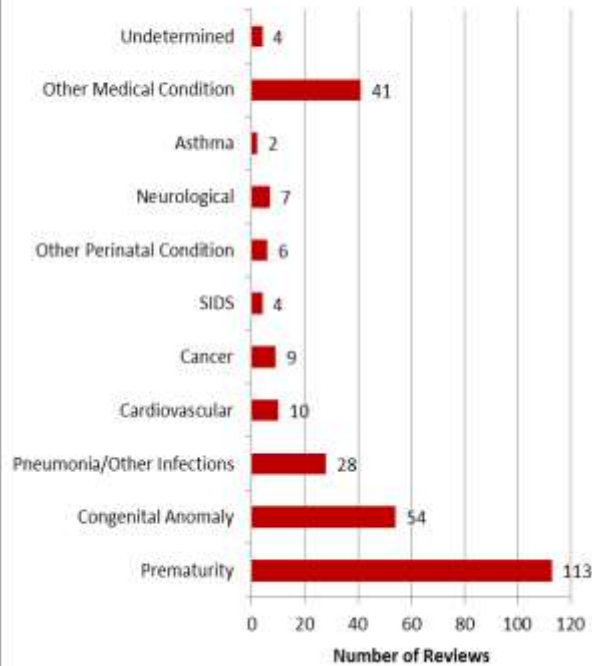
The CFR case report tool and data system record Hispanic ethnicity as a variable separate from race. A child of any race may be of Hispanic ethnicity.

For the five-year period 2006-2010, 381 of the 8,247 total reviews were for children of Hispanic ethnicity. During the five-year period, the population of Hispanic children living in Ohio increased from 3 percent of the total child population in 2006 to 5 percent in 2010.⁶ The increase is reflected in the percentage of all reviews for Hispanic children which increased from 4 percent in 2006 to 5 percent in 2010.

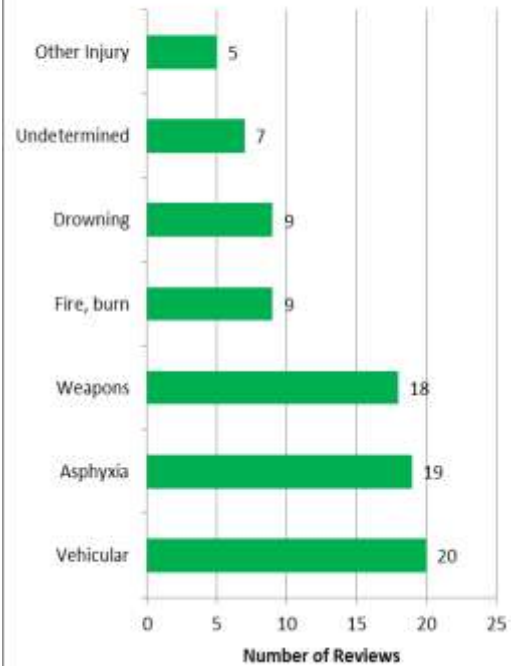
- Seventy percent (267) of the reviews for Hispanic children were for infants.
- Prematurity and congenital anomalies were the leading medical causes of death, accounting for 44 percent (167) of the reviews for Hispanic children.
- The leading external cause of death was vehicular crashes (20), followed by asphyxia (19) and weapons (18).
- Fifteen percent (41) of the reviews were for infant sleep-related deaths.



Reviews of Deaths to Hispanic Children by Medical Causes, 2006-2010, N=278



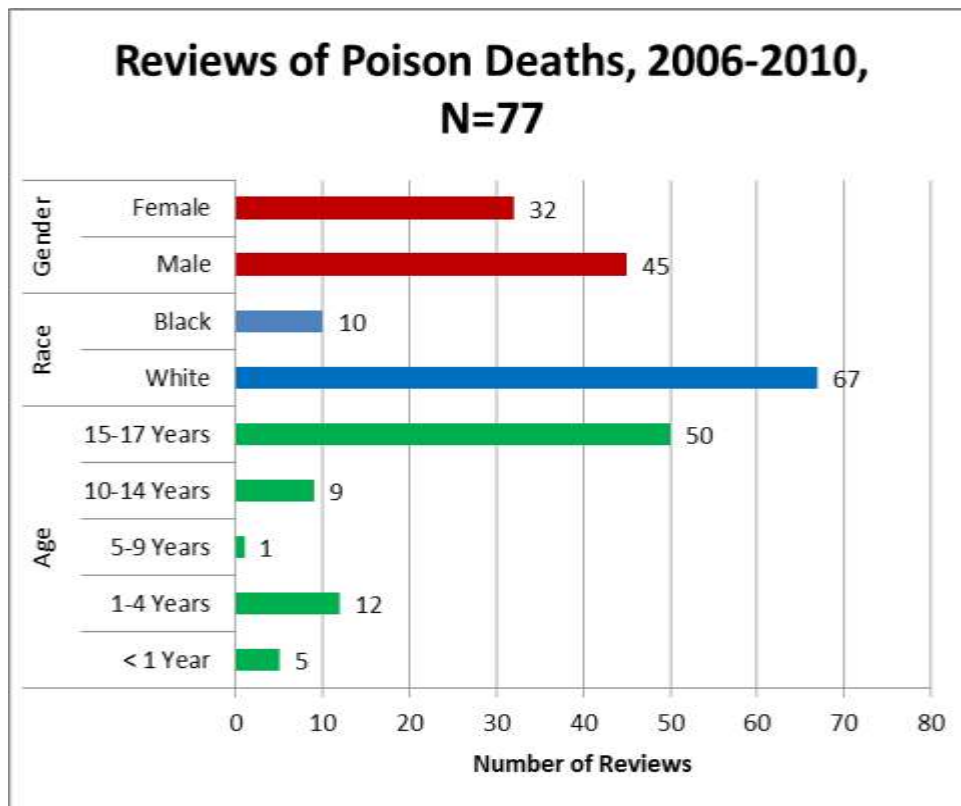
Reviews of Deaths to Hispanic Children by External Causes, 2006-2010, N=87



POISONING DEATHS, ALL AGES

Combining data from five years allows more analysis for deaths due to poison, where in-depth analysis is limited by small numbers in a single year.

- Local CFR boards reviewed 77 poisoning deaths for 2006-2010. These deaths represent four percent of the 1,988 deaths from external causes for the period. Seventy-one percent (55) of the deaths were of accidental manner. Twelve percent (9) were suicides.
 - Sixty-four percent (50) of the deaths occurred to 15 to 17 year olds.
 - The poison agents for this age group included prescription and over-the-counter medications, methadone, street drugs, alcohol and carbon monoxide.
 - Twenty-three percent (18) of the poisoning deaths occurred to children younger than 10 years.
 - The poison agents for this age group included prescription and over-the-counter medications, methadone, and street drugs. None were poisoned by household cleaners or plants.



Prescription Drug Abuse, Misuse and Overdose in Ohio

From 1999 to 2010, Ohio's death rate due to unintentional drug poisonings increased 372 percent, and the increase in deaths has been driven largely by prescription drug overdoses. In an effort to curb prescription drug abuse and diversion in Ohio, House Bill 93 was passed unanimously in the Ohio legislature and signed into law by Governor John Kasich in May, 2011. This bill provides the state medical and pharmacy boards and law enforcement agencies with additional tools to shut down pill mills, and investigate and prosecute those providers that are illegally and unethically prescribing and dispensing medication. Since the implementation of HB 93, Ohio law enforcement has been able to shut down more than a dozen pill mills operating in Scioto County alone.

The Ohio Department of Alcohol and Drug Addiction Services, the Ohio Attorney General's Office and ODH are actively engaged in addressing this problem through funding community coalitions, promoting public awareness campaigns, implementing drug disposal events, funding prevention programs in schools, colleges and work sites, and revising and expanding criminal justice and treatment programs to respond appropriately to increasing needs related to prescription drug abuse.

Ohio is making great progress in its efforts to curb prescription drug abuse, misuse and overdose. Through these endeavors, the state hopes to promote the health and safety of parents, which will ultimately promote the well-being of Ohio's children. For additional information and resources about this topic and details on program activities are available on the ODH Violence and Injury Prevention Program Drug Overdose Web site at <http://www.healthyohioprogam.org/vipp/drug/dpoison.aspx> .

HOMICIDE, ALL AGES

Background

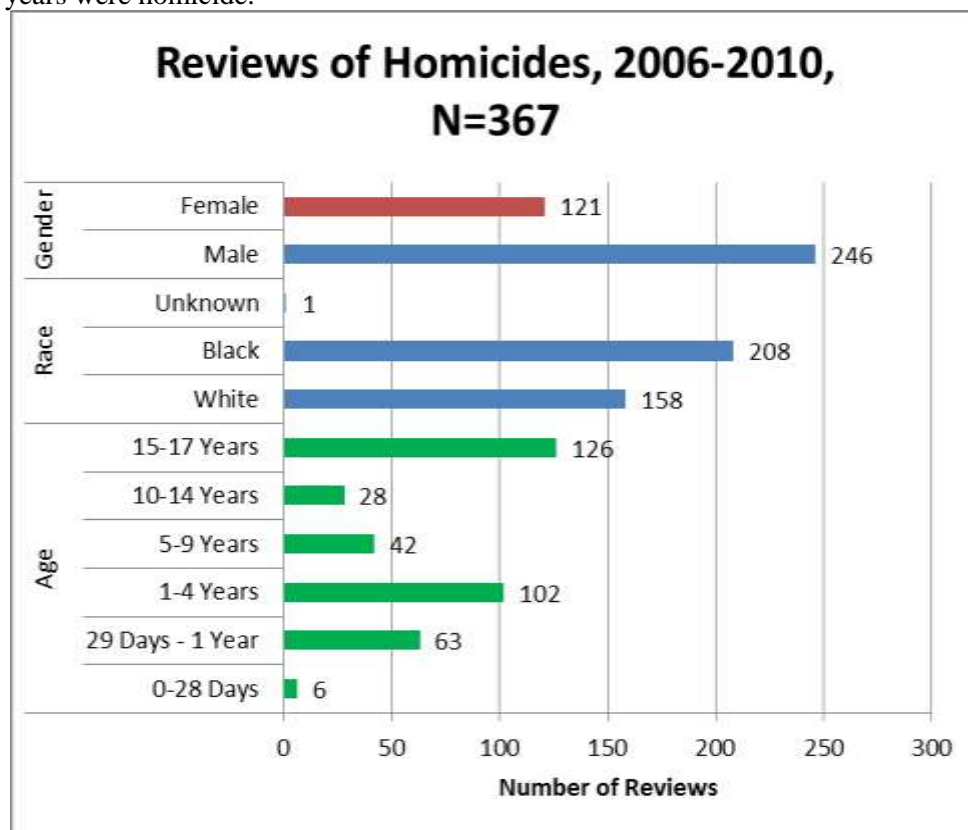
The CFR case report tool and data system capture information about homicide as a manner of death and as an act of commission, regardless of the cause of death. Because homicide has unique risk factors and prevention strategies, homicide reviews from all causes of death have been combined for further analysis as a group.

According to the National Center for Injury Prevention and Control, in 2009 homicide was the third-leading cause of death for young people ages 10 to 17 years and accounted for 12 percent of the deaths in this age group. Homicide was the leading manner of death for black children ages 10 to 17 years, accounting for 27 percent.⁷

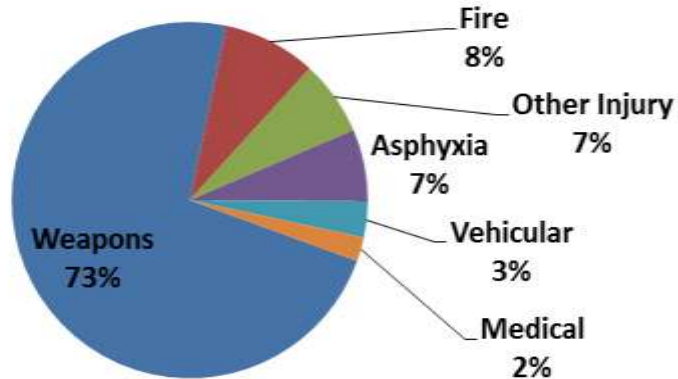
CFR Findings

For the five-year period 2006-2010, local CFR boards reviewed 367 deaths to children resulting from homicide. Homicides represent five percent of the total reviews and fourteen percent of all reviews for children ages 15 to 17 years. The percentage of all reviews due to homicide was 4 percent in 2008 and 2009, and 5 percent in 2006, 2007 and 2010.

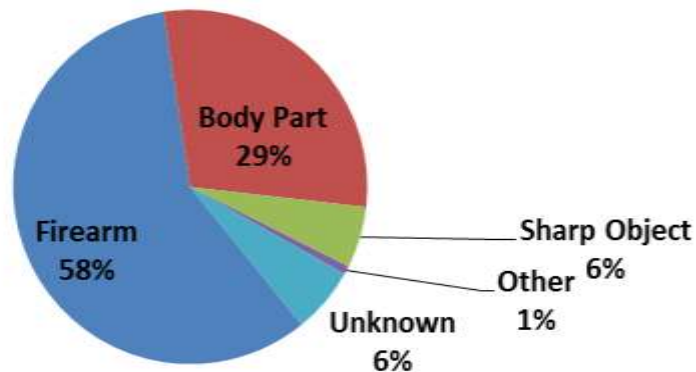
- Homicide deaths to boys (67 percent) were disproportionately higher than their representation in the general population (51 percent).
- The proportion of homicide deaths to black children (57 percent) was more than 3 times their representation in the general population (17 percent).
- Of the 175 deaths from all causes to black boys ages 15 to 17 years, 53 percent (92) were homicides, while only 3 percent (14) of the 451 deaths from all causes to white boys ages 15 to 17 years were homicide.



Homicides by Cause of Death, 2006-2010, N=367



Homicides by Weapon Type, 2006-2010, N=267



For a better understanding of the factors related to homicides, the 367 reviews were divided by age: 213 reviews for children 0 to 9 years old, and 154 reviews for children 10 to 17 years old.

- Seventy-three percent (267) of homicide deaths were caused by a weapon, including body parts.
 - Eighty-one percent (125) of the homicides to children 10 to 17 years old involved firearms as the weapon. Fifteen percent (31) of the homicides to children 0 to 9 years old involved firearms.
 - Thirty-six percent (77) of the homicides to children 0 to 9 years old involved the use of body parts as weapons.
- The perpetrator was more often a family member for children less than 10.
 - For children less than 10 years old, the perpetrator was a parent, stepparent, parent's partner or other relative in 74 percent (157) of reviews.
 - For children ages 10 to 17, the most frequently reported perpetrator was an acquaintance or friend (33 percent). There were 12 children ages 10 to 17 killed by a gang member (8 percent).

- In 49 percent (180) of the homicide reviews, the place of incident was the child's home.
 - For children less than 10 years old, the place of incident was the child's home in 74 percent of reviews.
 - For children ages 10 to 17 years, the commonly reported places of incident were roadways (19 percent), sidewalks (18 percent), child's home (23 percent), and friend's home (23 percent).

Reviews of Homicides by Perpetrator, 2006-2010, N=367		
Person Causing Death	#	%
Biological Parent	112	31
Stepparent	6	<2
Adoptive/Foster Parent	3	<1
Parent's Partner	43	12
Other Relative	24	7
Acquaintance	44	12
Friend/Boyfriend/Girlfriend	26	7
Gang Member	12	4
Stranger	31	9
Unknown	42	12
Other	13	4
Missing	11	
Total	367	100

Percents may not total 100 due to rounding.

Reviews of Homicides by Place of Incident, 2006-2010, N=367		
Place of Incident	#	%
Home	180	46
Road	33	9
Friend's Home	34	10
Relative's Home	19	8
Sidewalk/Driveway/Parking Lot	46	11
Other	38	12
Unknown	17	4
Missing	0	
Total	367	100

Percents may not total 100 due to rounding.

SUICIDE, ALL AGES

Background

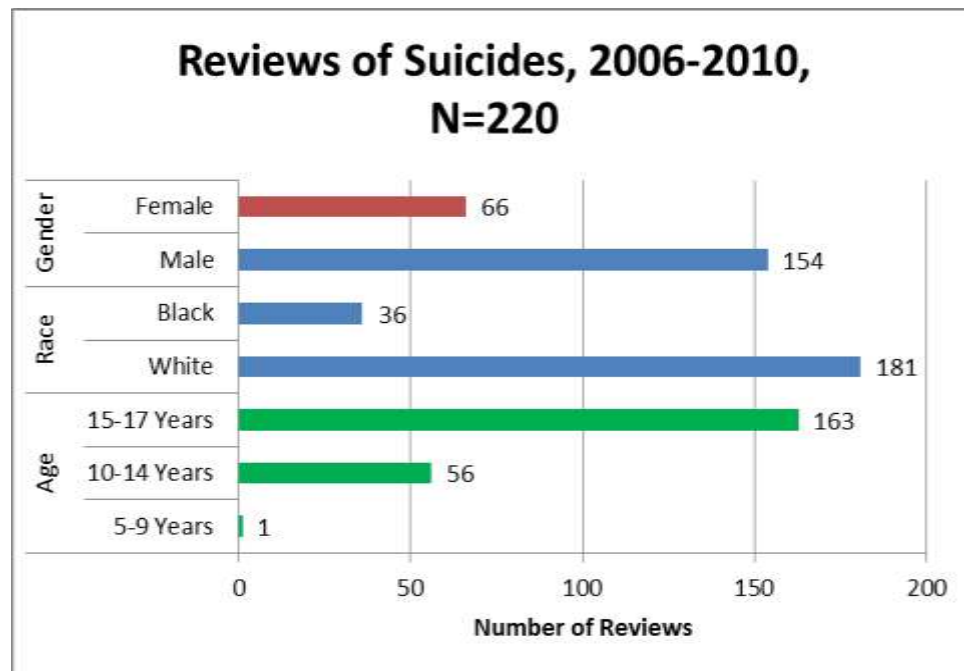
Suicide is death caused by self-directed injurious behavior with intent to die.⁸ The CFR case report tool and data system capture information about suicide as a manner of death and as an act of commission, regardless of the cause of death. Because suicide has unique risk factors and prevention strategies, suicide deaths from all causes have been combined for further analysis.

According to the National Center for Injury Prevention and Control, suicide accounted for 13 percent of the deaths for young people ages 10 to 17 years nationally in 2009.⁹

CFR Findings

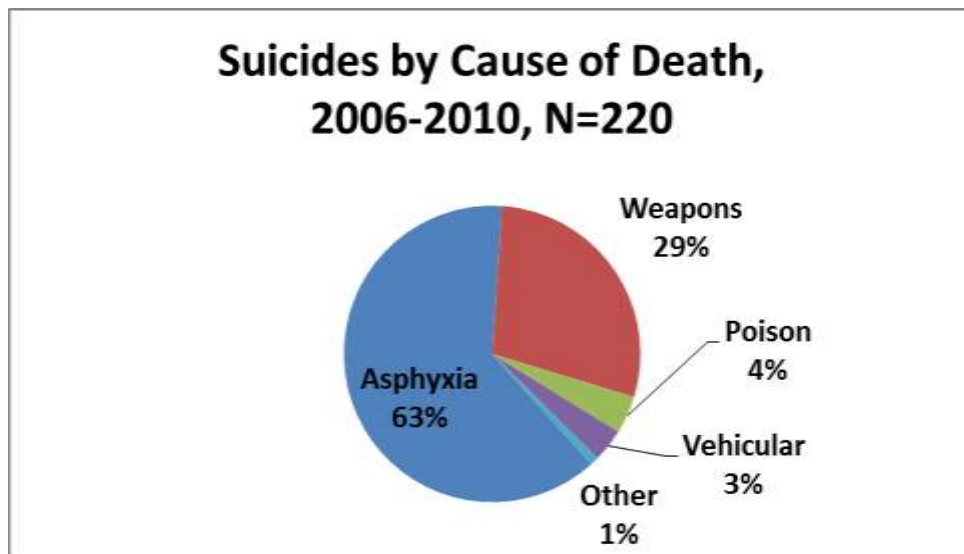
For the five-year period 2006-2010, local CFR boards reviewed 220 deaths to children from suicide. These represent three percent of the total 8,247 reviews and 15 percent of all reviews for children ages 10-17. The largest number of suicides occurred in 2008 (58) and the fewest occurred in 2010 (28).

- Suicide deaths were disproportionately higher among boys (82 percent) than their representation in the general population (51 percent).
- Seventy-four percent (163) of the suicide deaths reviewed were to children ages 15 to 17.



- Sixty-three percent (138) of the suicide deaths were caused by asphyxiation and 29 percent (63) were caused by a weapon.
- The most frequently indicated factors that might have contributed to the child's despondency included family problems, such as divorce and arguments with parents; arguments and break-ups with friends; school issues including failure; drug and alcohol use; victimization by bullying; and other personal crises.
- Twenty percent (44) of reviews for suicide deaths indicated the child had a history of child abuse or neglect. Fourteen had an open child protective services case at the time of the incident.
- Twenty-eight percent (62) of the suicide victims were receiving mental health services at the time

of the incident. Nineteen percent (42) had been prescribed medications for mental health conditions.



Percentages do not total to 100 due to rounding.

CHILD ABUSE AND NEGLECT, ALL AGES

Background

Child abuse and neglect is any act or failure to act on the part of a parent or caretaker that results in death, serious physical or emotional harm, sexual abuse or exploitation; or that presents an imminent risk of serious harm. Physical abuse includes punching, beating, shaking, kicking, biting, burning or otherwise harming a child and often is the result of excessive discipline or physical punishment that is inappropriate for the child's age. Head injuries and internal abdominal injuries are the most frequent causes of abuse fatalities. Neglect is the failure of parents or caregivers to provide for the basic needs of their children, including food, clothing, shelter, supervision and medical care. Deaths from neglect are attributed to malnutrition, failure to thrive, infections and accidents resulting from unsafe environments and lack of supervision.

Some deaths from child abuse and neglect are the result of long-term patterns of maltreatment, while many other deaths result from a single incident. According to Prevent Child Abuse America, there are several factors that put parents at greater risk of abusing a child: social isolation, difficulty dealing with anger and stress, financial hardship, mental health issues, apparent disinterest in caring for the health and safety of their child and alcohol or drug abuse.¹⁰

Many child abuse and neglect deaths are coded on the official death certificate as other causes of death, particularly unintentional injuries or natural deaths. In a study of 51 deaths identified as child abuse and neglect by local Ohio Child Fatality Review (CFR) boards in 2003 and 2004, 31 different causes of death were recorded on the death certificates. The causes included both medical and external injuries, both intentional and unintentional.¹¹

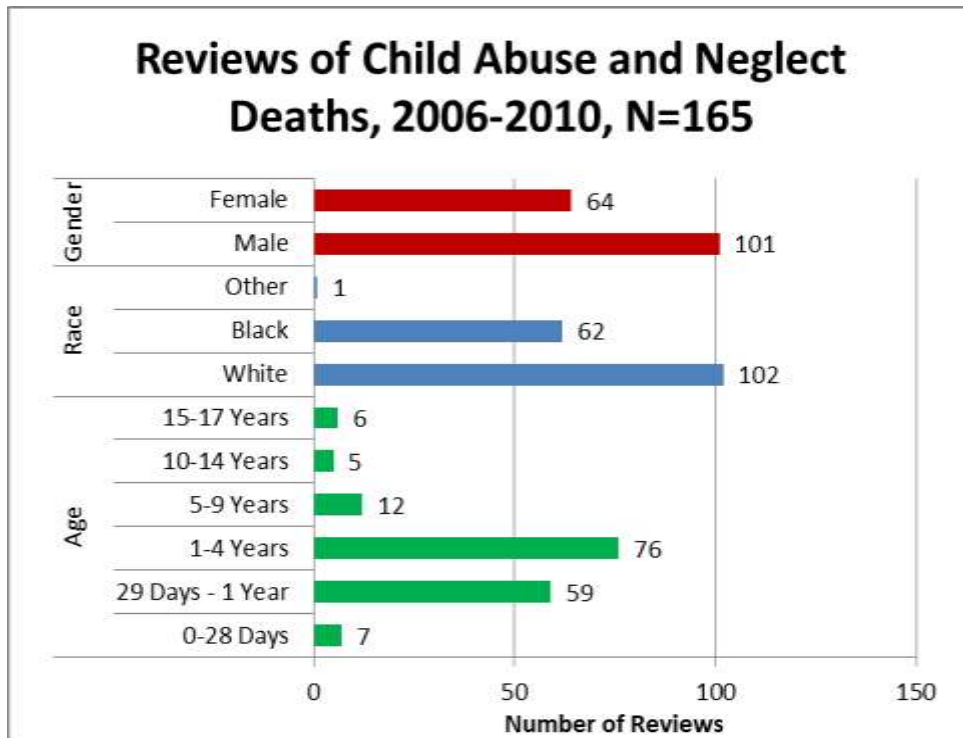
Best estimates are that any single source of child abuse fatality data, such as death certificates, exposes just the tip of the iceberg. The interagency, multidisciplinary approach of the CFR process may be the best way to recognize and assess the number and the circumstances of child maltreatment fatalities. Even the CFR process is likely to under count child abuse fatalities due to delays in reviews caused by lengthy investigation and prosecution procedures.

The CFR case report tool and data system capture information about child abuse and neglect deaths as acts of omission or commission, regardless of the cause of death. The tool collects details about the circumstances and persons responsible for the death.

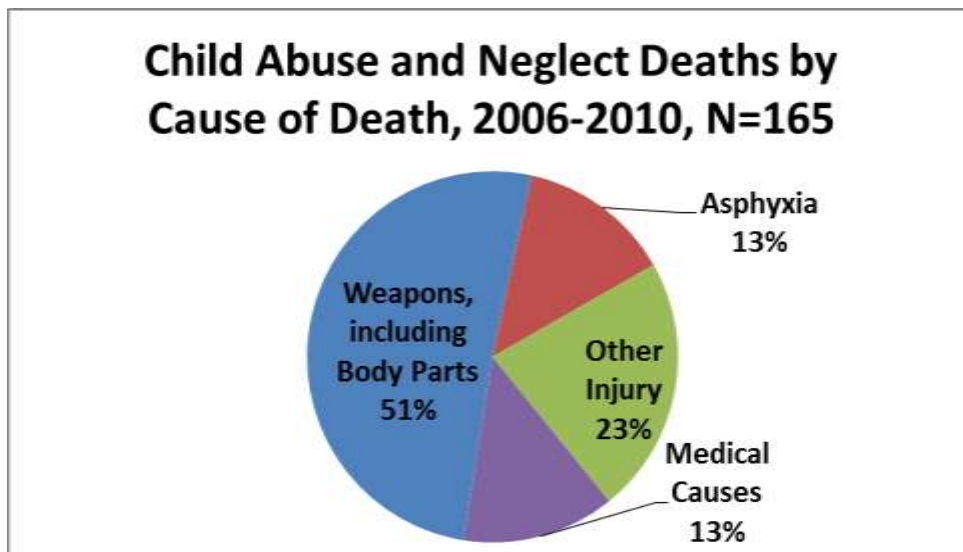
CFR Findings

For the five-year period 2006-2010, local CFR boards reviewed 165 deaths from child abuse and neglect. These represent two percent of all 8,247 deaths reviewed. The percentage of reviews of child abuse and neglect deaths has not changed during the five-year period.

- Seventy-four percent (122) of the 165 reviews indicated that physical abuse caused or contributed to the death, while 36 percent (49) reviews indicated that neglect caused or contributed to the death. Six reviews indicated both abuse and neglect caused or contributed to the death.
- Eighty-six percent (142) of child abuse and neglect deaths occurred among children younger than 5 years old.
- A greater percentage of child abuse and neglect deaths occurred to black children (38 percent) relative to their representation in the general population (17 percent).



- The 165 deaths identified as child abuse and neglect were the result of several kinds of injuries.
 - Fifty-one percent (84) were the result of weapons including use of a body part as a weapon.
 - Other causes of death included asphyxiation, poison, drowning, fire/burn and medical causes.
- The majority of the 165 child abuse and neglect deaths reviewed were violent deaths, with 122 resulting from physical abuse, including 35 indicating the child had been shaken.



- Thirty-eight percent (62) of the 165 child abuse and neglect deaths reviewed indicated the child had a prior history of child abuse and neglect, and 22 percent (37) had an open child protective services case at the time of the incident.

- Fifty-nine percent (97) of the reviews indicated the person causing the death was a biological parent. The parent's partner was cited in 21 percent (34) of the reviews.
- For the 148 reviews where the type of residence was known, 92 percent (136) of the children were living in a parental home. Only seven were in official placement in foster homes, relative foster homes or licensed group homes.

Reviews of Child Abuse and Neglect Deaths by Person Causing Death, 2006-2010, N=165		
Person	#	%
Biological Parent	97	59
Stepparent/Foster Parent	6	4
Parent's Partner	34	21
Other Relative	5	3
Friend/Acquaintance	6	4
Unknown	14	9
Total	165	100

Percents may not total 100 due to rounding.

For all 8,247 deaths reviewed from all causes for the five-year period 2006-2010, 5 percent (401) indicated a prior history of child abuse or neglect, and 4 percent (315) had an open case with child protective services at the time of the death.

REVIEWS FOR 2006-2010, BY AGE GROUPS

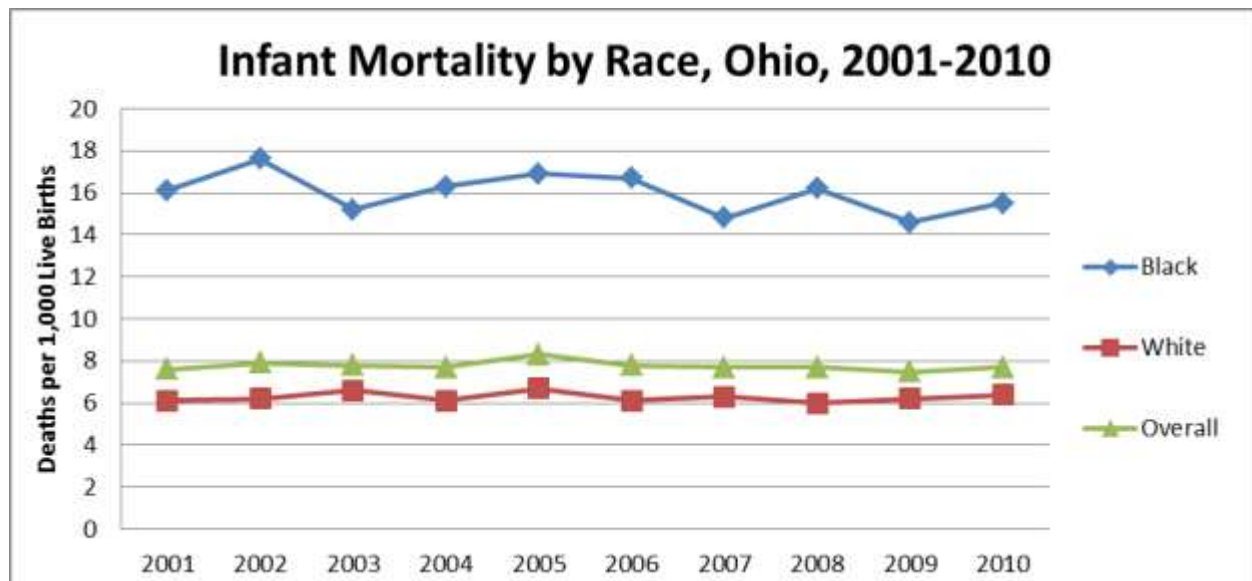
In response to recommendations from the Ohio CFR Advisory Committee to present the data and findings in ways that are meaningful and useful to program developers and policy makers, this report presents the findings by age groups. It is reasonable to assume that some risk and protective factors may vary by age group. Presenting findings by age group may be beneficial for programs working with specific age groups.

INFANT DEATHS FROM ALL CAUSES

Background

Infant mortality is an important gauge of the health of a community because infants are uniquely vulnerable to the many factors that impact health, including socioeconomic disparities. The U.S. infant mortality rate for 2010 was 6.1 infant deaths per 1,000 live births.¹² This represents a decrease of 3.9 percent from the final 2009 rate of 6.4. With the exception of 2002 and 2005, the infant mortality rate has statistically remained the same or decreased significantly each year from 1958 through 2010.

In 2010, Ohio's overall infant mortality rate was 7.7. Of particular concern is the black infant mortality rate of 15.5, which is more than double the white infant mortality rate of 6.4. These rates and proportions have changed little over the past decade.¹³



Caution should be used in interpreting rates and trends due to small numbers

Vital Statistics

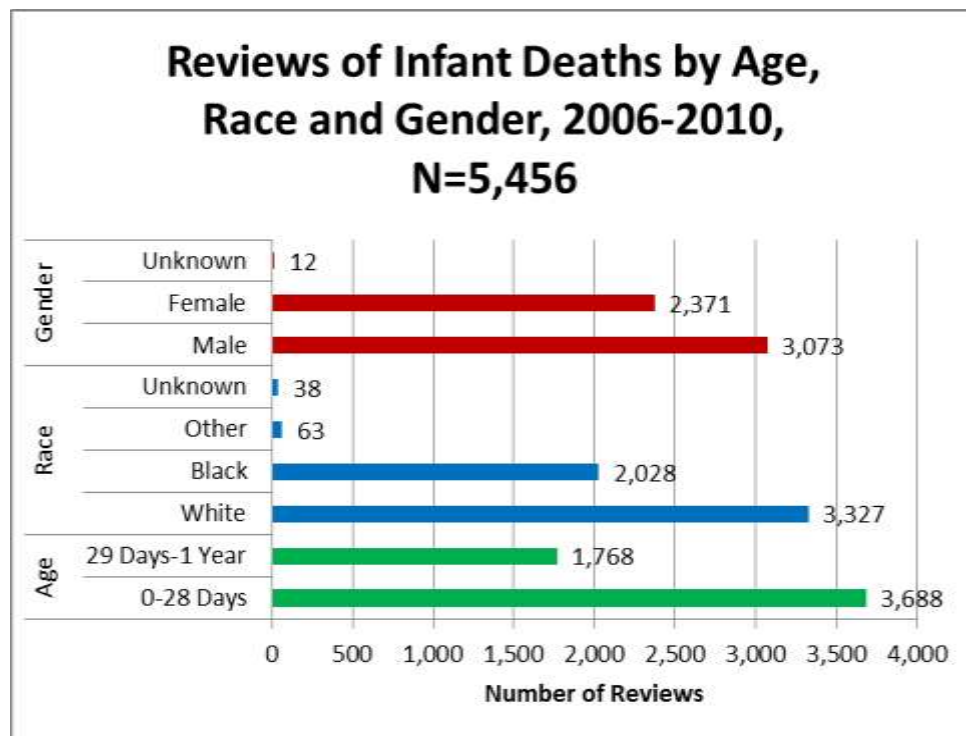
Ohio vital statistics data report 3,794 neonatal deaths (from birth to 28 days old) and 1,857 post-neonatal deaths (from 29 days to 1 year old) for a total of 5,651 infant deaths for the five-year period 2006-2010.

CFR Findings

Local child fatality review boards reviewed 5,456 infant deaths for 2006-2010. These represent 66 percent of all reviews for all ages.

- Sixty-eight percent (3,688) were infants from birth to 28 days old.
- Thirty-two percent (1,768) were infants from 29 days to 1 year old.

- Reviews for infant deaths were disproportionately higher among boys (56 percent) and among black infants (37 percent) relative to their representation in the general population (51 percent for boys and 17 percent for black children).
- Five percent (267) of the infant deaths reviewed were to Hispanic infants. Hispanic infants account for 6 percent of Ohio's infant population.
- Twelve percent (660) of the deaths were deemed probably preventable.



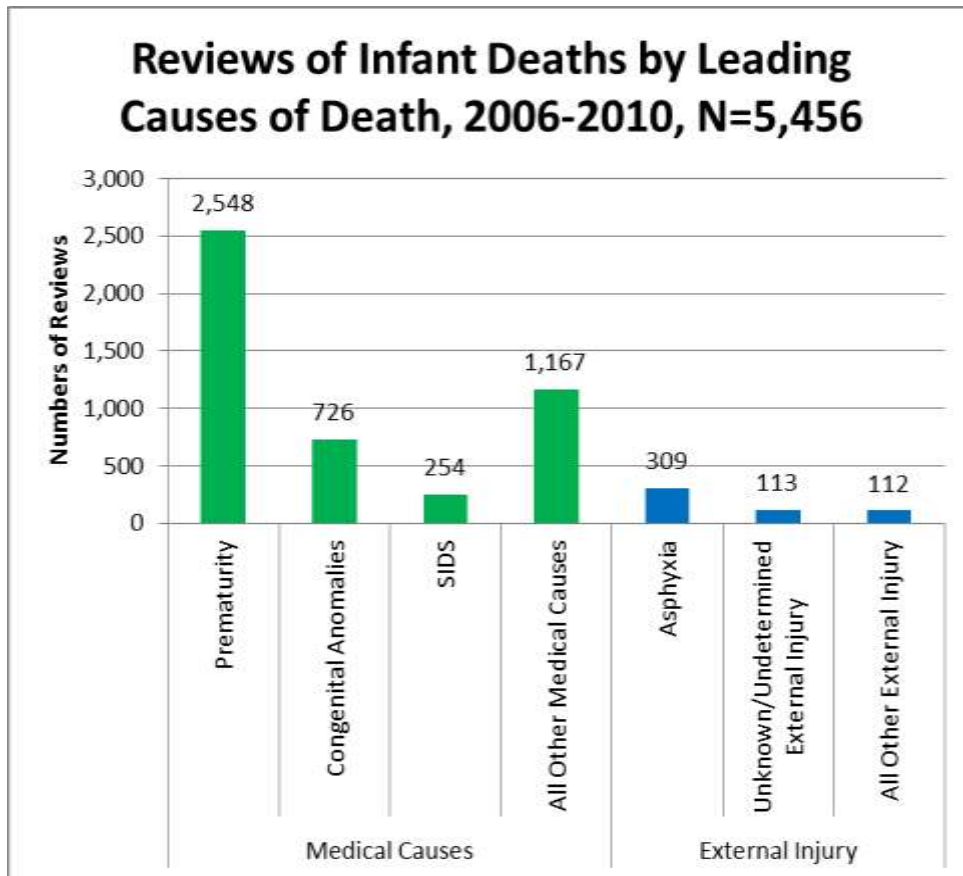
Reviews of infant deaths are grouped by cause of death:

- 4,686 (86 percent) of all infant deaths were due to medical causes.
- 534 (10 percent) were due to external injury causes.
- 236 (4 percent) were unknown if caused by medical or external causes.

Prematurity and congenital anomalies account for 70 percent (3,274) of all infant deaths from medical causes and 60 percent of infant deaths from all causes. Prematurity and congenital anomalies account for 78 percent (2,879) of the deaths to infants 0-28 days old.

Asphyxia is the leading cause of infant death due to external injury (49 percent of the infant deaths due to external injury). The next leading external cause of death is “undetermined” (20 percent of the infant deaths due to external injury).

Sleep-related deaths accounted for 15 percent (830) of all infant deaths and 41 percent (732) of the deaths to infants 29 days to 1 year old.



Other factors related to infant deaths:

- Thirteen percent (710) of the infants were from multiple births, including 79 from triplet or higher order births.
- Thirty-eight percent (2,084) of the infants were very low birthweight (<1,500 grams) and an additional 9 percent (505) were low birthweight (1,500-2,499 grams). Twenty percent (1,093) were of normal birthweight (2,500-3,999 grams) or heavier. Thirty-three percent (1,774) of the infants were of unknown or missing birthweight. For all births in Ohio in 2010, nine percent were low or very low birthweight.
- Fifty-one percent (2,764) of the infants were born preterm (<37 weeks gestation), 21 percent (1,166) were born full term (37-42 weeks gestation) and 28 percent (1,523) were of unknown or missing gestation. For all births in Ohio in 2010, 13 percent were born less than 37 weeks gestation.
- Twenty percent (1,107) of the infant deaths reviewed were infants born to mothers who smoked during the pregnancy. For all births in Ohio in 2010, 18 percent were born to mothers who smoked during the pregnancy.

Birth History Factors for Infant Deaths, 2006-2010, N=5,456		
	#	%
Multiple Birth	710	13
Very Low Birthweight (<1,500 g)	2,084	41
Low Birthweight (1,500-2,499 g)	505	10
Normal Birthweight (2,500-3,999 g)	1,042	20
Above Normal Birthweight (>3,999 g)	51	1
Unknown	1,412	28
Missing	362	
< 37 Weeks Gestation	2,764	53
37-42 Weeks Gestation	1,166	23
>42 Weeks Gestation	3	<1
Unknown	1,244	24
Missing	279	
Mother Smoked during Pregnancy	1,107	20

Missing data have been excluded from the percentages.

Percentages may not total 100 due to rounding.

Ohio Collaborative to Prevent Infant Mortality

In November 2009, the Ohio Infant Mortality Task Force published its report, *Preventing Infant Mortality in Ohio*, which contained the following recommendations to eliminate infant mortality and disparities among population groups in Ohio:

1. Provide comprehensive reproductive health services and service coordination for all women and children before, during, and after pregnancy.
2. Eliminate health disparities and promote health equity to reduce infant mortality.
3. Prioritize and align program investments based on documented outcome and cost effectiveness.
4. Implement health promotion and education to reduce preterm birth.
5. Improve data collection and analysis to inform program and policy decisions.
6. Expand quality improvement initiatives to make measurable improvements in maternal and child health outcomes.
7. Address the effects of racism and the impact of racism on infant mortality.
8. Increase public awareness of the effect of preconception health on birth outcomes.
9. Develop, recruit, and train a diverse network of culturally competent health professionals statewide.
10. Establish a consortium to implement and monitor the recommendations of the Ohio Infant Mortality Task Force.

The Ohio Collaborative to Prevent Infant Mortality was formed in 2010 as a permanent organization dedicated to implementation of the task force's recommendations. Membership consists of government agencies (including ODH), advocacy groups, medical and public health providers, and a wide variety of other organizations and individuals committed to eliminating infant mortality and disparities. The collaborative operates through five workgroups: Coordinated Healthcare, Disparities/Racism, Data/Metrics/Quality Improvement, Education/Outreach, and Public Policy, and is guided by an executive/steering committee.

Recent efforts of the collaborative include raising awareness of safe sleep practices, instituting universal screening and progesterone treatment of women at high risk of preterm delivery, and creating a website of resources to help women achieve good health and raise healthy babies.

For more information on the collaborative, visit the website at www.odh.ohio.gov/odhPrograms/cfhs/OCTPIM/infantmortality.aspx.

INFANT SLEEP-RELATED DEATHS

Background

Since the beginning of the Ohio CFR program, local boards have been faced with a significant number of deaths of infants while sleeping. Some of these sudden unexpected infant deaths (SUIDs) are diagnosed as sudden infant death syndrome (SIDS), while others are diagnosed as accidental suffocation, positional asphyxia, overlay (the obstruction of breathing caused by the weight of a person or animal lying on the infant) or undetermined. SIDS is a subset of SUID and is a medical cause of death. It is the diagnosis given the sudden death of an infant under 1 year of age that remains unexplained after the performance of a complete postmortem investigation, including an autopsy, an examination of the scene of death and review of the infant's health history.¹⁴ The distinction between SIDS and other SUIDs is challenging. Many of the risk factors for SIDS and asphyxia are similar. Incomplete investigations, ambiguous findings and the presence of known risk factors for other causes of deaths result in many SUID being diagnosed as "undetermined cause" rather than SIDS.

The difficulty of obtaining consistent investigations and diagnoses of infant deaths led the CDC to launch an initiative to improve investigations and reporting.¹⁵ An Infant Death Investigation training was hosted by the Franklin County CFR board in June, 2011. Many Ohio counties have adopted the CDC's Sudden Unexpected Infant Death Investigation tool and procedures.

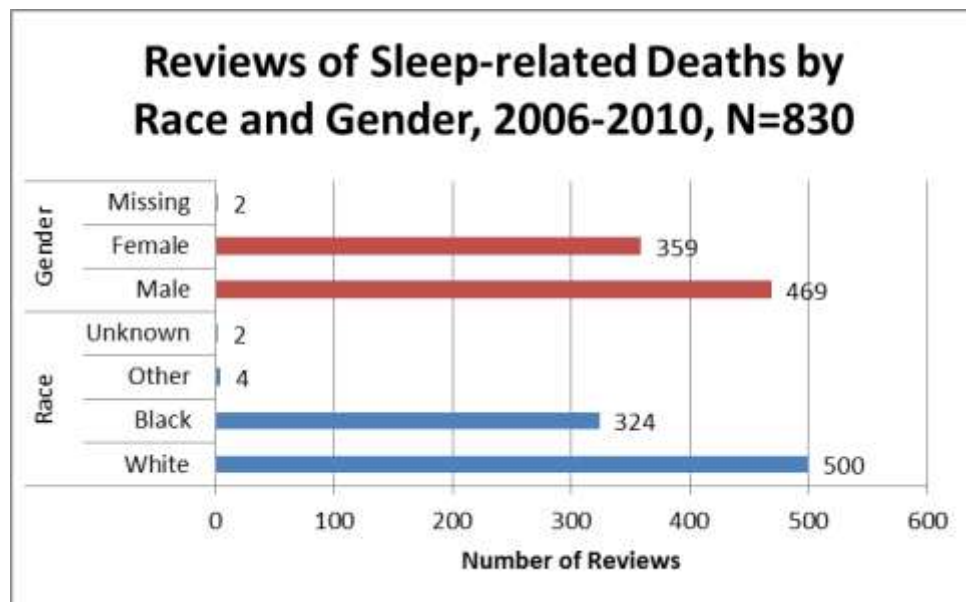
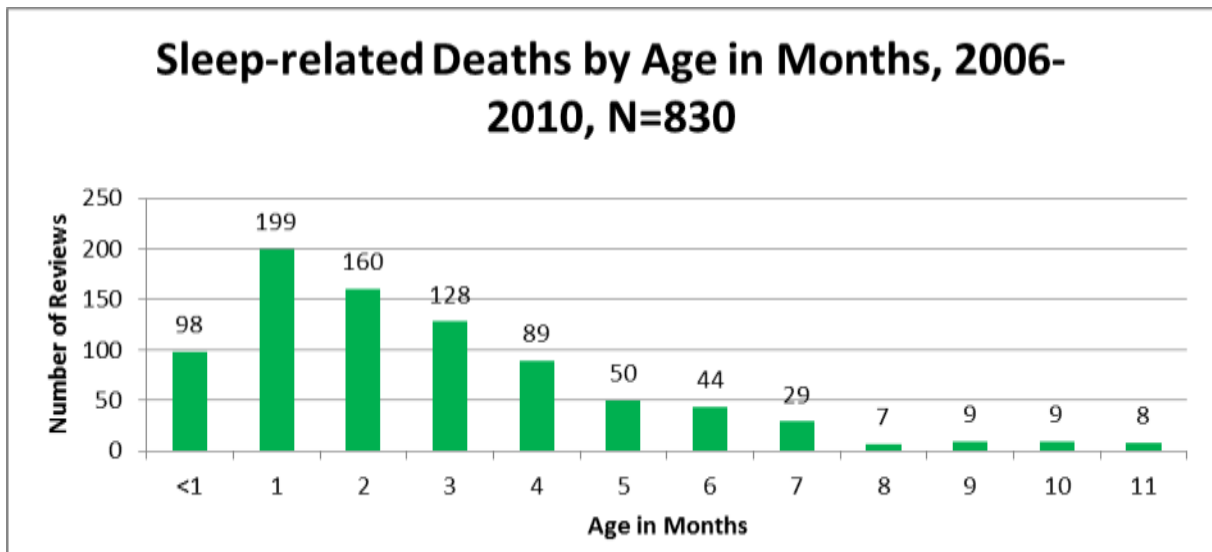
The CFR case report tool and data system captures information about deaths while sleeping as special circumstances, regardless of the cause of death. In order to better understand the contributing factors for these deaths and to develop prevention strategies, these sleep-related deaths including SIDS are analyzed and discussed as a group.

CFR Findings

From the reviews of deaths in the five-year period from 2006 to 2010, 931 cases of infants who died while in a sleep environment were identified. For the analysis of sleep-related deaths, cases of death from specific medical causes except SIDS were excluded, as were deaths from specific unrelated injuries such as fire, resulting in 830 infant sleep-related deaths. These cases include 207 SIDS reviews that included information about the circumstances.

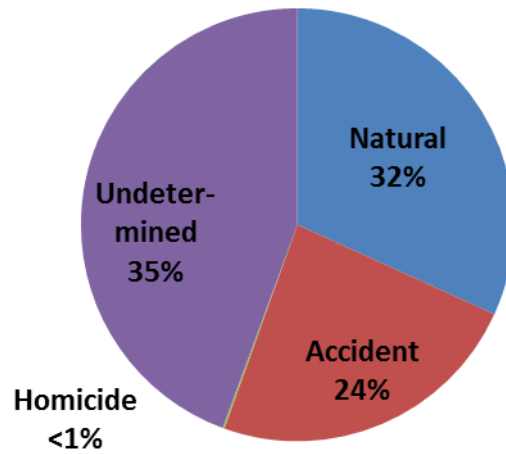
The 830 infant sleep-related deaths account for 15 percent of the 5,456 total reviews for infant deaths from 2006 to 2010, more than any single cause of death except prematurity. Over the five-year period, the percentage of infant deaths that were sleep-related has decreased from 17 percent in 2006 to 14 percent in 2010.

- More than three Ohio infant deaths each week are sleep-related. If the sleep-related deaths were prevented, the Ohio infant mortality rate for 2010 would have been reduced from 7.7 to 6.6 deaths per 1,000 live births.
- Of the 1,768 reviews of infant deaths from 29 days to 1 year of age, 41 percent (732) were sleep related.
- Thirty-nine percent (324) of deaths in a sleep environment were to black infants. This is disproportionately higher than their representation in the general population (17 percent).
- Eighty-seven percent (724) of the deaths occurred before 6 months of age; 55 percent (457) occurred before 3 months of age.

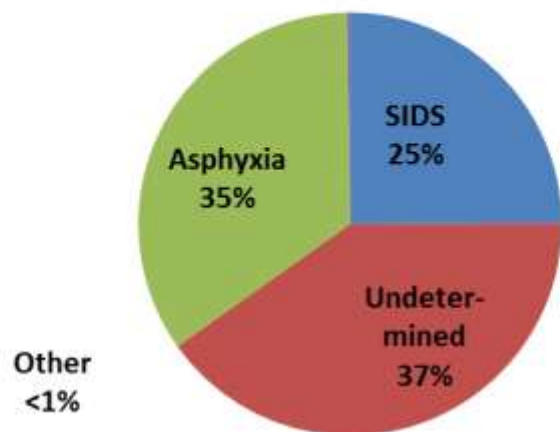


As discussed earlier in this section, determining the cause of death for infants in sleep situations is difficult, even when a complete investigation has occurred. Forty percent (334) of the sleep-related deaths were diagnosed as unknown or undetermined cause, even though autopsies had been completed for 99 percent of the cases.

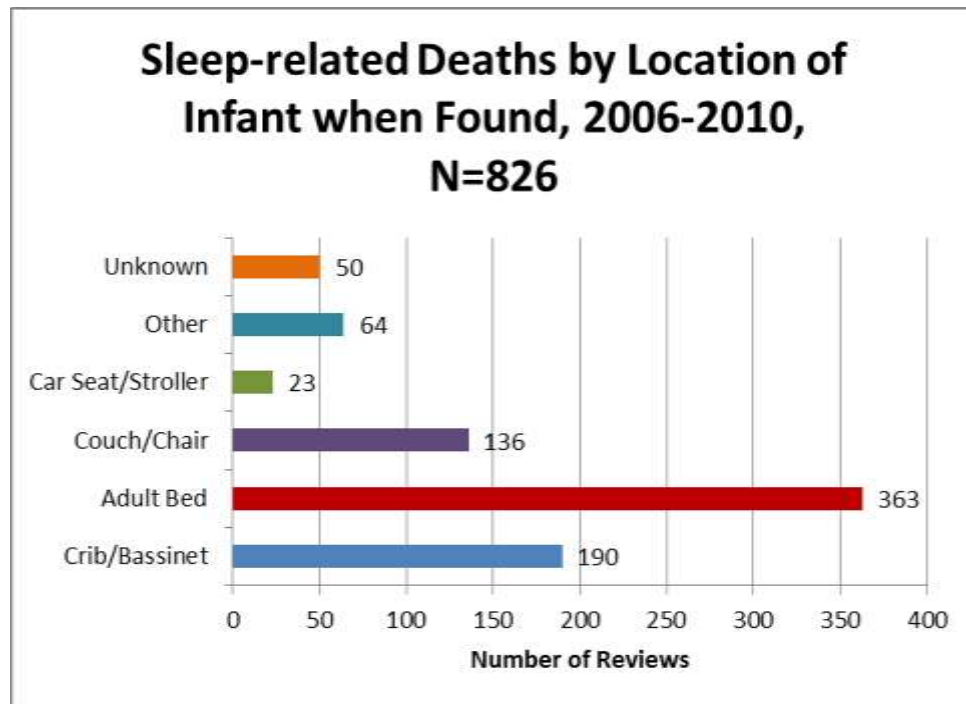
Sleep-related Deaths by Manner of Death, 2006-2010, N=830



Sleep-related Deaths by Cause of Death, 2006-2010, N=830



Twenty-three percent (190) of sleep-related deaths occurred in cribs or bassinets. Sixty percent (499) of sleep-related deaths occurred in adult beds, on couches or on chairs.



Bedsharing was a commonly reported circumstance for sleep-related deaths. Sixty-two percent (514) of sleep-related deaths occurred to infants who were sharing a sleep surface with another person at the time of death.

- Of those cases that indicated bedsharing, 401 of the infants were sharing a sleep surface with an adult, including 81 infants who were sharing with an adult and another child.
- An additional 33 infants were sharing with another child only.
- Two infants were sharing a sleep surface with pets.
- Forty-three reviews indicated an adult fell asleep while feeding the infant. Nineteen were bottle feeding; 18 were breast feeding. The feeding type was unknown or missing for 6 reviews.
- Of the 514 reviews indicating the infant was sharing a sleep surface, 358 (70 percent) indicated the infant's supervisor was impaired at the time of the incident.
 - Twenty-one supervisors (4 percent) were impaired by alcohol.
 - Thirteen supervisors (3 percent) were impaired by drugs.
 - Sixty-four percent (329) of the bedsharing supervisors were impaired by sleep.

Exposure to smoking was another commonly reported circumstance for sleep-related deaths.

- Forty-two percent (346) of the infants were exposed to smoke either in utero or after birth.
- Of the 401 infants sharing a sleep surface with an adult, 47 percent (188) were also exposed to smoke either in utero or after birth.

Infant Safe Sleep Recommendations

In October 2011, the American Academy of Pediatrics issued a policy statement expanding its 2005 recommendations for reducing the risk of SIDS and other sleep-related infant deaths. ODH continues to urge parents and caregivers to follow these recommendations as the most effective way to reduce the risk of infant death.

- Place infants for sleep wholly on the back for every sleep, nap time and night time.
- Use a firm sleep surface. A firm crib mattress is the recommended surface.
- Room-sharing without bedsharing is recommended. The infant's crib should be in the parents' bedroom, close to the parents' bed.
- Keep soft objects and loose bedding out of the crib.
- Pregnant women should receive regular prenatal care.
- Do not smoke during pregnancy. Avoid exposure to secondhand smoke.
- Avoid alcohol and illicit drug use during pregnancy and after birth.
- Breastfeeding is recommended.
- Offer a pacifier at sleep time after breastfeeding has been established.
- Avoid overheating.
- Avoid commercial devices marketed to reduce the risk of SIDS. None have been proven safe or effective.
- Encourage supervised "tummy time" when infant is awake to avoid flat spots on the back of the infant's head and to strengthen the upper torso and neck.
- All infants should be immunized in accordance with AAP and CDC recommendations.

The policy statement includes four recommendations directed toward health policy makers, researchers and professionals to endorse the recommendations; continue research and surveillance; adhere to safe sleep guidelines in media and manufacturing advertising; and expand the Back to Sleep campaign for parents, grandparents and all other caregivers with a major focus on the safe sleep environment.

DEATHS TO CHILDREN 1 TO 4 YEARS OLD

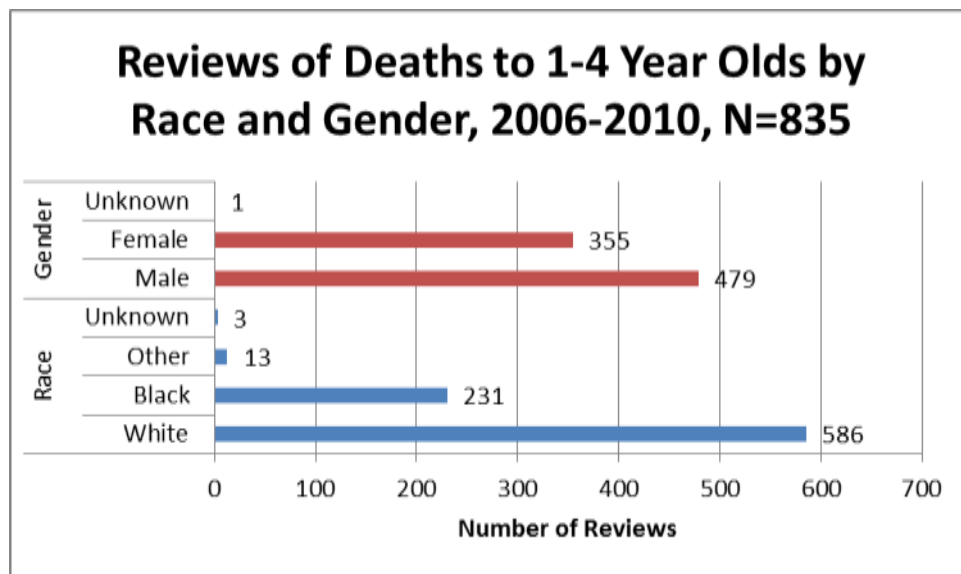
Background

No longer babies, toddlers and preschoolers experience increased mobility and more awareness of their surroundings, but lack the reasoning skills to protect themselves from many dangers.¹⁶ According to the National Center for Health Statistics, the leading causes of death for 1 to 4 year olds are accidents, congenital anomalies and homicides. Nationally, the 2010 mortality rate for this age group was unchanged from 27 per 100,000 population in 2009.¹⁷

CFR Findings

For the five-year period 2006-2010, local CFR boards reviewed 835 deaths to children ages 1 to 4 years. These represent 10 percent of all 8,247 deaths reviewed.

- Reviews were disproportionately higher among boys (57 percent) relative to their representation in the general population (51 percent).
- A greater percentage of deaths in this age group occurred among black children (28 percent) relative to their representation in the general population (17 percent).
- Six percent (51) of the reviews were for Hispanic children.
- Thirty-eight percent (313) of the deaths were deemed probably preventable.



The 835 reviews were classified by manner as follows:

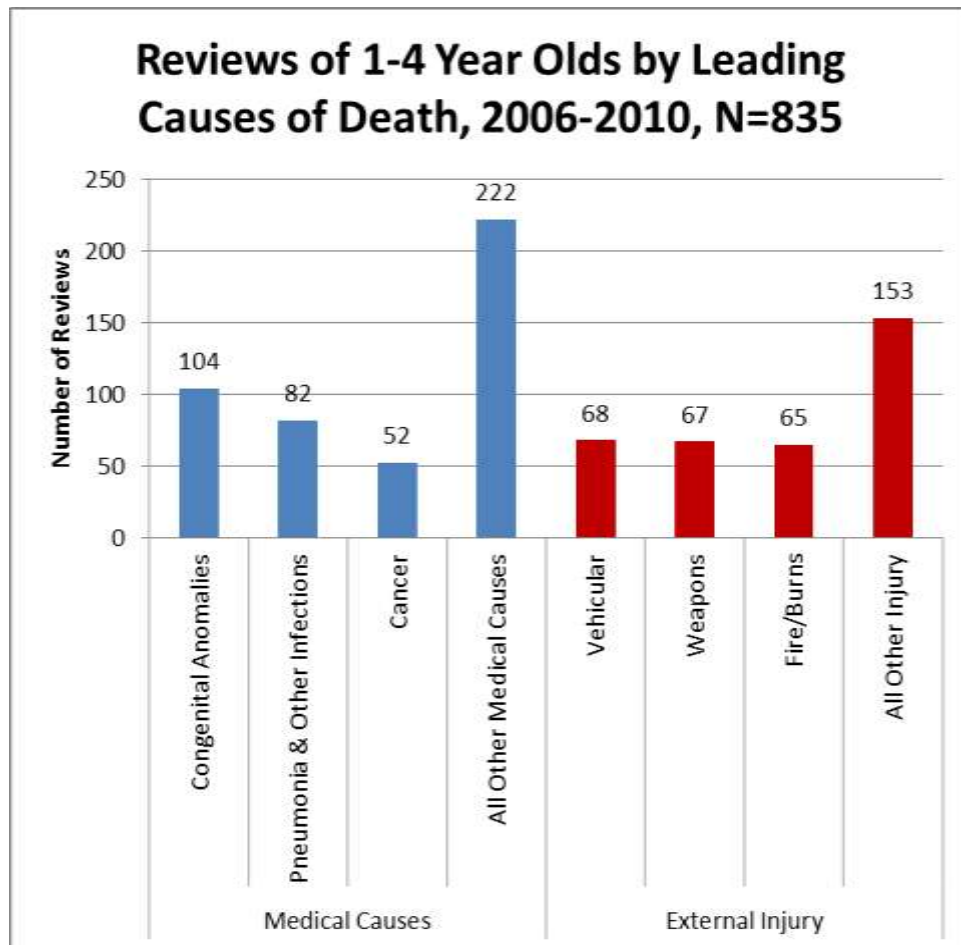
- Fifty-four percent (450) were natural deaths.
- Twenty-nine percent (244) were of accidental manner.
- Twelve percent (102) were homicides.
- Five percent (39) were of an undetermined manner.

Fifty-five percent (460) of the 835 reviews for 1 to 4 year olds were from medical causes.

- Congenital anomalies were the leading cause of death in this age group.
- Twenty-three percent (104) of the deaths from medical causes were due to congenital anomalies.
- Eighteen percent (82) were due to pneumonia and other infections.
- Cancer accounted for 11 percent (52) of the deaths from medical causes.

Forty-two percent (353) of the 835 reviews for 1 to 4 year olds were due to external causes. Vehicular crashes, weapons injuries, and fire and burn injuries were the three leading external causes of death for this age group.

- Nineteen percent (68) were due to vehicular injuries.
- Nineteen percent (67) were due to weapons injuries, including the use of body parts as weapons.
- Eighteen percent (65) of the 338 reviews were due to fire and burn injuries.



Vehicular injuries were the leading external cause of death for 1-4 year olds, accounting for 68 deaths.

- Sixty-three percent (43) of the 68 were passengers in vehicles. The average age of the child's driver was 31 years. Twelve of the 43 drivers (28 percent) were impaired at the time of the incident.
- Fifty-four percent (37) of the 68 vehicular deaths indicated the child killed was a passenger in a car, truck, van or SUV, where by law, children must use seat belts and safety seats or boosters. Of those 37, 41 percent (15) were properly restrained.
- Thirty-five percent (24) of the vehicular deaths were to pedestrians or children on bicycles or tricycles. Seven were back-over incidents. Eleven of the 24 pedestrians or cyclists had supervision at the time of the incident.

Weapons deaths accounted for 67 deaths to 1 to 4 year olds. Sixty-three of the 67 weapons deaths were homicides.

- Of the 63 homicides, 29 percent (18) indicated the perpetrator was a biological parent. The parent's partner was cited in 40 percent (25) of the reviews.
- The weapon type was indicated as body parts in 63 percent (42) of the weapons deaths to 1 to 4 year olds. Firearms (handguns, shotguns and rifles) were indicated in 24 percent (16) of the reviews.

Local CFR boards identified 76 deaths from child abuse and neglect among 1 to 4 year olds. These represent 9 percent of all reviews for this age group, more than any other age group.

- Thirty-eight percent (29) of the reviews indicated the person causing the death was a biological parent.
- The parent's partner was cited in 36 percent (27) of the reviews.

Ohio's Booster Seat Law

Effective Oct. 7, 2009, Ohio's Child Restraint Law was revised to require Ohio's children to use belt-positioning booster seats when they outgrow their child safety seats (usually at 4 years old and 40 pounds). The belt-positioning booster seats must be used until the child is 8 years old, unless the child is at least 4 feet, 9 inches tall.

The revised law requires the following:

- Children younger than 4 years old or less than 40 pounds must use a child safety seat.
- Children younger than 8 years old must use a booster seat until they are at least 4 feet, 9 inches tall.
- Children ages 8 to 15 who have outgrown child safety seats and boosters must be restrained by the standard safety belts.

Booster seats raise the child so the shoulder and lap belt are correctly positioned across the strongest parts of the child's body, rather than riding up over the child's neck and stomach. By requiring the use of booster seats, the revised law will help prevent serious injuries and deaths to young children.

More information about the law and choosing the correct car seat or booster seat can be found at www.odh.ohio.gov/odhPrograms/hpr/cpsafe/childbooster.aspx.

DEATHS TO CHILDREN 5 TO 9 YEARS OLD

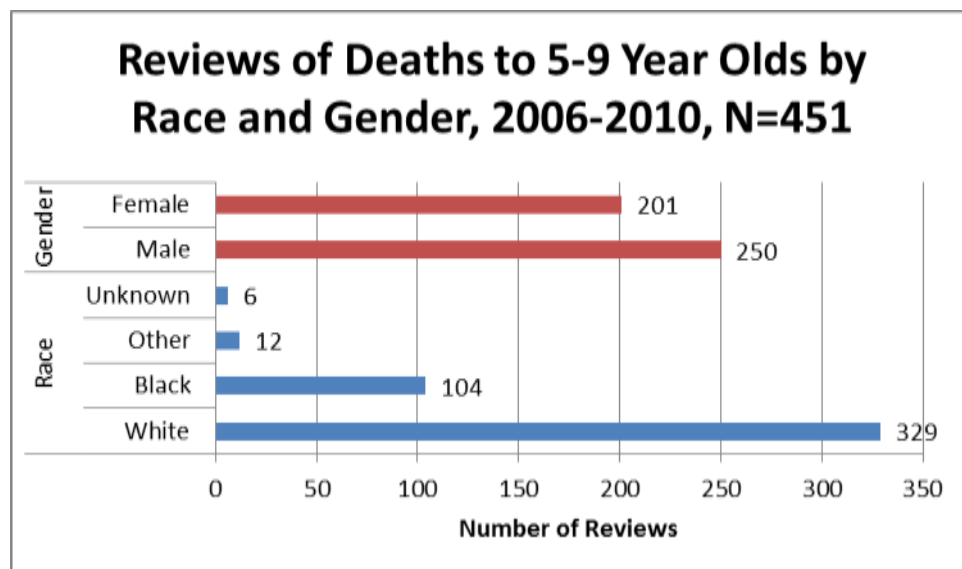
Background

Children ages 5 to 9 years continue to improve motor skills and have more regular contact with people outside their family. They have a growing understanding of consequences and of right and wrong.¹⁸ According to the National Center for Injury Prevention and Control, the leading causes of death for 5 to 9 year olds are accidents, cancers and congenital anomalies.¹⁹

CFR Findings

For the five-year period 2006-2010, local CFR boards reviewed 451 deaths to children ages 5 to 9 years. These represent 6 percent of all 8,247 deaths reviewed.

- Reviews were disproportionately higher among boys (55 percent) relative to their representation in the general population (51 percent).
- A greater percentage of deaths in this age group occurred among black children (23 percent) relative to their representation in the general population (17 percent).
- Four percent (17) of the reviews were for Hispanic children.
- Thirty-two percent (145) of the deaths were deemed probably preventable.



The 451 reviews were classified by manner as follows:

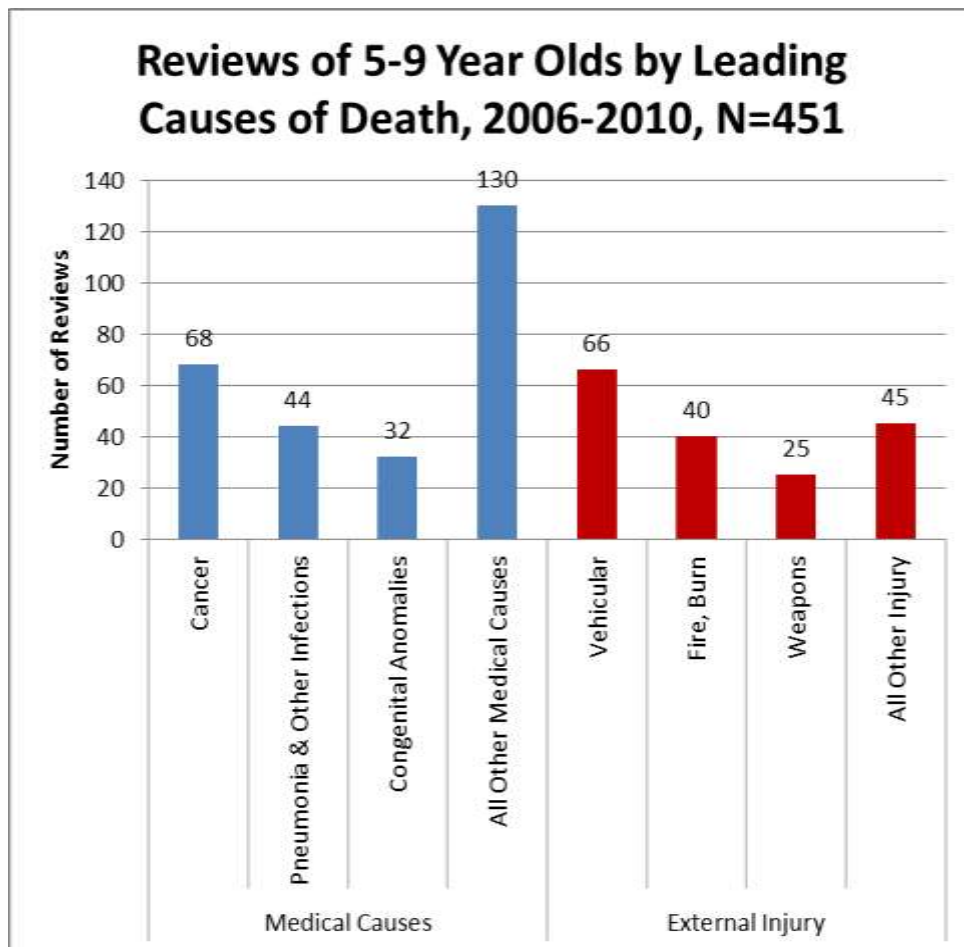
- Sixty percent (270) were natural deaths.
- Twenty-nine percent (132) were of accidental manner.
- Nine percent (42) were homicides.
- Less than 1 percent (1) were suicides.
- One percent (6) were of an undetermined manner.

Sixty-one percent (274) of the 451 reviews for 5 to 9 year olds were from medical causes.

- Cancer was the leading medical cause of death in this age group.
- Twenty-five percent (68) of the deaths from medical causes were due to cancer.
- Sixteen percent (44) were due to pneumonia and other infections.
- Congenital anomalies accounted for 12 percent (32) of the deaths from medical causes.

Thirty-nine percent (176) of the 451 reviews for 5 to 9 year olds were due to external causes. Vehicular crashes, fires and weapons injuries were the three leading external causes of death for this age group.

- Thirty-eight percent (66) of the 176 reviews were due to vehicular injuries.
- Twenty-three percent (40) were due to fires and burns.
- Fourteen percent (25) were due to weapons injuries, including the use of body parts as weapons.



Vehicular injuries accounted for 66 deaths to 5 to 9 year olds. One vehicular death was homicide; the remainder were accidental manner.

- Fifty-eight percent (38) of the 66 were passengers in vehicles. The average age of the child's driver was 32 years. Two of the 38 drivers (5 percent) were impaired at the time of the incident.
- Forty-eight percent (32) indicated the child killed was a passenger in a car, truck, van or SUV, where by law, children must use seat belts and safety seats or boosters. Of those 32, 47 percent (15) were properly restrained.
- Thirty-eight percent (25) of the vehicular deaths were to pedestrians or children on bicycles or other pedal cycles. Ten of the 25 pedestrians or cyclists had supervision at the time of the incident.

Fire and burn injuries (40) were the second leading cause of external death for 5 to 9 year olds. Twenty-five percent (10) of the 40 fire and burn deaths were homicides.

- Thirty-five percent (14) of the reviews indicated a smoke detector was present.

Local CFR boards identified 12 deaths from child abuse and neglect among 5 to 9 year olds. These represent 3 percent of all reviews for this age group, and 7 percent of the 165 child abuse and neglect deaths for all ages.

- Forty-two percent (5) of the reviews indicated the person causing the death was a biological parent.
- Other perpetrators included other relatives, parents' partner and unknown persons.

DEATHS TO CHILDREN 10 TO 14 YEARS OLD

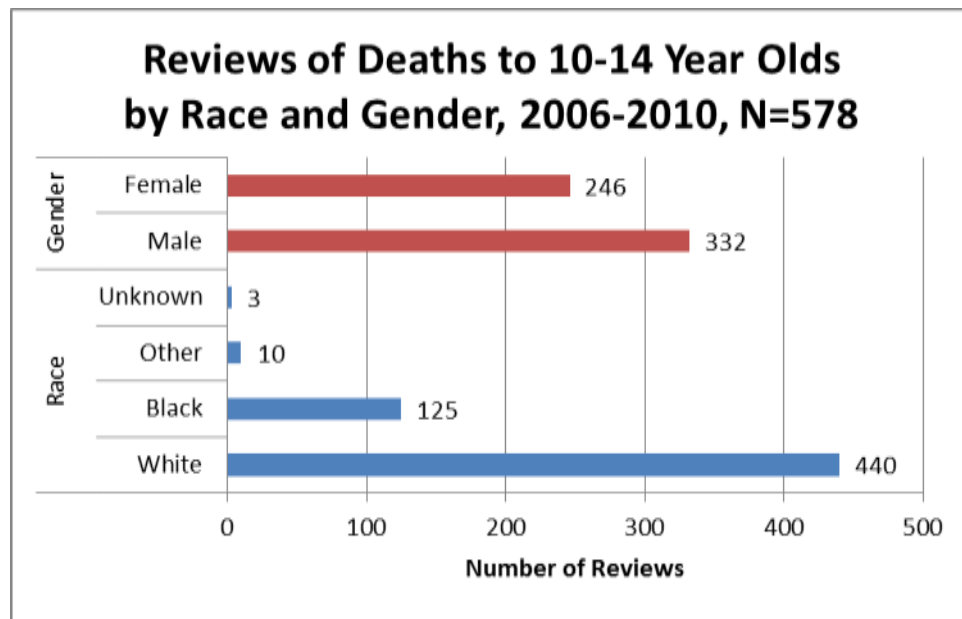
Background

Children in early adolescence experience many physical, cognitive and social-emotional changes. As 10 to 14 year olds experience more independence, they also encounter strong peer pressure.²⁰ According to the National Center for Injury Prevention and Control, the leading causes of death for 10 to 14 year olds are accidents, cancers and homicides.²¹

CFR Findings

For the five-year period 2006-2010, local CFR boards reviewed 578 deaths to children ages 10 to 14 years. These represent 7 percent of all 8,247 deaths reviewed.

- Reviews were disproportionately higher among boys (57 percent) relative to their representation in the general population (51 percent).
- A greater percentage of deaths in this age group occurred among black children (22 percent) relative to their representation in the general population (17 percent).
- Three percent (16) of the reviews were for Hispanic children.
- Thirty-six percent (205) of the deaths were deemed probably preventable.



The 578 reviews were classified by manner as follows:

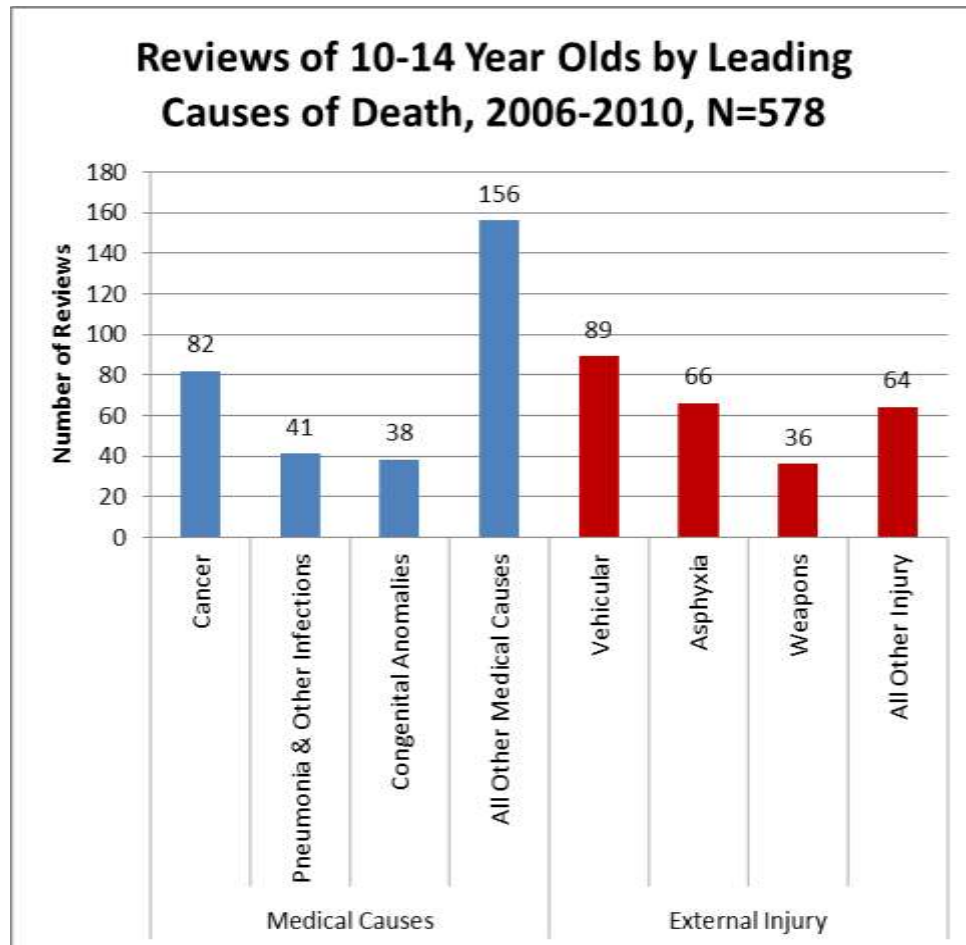
- Fifty-four percent (313) were natural deaths.
- Twenty-nine percent (170) were of accidental manner.
- Ten percent (56) were suicides.
- Five percent (28) were homicides.
- Two percent (11) were of an undetermined or unknown manner.

Fifty-five percent (317) of the 578 reviews for 10 to 14 year olds were from medical causes.

- Cancer was the leading medical cause of death in this age group.
- Twenty-six percent (82) of the deaths from medical causes were due to cancer.
- Thirteen percent (41) were due to pneumonia and other infections.
- Congenital anomalies accounted for 12 percent (38) of the deaths from medical causes.

Forty-four percent (255) of the 578 reviews for 10 to 14 year olds were due to external causes. Vehicular crashes, asphyxia and weapons injuries were the three leading external causes of death for this age group.

- Thirty-five percent (89) of the 255 reviews were due to vehicular injuries.
- Twenty-six percent (66) were due to asphyxia.
- Fourteen percent (36) were due to weapons injuries, including the use of body parts as weapons.



Vehicular injuries accounted for 89 deaths to 10 to 14 year olds. All but one of the vehicular deaths were accidental manner.

- Forty-six percent (41) of the 89 were passengers in vehicles. The average age of the child's driver was 29 years. Two of the 41 drivers (5 percent) were impaired at the time of the incident.
- Thirty-three percent (29) indicated the child killed was a passenger in a car, truck, van or SUV, where by law, children must use seat belts. Of those 29, 10 percent (3) were properly restrained.
- Thirty percent (27) of the vehicular deaths were to pedestrians or children on bicycles or other pedal cycles.

Asphyxia (66) was the second leading cause of external death for 10 to 14 year olds.

- Ninety-four percent (62) of the asphyxia deaths were due to strangulation. The remaining four were due to choking or suffocation.
- Sixty-five percent (43) of the 66 asphyxia deaths were suicides.

Local CFR boards reviewed 56 suicide deaths to 10 to 14 year olds. These represent 10 percent of all 578 reviews for this age group, and 26 percent of the 220 suicide deaths for all ages.

- Seventy-seven percent (43) of the suicides were by asphyxia. Twenty percent (11) were by weapons and two deaths were by poisoning.
- Twenty-seven percent (15) were receiving mental health services at the time of the incident.
- The most frequently indicated factors that might have contributed to the child's despondency were arguments with parents and friends, and school problems.

DEATHS OF CHILDREN 15 TO 17 YEARS OLD

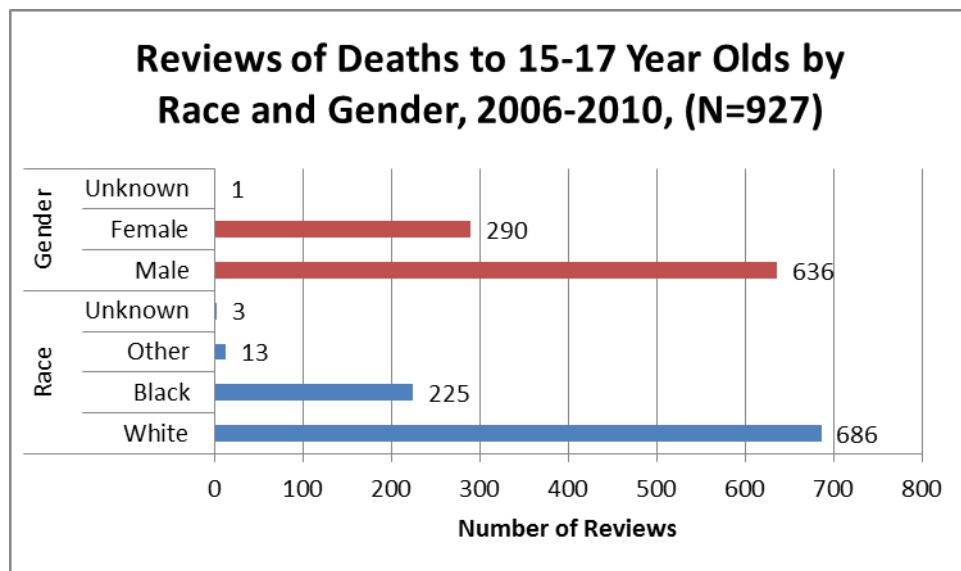
Background

Known for challenging the limits, teenagers enjoy more independence from their family and develop strong relationships with peers.²² According to the National Center for Injury Prevention and Control, the leading causes of death for 15 to 17 year olds are accidents, homicides and suicides.²³

CFR Findings

For the five-year period 2006-2010, local CFR boards reviewed 927 deaths of children ages 15 to 17 years. These represent 11 percent of all 8,247 deaths reviewed.

- Reviews were disproportionately higher among boys (69 percent) relative to their representation in the general population (51 percent).
- A greater percentage of deaths in this age group occurred among black children (24 percent) relative to their representation in the general population (17 percent).
- Three percent (30) of the reviews were for Hispanic children.
- Fifty-eight percent (536) of the deaths were deemed probably preventable.



The 927 reviews were classified by manner as follows:

- Twenty-seven percent (253) were natural deaths.
- Forty-one percent (376) were of accidental manner.
- Eighteen percent (163) were suicides.
- Fourteen percent (126) were homicides.
- One percent (9) were of an undetermined or unknown manner.

Of the 175 deaths from all causes to black boys ages 15 to 17 years, 53 percent (92) were homicides, while only 3 percent (14) of the 451 deaths from all causes to white boys ages 15 to 17 years were homicide.

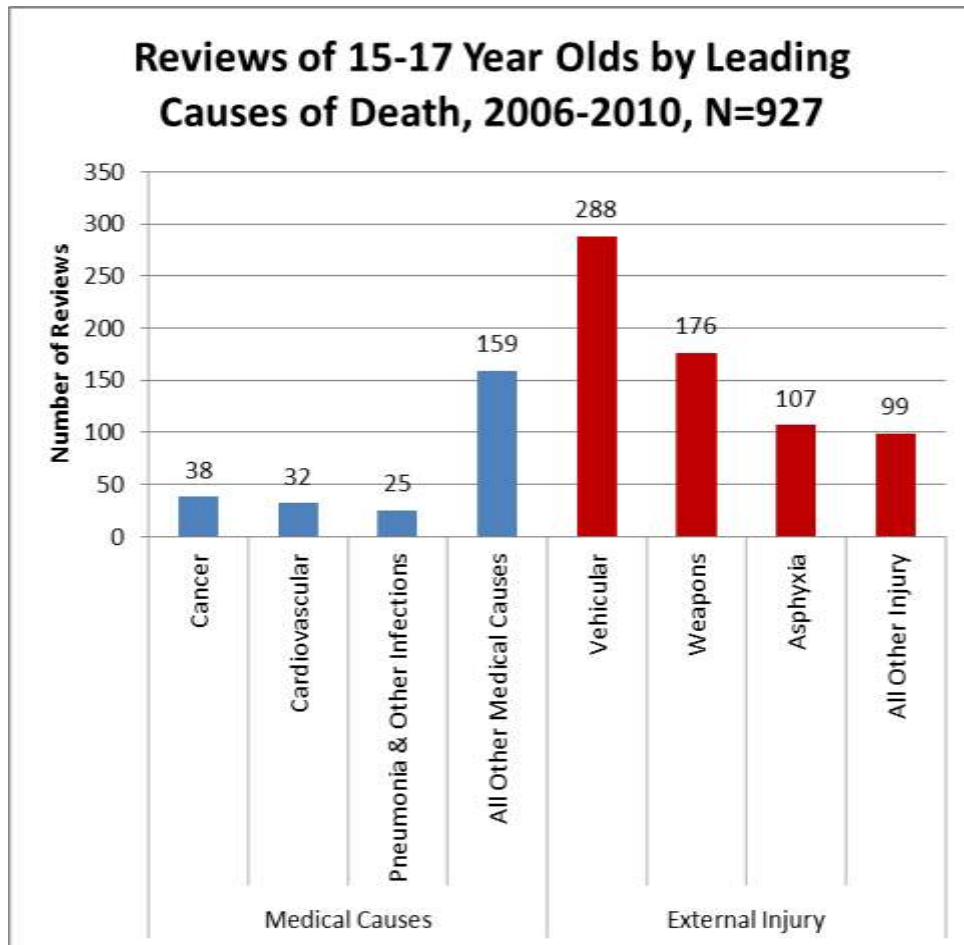
Twenty-seven percent (254) of the 927 reviews for 15 to 17 year olds were from medical causes.

- Cancer was the leading medical cause of death in this age group.
- Fifteen percent (38) of the deaths from medical causes were due to cancer.

- Cardiovascular disorders accounted for 13 percent (32) of the deaths from medical causes.
- Ten percent (25) were due to pneumonia and other infections; and 10 percent (25) were due to neurological disorders.

Seventy-two percent (670) of the 927 reviews for 15 to 17 year olds were due to external causes. Vehicular crashes, weapons injuries and asphyxia were the three leading external causes of death for this age group.

- Forty-three percent (288) of the 670 reviews were due to vehicular injuries.
- Twenty-six percent (176) were due to weapons injuries, including the use of body parts as weapons.
- Sixteen percent (107) were due to asphyxia.



Of the 288 reviews for deaths from vehicular injuries to 15 to 17 year olds, 3 percent (8) were suicides and 3 percent (8) were homicides.

- Vehicular deaths to 15 to -17 year olds outnumbered deaths from all medical causes combined.
- Eighty-six percent (249) of the vehicular deaths to 15 to 17 year olds were white children, while 11 percent (33) were black children.
- Forty-eight percent (137) of the reviews were for children who were driving the vehicle.
 - Eighty-two percent (113) of the 137 child drivers were deemed responsible for the incident. Twenty-one were impaired.

- Speed, recklessness and inexperience were the most frequently cited causes of crashes.
- Of the 114 children who were driving cars, trucks, vans and SUVs, where by law, children must use seat belts, 32 percent (37) were properly restrained.
- Thirty-six percent (104) of the 288 vehicular deaths occurred to children who were passengers.
 - Seventy-three percent (76) of the drivers of the child's vehicle were deemed responsible for the incident. Twenty-two were impaired.
 - Speed, recklessness and inexperience were the most frequently cited causes of crashes.
 - Of the 94 children who were passengers in cars, trucks, vans and SUVs, where by law, children must use seat belts, 23 percent (22) were properly restrained.
 - For children who were passengers, the average age of the child's driver was 21 years.
- Fourteen percent (40) of the vehicular deaths were to pedestrians or children on bicycles or other pedal cycles.
- Of the 33 vehicular deaths to black 15 to 17 year olds, 39 percent (13) were pedestrians or cyclists, while 10 percent (26) of the 249 white 15 to 17 year olds were pedestrians or cyclists.

Weapons injuries, including the use of body parts as weapons, were the second leading cause of death for 15 to 17 year olds.

- The 176 weapons deaths represent 19 percent of all deaths to 15 to 17 year olds.
- Weapons deaths were disproportionately higher among boys (88 percent) and black children (64 percent) relative to their representation in the general population (51 percent for boys and 17 percent for black children).
- Sixty-five percent (114) of the weapons deaths were homicides and 30 percent (52) were suicides. Only 6 percent (10) were of accidental manner.
- Firearms (handguns, shotguns and rifles) were involved in 94 percent (166) of the deaths. Other weapons included sharp instruments and other weapons.
- Forty-three percent (75) of the reviews for weapons deaths indicated the child had a delinquent or criminal history.

Asphyxia was the third leading cause of death for 15 to 17 year olds.

- The 107 asphyxia deaths represent 12 percent of all deaths to 15 to 17 year olds.
- Ninety-three percent (100) of the asphyxia deaths were due to strangulation. The remaining seven were due to suffocation or other mechanism.
- Eighty-eight percent (94) of the 107 asphyxia deaths were suicides.

Local CFR boards reviewed 163 suicide deaths to 15 to 17 year olds. These represent 18 percent of all 927 reviews for this age group, and 74 percent of the 220 suicide deaths for all ages.

- Fifty-eight percent (94) of the suicides were by asphyxia. Thirty-two percent (52) were by weapons. Other causes included vehicular crashes, poisoning, falls and other causes.
- Twenty-eight percent (47) were receiving mental health services at the time of the incident and twenty percent (33) were receiving medication for mental illness.
- Twenty percent (33) of the suicide reviews indicated a history of child maltreatment and 8 indicated an open case with children's protective services at the time of the incident.
- The most frequently indicated factors that might have contributed to the child's despondency were family discord including divorce and arguments with parents; arguments or breakups with boyfriend or girlfriend; and school problems.

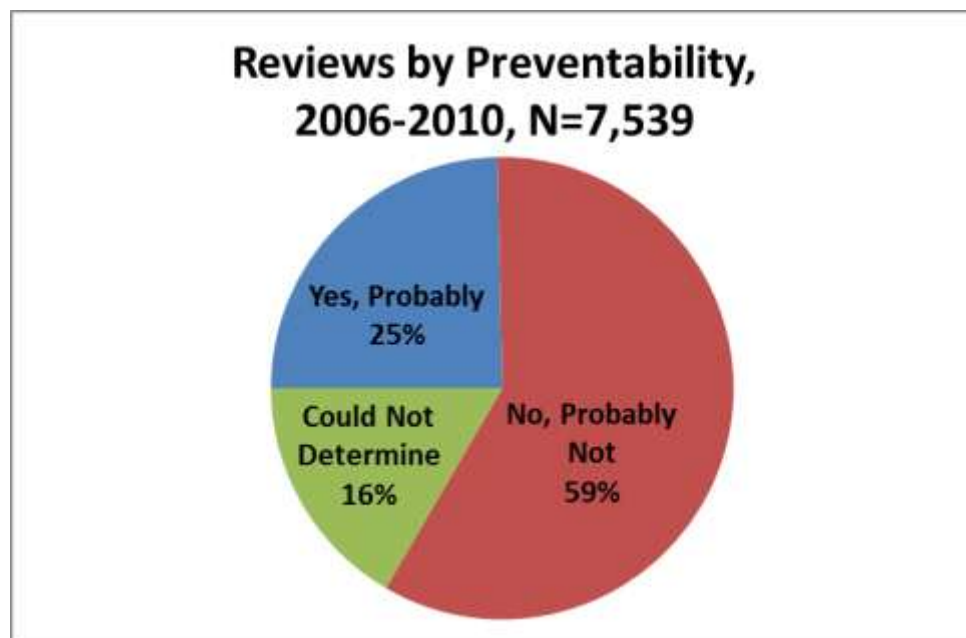
PREVENTABLE DEATHS

The mission of the Ohio Child CFR program is to reduce the incidence of preventable child deaths in Ohio. A child's death is considered preventable if the community or an individual could reasonably have changed the circumstances that led to the death.²⁴ The review process helps CFR boards focus on a wide spectrum of factors that may have caused or contributed to the death or made the child more susceptible to harm. After these factors are identified the board must decide which, if any, of the factors could reasonably have been changed. Cases are then deemed "probably preventable" or "probably not preventable."

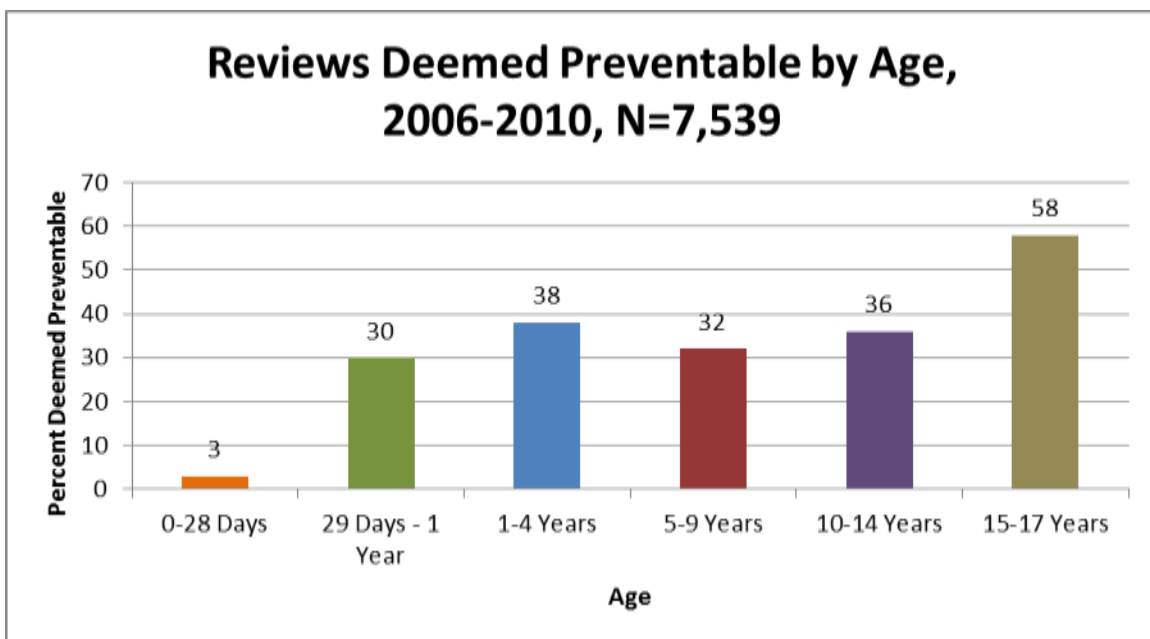
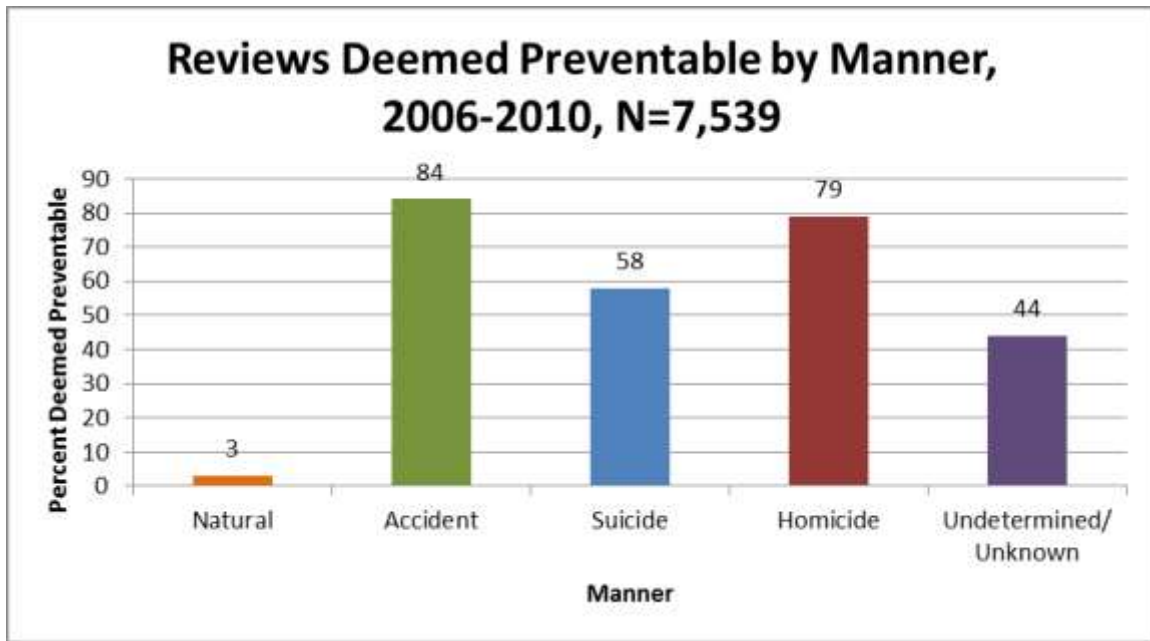
Even if a particular case is deemed "probably not preventable," the CFR process is valuable in identifying gaps in care, systemic service delivery issues or community environmental factors which contribute to less than optimal quality of life for vulnerable individuals. For this reason, many local boards make recommendations and initiate changes even when a particular death is not deemed preventable.

CFR Findings

Local boards indicated 23 percent (1,859) of the 8,247 deaths reviewed from 2006 to 2010 probably could have been prevented. The percentage changed little over the period, from a high of 23 percent in 2006, 2008 and 2010 to a low of 22 percent in 2007 and 2009. Preventability differed by manner of death and by age group.



- Eighty-four percent (1,074) of the 1,284 deaths of accidental manner were considered probably preventable.
- Fifty-eight percent (536) of the 927 deaths to 15 to 17-year-olds were considered probably preventable.
- Only 3 percent (125) of the 3,688 deaths to infants less than 29 days old were considered probably preventable.



Local CFR boards identify many deaths that likely could have been prevented through changes in laws or policies, such as mandating the use of booster seats in cars; or the implementation of programs, such as Cribs for Kids. Many other deaths likely could have been prevented through increased adult supervision, increased parental responsibility and the exercise of common sense. Through the sharing of perspectives during the CFR discussions, members have learned that often-repeated health and safety messages need to be presented in new ways to reach new generations of parents, caregivers and children.

CONCLUSION

The mission of CFR is the prevention of child deaths in Ohio. This report summarizes the process of local reviews by multi-disciplinary boards of community leaders, which results in data regarding the circumstances related to each death. Each child's death is a tragic story. As the facts about the circumstances of all the deaths are compiled and analyzed, certain risks to children become clear, including:

- Prematurity, which accounts for nearly half of all infant deaths.
- Unsafe sleep environments, which place healthy infants at risk of sudden death.
- Riding unrestrained in vehicles, which puts children at greater risk of death in the event of a crash.
- Racial disparity that results in black children dying from homicide at more than three times the expected rate.

This report is intended to be a vehicle to share the findings with the wider community to engage others in concern about these and other risks. Partners are needed to develop recommendations and implement policies, programs and practices that can have a positive impact in reducing the risks and improving the lives of Ohio's children. We encourage you to use the information in this report and to share it with others who can influence changes to benefit children. We invite you to collaborate with local CFR boards to prevent child deaths in Ohio.

APPENDIX I

OVERVIEW OF OHIO CHILD FATALITY REVIEW PROGRAM

Child deaths are often regarded as indicators of the health of a community. While mortality data provide us with an overall picture of child deaths by number and cause, it is from a careful study of each and every child's death that we can learn how best to respond to a death and how best to prevent future deaths.

Recognizing the need to better understand why children die, in July 2000 then Gov. Bob Taft signed the bill mandating child fatality review (CFR) boards in each of Ohio's counties to review the deaths of children under 18 years of age. For the complete law and administrative rules pertaining to CFR, refer to the ODH website at www.odh.ohio.gov/rules/final/f3701-67.aspx. The mission of these local review boards, as described in the law, is to reduce the incidence of preventable child deaths. To accomplish this, it is expected that local review teams will:

- Promote cooperation, collaboration and communication among all groups that serve families and children.
- Maintain a database of all child deaths to develop an understanding of the causes and incidence of those deaths.
- Recommend and develop plans for implementing local service and program changes and advise ODH of data, trends and patterns found in child deaths.

While membership varies among local boards, the law requires that minimum membership include:

- County coroner or designee.
- Chief of police or sheriff or designee.
- Executive director of a public children service agency or designee.
- Public health official or designee.
- Executive director of a board of alcohol, drug addiction and mental health services or designee.
- Pediatrician or family practice physician.

Additional members are recommended and may include the county prosecutor, fire/emergency medical service representatives, school representatives, representatives from Ohio Family and Children First Councils, other child advocates and other child health and safety specialists. The health commissioner serves as board chairperson in many counties.

CFR boards must meet at least once a year to review the deaths of child residents of that county. The basic review process includes:

- The presentation of relevant information.
- The identification of contributing factors.
- The development of data-driven recommendations.

Local CFR board review meetings are not open meetings and all discussion and work products are confidential.

Each local CFR board provides data to ODH by recording information on a case report tool before entering it into a national web-based data system. The report tool and data system were developed by the National Center for Prevention and Review of Child Death (NCPRCD) with a grant from the federal Maternal and Child Health Bureau. The tool captures information about the factors related to the death and the often-complex conversations that happen during the review process in a format that can be analyzed on the local, state or national level. This report is based on the analysis of data from the NCPRCD data system.

ODH is responsible for providing technical assistance and annual training to the CFR boards. In 2011, ODH provided two new board chair/coordinator orientations. ODH collaborated with the Franklin County CFR board and the SID Network of Ohio to present an Infant Death Investigation Training on June 8 and 9, 2011. The purpose of the training was to provide local teams from across Ohio with the knowledge and skills to complete consistent, thorough infant death investigations. The faculty was a team from Cuyahoga County that had been training in Sudden, Unexpected Infant Death Investigation (SUIDI) by the CDC. Throughout the year, NCPKCD webinars provided additional training opportunities for Ohio's local boards. ODH staff also coordinate the data collection, assure the maintenance of a Web-based data system and analyze the data reported by the local boards. The annual state report is prepared and published jointly with the Ohio Children's Trust Fund.

To assist moving CFR forward in Ohio, an advisory committee was established in 2002. The purpose of the advisory committee is to review Ohio's child mortality data and CFR data to identify trends in child deaths; to provide expertise and consultation in analyzing and understanding the causes, trends and system responses to child deaths in Ohio; to make recommendations in law, policy and practice to prevent child deaths in Ohio; to support CFR and recommend improvements in protocols and procedures; and to review and provide input for the annual report.

This report presents information from the reviews of deaths that occurred in 2010, as well as aggregate data for the five-year period 2006 to 2010. By reporting the information by year of death, it is possible to compare CFR data with data from other sources such as vital statistics. In making such comparisons, it is important to use caution and acknowledge the unique origins and purposes for each source of data. CFR data included in this report are the outcome of thoughtful inquiry and discussion by a multi-disciplinary group of community leaders who consider all the circumstances surrounding the death of each child. They bring to the review table information from a variety of agencies, documents and areas of expertise. Their careful review process results in a thorough description of the factors related to child deaths.

Despite their best efforts, CFR boards are not able to review every child death. Some reviews must be delayed until all legal investigations and prosecutions are completed. Some deaths occur outside the county of residence or outside the state, resulting in long delays in notification to the CFR board. Because of these variables, it is usually impossible to find an exact number-for-number match between CFR data and data from other sources such as vital statistics. The unique role of CFR data is to provide a comprehensive depth of understanding to augment other, more one-dimensional data sources.

**APPENDIX II
CHILD FATALITY REVIEW ADVISORY COMMITTEE**

Christy Beeghly
Ohio Department of Health
Violence and Injury Prevention

Rachel Belenker
Ohio Department of Health
Office of General Counsel

Jim Beutler
Putnam County Sheriff's Office

Jo Bouchard
Ohio Department of Health
Bureau of Child and Family Health Services

Brian Carlson
Ohio Attorney General's Office

Lorrie Considine
Cuyahoga County Board of Health

David Corey
Ohio Coroners Association

Amy Davis
Ohio Department of Health
Bureau of Child and Family Health Services

Angela Cornelius Dawson
Commission on Minority Health

Lori Deacon
Ohio Department of Health
Bureau of Child and Family Health Services

Jolene DeFiore-Hyrmer
Ohio Department of Health
Ohio Violent Death Reporting System

Kelly Friar
Ohio Department of Health
Vital Statistics

Connie Geidenberger
Ohio Department of Health
Center for Public Health Statistics and
Informatics

Liz Henrich
Ohio Association of County Behavioral Health
Authorities

Shelia Hiddleston
Champaign County Health District

Marla Himmeger
Ohio Department of Mental Health

Janice Houchins
Ohio Family and Children First
East Central District

Karen Hughes
Ohio Department of Health
Division of Family and Community Health
Services

Jill Jackson
Ohio Department of Education

Arthur James
Ohio Department of Health
Nationwide Children's Hospital
The Ohio State University

Barbara Manuel
Ohio Department of Job and Family Services
Office of Families and Children

Ellen McManus
Nationwide Children's Hospital
Center for Family and Child Advocacy

Karen Gray-Medina
Columbus Public Health

Michael Mier
Copley Police Department

Kathleen Nichols
Attorney General's Office

Angie Norton
Ohio Department of Health
Bureau of Community Health Services and
Patient-Centered Primary Care

Emily Pelphrey
Ohio Attorney General's Office

Barbara Pryor
Ohio Department of Health
Bureau of Health Promotion and Risk Reduction

Leslie Redd
SID Network of Ohio

Kristen Rost
Ohio Department of Job and Family Services
Children's Trust Fund

Angela Sausser Short
Ohio Family and Children First

Cynthia Shellhaas
Ohio Department of Health
Bureau of Child and Family Health Services

Joe Stack
Ohio Department of Public Safety

Kelly Taulbee
Hocking County Health Department

Laurie Thuman
Delaware County Health Department

Tracy Tucker
Parent (SIDS)

Barbara Turpin
Ohio Children's Defense Fund

Crystal Ward Allen
Public Children Services Association of Ohio

APPENDIX III
OHIO DEPARTMENT OF HEALTH
BUREAU OF CHILD AND FAMILY HEALTH SERVICES
CHILD FATALITY REVIEW PROGRAM STAFF

Jo Bouchard
Chief

Lori Deacon
Assistant Chief

Amy Davis
Health Planning Administrator

Merrily Wholf
CFR Coordinator

APPENDIX IV
LOCAL CHILD FATALITY REVIEW BOARD CHAIRS

Adams

Bruce M. Ashley
Adams County Health Department
937-544-5547
adamcohd@odh.ohio.gov

Allen

Kathy Luhn
Allen County Health Department
419-228-4457
kluhn@allenhealthdept.org

Ashland

Dan Daugherty
Ashland Health Department
419-282-4317
ddaughe2@lycos.com

Ashtabula

Raymond J. Saporito
Ashtabula County Health Department
440-576-6010
ray.saporito@odh.ohio.gov

Athens

James R. Gaskell
Athens City-County Health Department
740-592-4431
jamesgaskell2000@yahoo.com

Auglaize

Charlotte Parsons
Auglaize County Health Department
419-738-3410
cparsons@auglaizehealth.org

Belmont

Linda Mehl
Belmont County Health Department
740-695-1202
lmehl@belmontcountyhealth.org

Brown

Christopher T. Haas
Brown County General Health District
937-378-6892
christopher.haas@odh.ohio.gov

Butler

Robert J. Lerer
Butler County Health Department
513-863-1770
boh@butlercountyohio.org

Carroll

Nicholas V. Cascarelli
Carroll County Health Department
330-627-4866
Ncascarelli@carroll-lhd.org

Champaign

Shelia Hiddleson
Champaign Health District
937-484-1605
shiddleson@champaignhd.com

Clark

Charles Patterson
Clark County Combined Health District
937-390-5600
cpatterson@ccchd.com

Clermont

Marty Lambert
Clermont County General Health District
513-732-7499
mlambert@clermontcountyohio.gov

Clinton

Pamela Walker-Bauer
Clinton County Health Department
937-382-3829
pbauer@clincohd.com

Columbiana

Wesley J. Vins
Columbiana County Health Department
330-424-0272
wvins@columbiana-health.org

Coshocton

Rebecca J. Beiter
Cochocton County General Health District
740-295-7307
becky.beiter@odh.ohio.gov

Crawford

W. Scott Kibler
Crawford County General Health District
419-562-5871
cchc@crawford-co.org

Cuyahoga

Lori Mago
Help Me Grow
216-698-8973
lmago@helpmegrow.org

Darke

Terrence L. Holman
Darke County Health Department
937-548-4196
terrence.holman@odh.ohio.gov

Defiance

Kimberly J. Moss
Defiance County General Health District
419-784-3818
healthcommish@defiance-county.com

Delaware

Laurie Thuman
Delaware General Health District
740-203-2034
lthuman@delawarehealth.org

Erie

Peter T. Schade
Erie County General Health District
419-626-5623
pschade@eriecohealthohio.org

Fairfield

Larry Hanna
Fairfield Department of Health
740-653-2817
lhanna@co.fairfield.oh.us

Fayette

Robert G. Vanzant
Fayette County Health District
740-335-5910
fayecohd@odh.ohio.gov

Franklin

Andrea Hauser
Columbus Public Health
614-645-1667
alhauser@columbus.gov

Fulton

Michael Oricko
Fulton County Health Department
419-337-0915
mike.oricko@odh.ohio.gov

Gallia

Melissa Conkle
Gallia County Health Department
740-441-2960
melissa.conkle@odh.ohio.gov

Geauga

Robert Weisdack
Geauga County Health District
440-279-1903
rweisdack@geaugacountyhealth.org

Greene

Mark McDonnell
Green County Combined Health District
937-374-5600
mmcdonnell@gcchd.org

Guernsey

LuAnn Danford
Cambridge-Guernsey County Health
Department
740-439-3577
luann.danford@odh.ohio.gov

Hamilton

Ted Folger
Hamilton County Public Health
513-946-7924
Ted.Folger@hamilton-co.org

Hancock

Greg Arnette
Hancock County Health Department
419-424-7869
gaarnette@co.hancock.oh.us

Hardin

Kalyan Das
Kenton-Hardin Health Department
419-673-6230
hardcohd@odh.ohio.gov

Harrison

Luan Touvall
Harrison County Health Department
740-942-2616
luan.touvell@odh.ohio.gov

Henry

Anne Goon
Henry County Health Department
419-599-5545
agoon@henrycohd.org

Highland

James Vanzant
Highland Health Department
937-393-1941
jimvanzant@yahoo.com

Hocking

Kelly Taulbee
Hocking County Health District
740-385-3030
ktaulbee@hockingchd.com

Holmes

D. J. McFadden
Holmes County Health District
330-674-5035
dmcfadden@holmeshealth.org

Huron

Tim Hollinger
Huron County General Health District
419-668-1652
thollinger@huroncohealth.com

Jackson

Gregory A. Ervin
Jackson County Health Department
740-286-5094
greg.ervin@jacksoncountyhealthdepartment.org

Jefferson

Frank J. Petrola
Jefferson County General Health District
740-283-8530
jchd@jchealth.com

Knox

Julie Miller
Knox County Health Department
740-399-8000
jemiller@knoxhealth.com

Lake

Christine Margalis
Lake County General Health District
440-350-2879
cmargalis@lcghd.org

Lawrence

Kurt Hofmann
Lawrence County Health Department
740-532-3962
kurt.hofmann@odh.ohio.gov

Licking

Robert P. Raker
Licking County Coroner's Office
740-349-3633
lccoroner@alink.com

Logan

Boyd C. Hoddinott
Logan County Health District
937-592-9040
boyd.hoddinott@odh.ohio.gov

Lorain

Kenneth G. Pearce
Lorain County General Health District
440-284-3219
kpearce@loraincountyhealth.com

Lucas

David Grossman
Toledo-Lucas County Health Department
419-213-4018
grossmad@co.lucas.oh.us

Madison

Mary Ann Webb
Madison County-London City Health District
740-852-3065
mwebb@co.madison.oh.us

Mahoning

Patricia Sweeney
District Board of Health, Mahoning County
330-270-2855
psweeney@mahoninghealth.org

Marion

Frederick Winegarner
Marion Public Health
740-387-3604
maricohd@odh.ohio.gov

Medina

Daniel Raub
Medina County Health Department
330-723-9511
draub@medinahealth.org

Meigs

Larry Marshall
Meigs County Health Department
740-992-6626
larry.marshall@odh.ohio.gov

Mercer

Philip Masser
Mercer County - Celina City Health Department
419-586-3251
healthdept@mccchd.org

Miami

Christopher Cook
Miami County Health District
937-440-5418
ccook@miamicountyhealth.net

Monroe

Linda Dick
Monroe County Health Department
740-472-1677
linda.dick@odh.ohio.gov

Montgomery

James W. Gross
Public Health - Dayton and Montgomery County
937-225-4395
jgross@phdmc.org

Morgan

Richard D. Clark
Morgan County Health Department
740-962-4572
morgcohd@odh.ohio.gov

Morrow

Krista Wasowski
Morrow County Health Department
419-947-1545
krista.wasowski@odh.ohio.gov

Muskingum

Corrie Marple
Zanesville Muskingum County Health
Department
740-454-9741
corriem@zmchd.org

Noble

Shawn E. Ray
Noble County Health Department
740-732-4958
shawn.ray@noblecohd.org

Ottawa

Nancy C. Osborn
Ottawa County Health Department
419-734-6800
nosborn@cros.net

Paulding

Larry Fishbaugh
Paulding County Health Department
419-399-3921
paulcohd@odh.ohio.gov

Perry

Angela DeRolph
Perry County Health Department
740-342-5179
aderolph@perryhealth.com

Pickaway

Elaine Miller
Pickaway County General Health District
740-477-9667
emiller@pchd.org

Pike

Wally Burden
Pike County General Health District
740-947-7721
pcghd@bright.net

Portage

Duwayne Porter
Portage County Health Department
330-296-9919
dporter@portageco.com

Preble

Mark Vosler
Preble County Health District
937-472-0087
pcdh@preblecountyhealth.org

Putnam

Mary Ann Myers
Putnam County General Health District
419-523-5608
maryann.myers@odh.ohio.gov

Richland

Stan Saalman
Mansfield/Richland County Health Department
419-774-4510
ssaalman@richlandhealth.org

Ross

Timothy Angel
Ross County Health District
740-779-9652
tangel@horizonview.net

Sandusky

David G. Pollick
Sandusky County Health Department
419-334-6379
dpollick@sanduskycohd.org

Scioto

Aaron Adams
Scioto County Health Department
740-543-241
aaron.adams@odh.ohio.gov

Seneca

Marjorie S. Broadhead
Seneca County Health Department
419-447-3691
marjorie.broadhead@odh.ohio.gov

Shelby

Steven Tostrick
Sidney-Shelby County Health Department
937-498-7249
steven.tostrick@odh.ohio.gov

Stark

Kirkland Norris
Stark County Health Department
330-493-9904
norrisk@starkhealth.org

Summit

R. Daryl Steiner
Children's Hospital Medical Center of Akron
330-543-8124
dsteiner@chmca.org

Trumbull

James Enyeart
Trumbull County Health Department
330-675-2590
health@co.trumbull.oh.us

Tuscarawas

Deb Crank
Tuscarawas County Health Department
330-343-5555
debbie.crank@odh.ohio.gov

Union

Alexandria Jones
Union County Health Department
937-645-2054
alex.jones@health.co.union.oh.us

VanWert

Paul A. Kalogerou
Van Wert County Health Department
419-238-0808
vwchd@vanwertcountyhealth.org

Vinton

Susan Crapes
Vinton County Health District
740-596-5233
scrapes@vintonohhealth.org

Warren

Duane Stansbury
Warren County Combined Health District
513-695-1566
duane.stansbury@co.warren.oh.us

Washington

Kathleen L. Meckstroth
Washington County Health Department
740-374-2782
healthadmin@washco-ohhealth.org

Wayne

Gregory L. Halley
Wayne County Combined General Health
Department
330-264-9590
GHalley@wayne-Health.org

Williams

James Watkins
Williams County Health Department
419-485-3141
willcohd@odh.ohio.gov

Wood

Pam Butler
Wood County Health Department
419-352-8402
pbutler@co.wood.oh.us

Wyandot

Barbara Mewhorter
Wyandot County General Health District
419-294-3852
wchealthdept@co.wyandot.oh.us

APPENDIX V
ICD-10 CODES
USED FOR VITAL STATISTICS DATA
INCLUDED IN CFR REPORT

Cause of Death	ICD-10 Codes
Animal Bite or Attack	W53-W59, X20-27, X29
Asphyxia	W75-W84, X47, X66, X67, X70, X88, X91, Y17, Y20
Child Abuse and Neglect	Y06-Y07
Drowning	W65-W74, X71, X92, Y21
Environmental Exposure	W92, W93, W99, X30, X31, X32
Fall and Crush	W00-W19, W23, X80, Y01, Y02, Y30, Y31
Fire, Burn, Electrocution	X00-X09, X33, X76, X77, X97, X98, Y26, Y27, W85, W86, W87
Medical Causes (Excluding SIDS)	A000-B999, C000-D489, D500-D899, E000-E909, F000-F999, G000-G999, H000-H599, H600-H959, I000-I999, J000-J999, K000-K939, L000-L999, M000-M999, N000-N999, O000-O999, P000-P969, Q000-Q999, R000-R949
Other Causes (Residual)	All other codes not otherwise listed
Poisoning	X40-X49, X60-X65, X68, X69, X85, X87, X89, X90, Y10-Y16, Y18, Y19
Sudden Infant Death Syndrome	R95
Suicide	X60-X84
Vehicular	V01-V99, X81, X82, Y03, Y32
Weapon, Including Body Part	W26, W32-W34, X72-75, X78, X79, X93-96, X99, Y00, Y04, Y05, Y08, Y09, Y22-25, Y28-Y29, Y35.0 Y35.3

For this report, ICD-10 codes used for classification of Vital Statistics data were selected to most closely correspond with the causes of death indicated on the CFR case report tool. Therefore, the ICD-10 codes used for this report may not match the codes used for other reports or data systems.

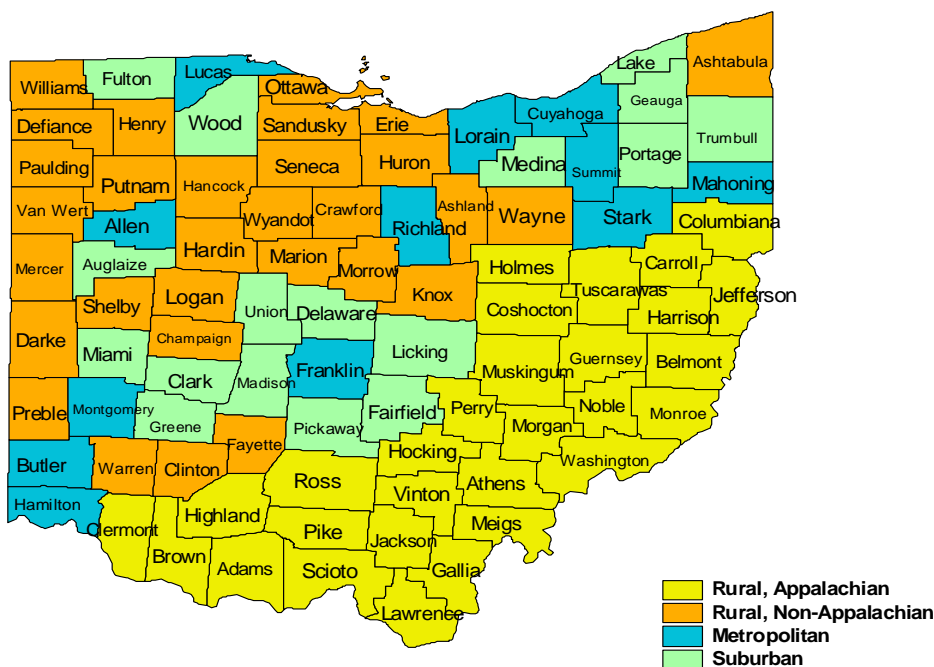
APPENDIX VI 2010 OHIO COUNTY TYPE DESIGNATIONS

Ohio's 88 counties have been categorized into four county types: rural Appalachian; rural non-Appalachian; metropolitan; and suburban.

- The 29 rural Appalachian counties were identified from Section 403 of the U. S. Code, and most are geographically situated in the Southeast region of Ohio.
- The 12 metropolitan counties were defined as non-Appalachian counties containing at least one city with 50,000 or more inhabitants as of the 1990 census.
- The 17 suburban counties were non-metropolitan, non-Appalachian counties that met the criteria of an urbanized area as defined by the U.S. Census Bureau for the 1990 census. Thus, suburban counties are essentially urbanized areas without large cities. All suburban counties are also adjacent to at least one metropolitan county.
- The 30 counties that were not Appalachian, metropolitan, or suburban were classified as rural non-Appalachian.

In 2008, Ashtabula, Trumbull and Mahoning were added to the Appalachian counties. To maintain continuity for the five-year period 2006-2010, for the purpose of this report, Ashtabula remains rural non-Appalachian; Trumbull remains suburban; and Mahoning remains metropolitan.

Ohio County Designation



**APPENDIX VII
DATA TABLES**

Table 1: Reviews of 2010 Deaths by Manner of Death by Age, Race and Gender (N=1,542)						
	Natural	Accident	Homicide	Suicide	Undetermined/ Unknown	Total
Age	#	#	#	#	#	#
1-28 Days	694	9	7	0	14	724
29-364 Days	186	50	15	0	81	332
1-4 Years	94	58	10	0	10	172
5-9 Years	49	26	1	0	1	77
10-14 Years	63	28	1	7	2	101
15-17 Years	42	52	19	21	2	136
Unknown	-	-	-	-	-	0
Missing	-	-	-	-	-	0
Race*	#	#	#	#	#	#
White	747	178	25	24	54	1,028
Black	535	41	28	4	56	664
Other	28	4	-	-	-	32
Unknown	-	-	-	-	-	0
Missing	-	-	-	-	-	0
Gender	#	#	#	#	#	#
Male	612	132	38	21	61	864
Female	516	91	15	7	49	678
Unknown	-	-	-	-	-	-
Missing	-	-	-	-	-	-
Total	1,128	223	53	28	110	1,542
*37 cases with multiple races indicated were assigned to the minority race.						

Table 2: Reviews of 2010 Deaths: All Medical Causes of Death by Age (N=1,130)

	0-28 Days	29-364 Days	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Asthma	0	0	0	1	0	3	4
Cancer	0	0	11	14	17	6	49
Cardiovascular	16	2	9	4	8	5	44
Congenital Anomalies	100	40	28	4	8	6	186
Neurological Disorders	1	4	4	3	3	5	20
Pneumonia	5	16	6	2	4	1	34
Prematurity	475	34	2	1	0	0	512
SIDS	6	22	0	0	0	0	28
Other Infection	5	16	7	1	5	2	35
Other Perinatal Conditions	21	3	0	0	0	0	24
Other Medical Condition	63	48	28	18	17	14	188
Undetermined/Unknown	1	4	1	0	0	0	6
Medical Causes Total	694	188	96	48	62	42	1,130
Reviews of 2010 Deaths: All External Causes of Death by Age (N=334)							
	0-28 Days	29-364 Days	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Vehicular	0	5	17	13	14	39	88
Asphyxia	8	38	9	1	9	13	78
Weapon (Including Body Part)	0	8	13	5	4	24	54
Fire, Burn or Electrocution	1	2	17	5	4	1	30
Drowning	0	1	13	7	5	2	28
Poisoning	0	0	4	0	0	12	16
Fall or Crush	0	1	4	1	2	1	9
Exposure	0	1	2	0	0	0	3
Other Injury	0	0	0	1	0	0	1
Undetermined/Unknown	2	24	0	0	0	1	27
External Causes Total	11	80	79	33	38	93	334
For 78 reviews, the cause of death could not be determined as either medical or external.							

Table 3: Reviews of 2010 Deaths: All Medical Causes of Death by Race (N=1,130)						
	White	Black	Other	Unknown	Missing	Total
Asthma	0	4	-	-	-	4
Cancer	32	9	2	-	-	49
Cardiovascular	31	9	3	-	-	44
Congenital Anomalies	130	51	5	-	-	186
Neurological Disorders	13	6	1	-	-	20
Pneumonia	25	8	1	-	-	34
Prematurity	597	208	7	-	-	512
SIDS	24	3	1	-	-	28
Other Infection	29	5	1	-	-	35
Other Perinatal Conditions	14	10	-	-	-	24
Other Medical Condition	140	41	7	-	-	184
Undetermined	5	1	-	-	-	6
Medical Causes Total	747	355	28	0	0	1,130
*29 cases with multiple races indicated were assigned to the minority race.						
Reviews of 2010 Deaths: External Causes of Death by Race (N= 334)						
	White	Black	Other	Unknown	Missing	Total
Vehicular	73	12	3	-	-	88
Asphyxia	55	23	-	-	-	78
Weapon (Including Body Part)	28	26	-	-	-	54
Fire, Burn or Electrocution	27	3	-	-	-	30
Drowning	21	6	1	-	-	28
Poisoning	15	1	-	-	-	16
Fall or Crush	9	-	-	-	-	9
Exposure	2	1	-	-	-	3
Other Injury	1	-	-	-	-	1
Undetermined/Unknown	9	18	-	-	-	27
External Causes Total	240	*0	4	0	0	334
*6 cases with multiple races indicated were assigned to the minority race.						
For 78 reviews, the cause of death could not be determined as either medical or external.						

Table 4: Reviews of 2010 Deaths: All Medical Causes of Death by Gender (N=1,130)					
	Male	Female	Unknown	Missing	Total
Asthma	2	2	-	-	4
Cancer	26	23	-	-	49
Cardiovascular	22	22	-	-	44
Congenital Anomalies	92	94	-	-	186
Neurological Disorders	9	11	-	-	20
Pneumonia	18	16	-	-	34
Prematurity	286	226	-	-	512
SIDS	17	11	-	-	28
Other Infection	20	15	-	-	38
Other Perinatal Conditions	8	16	-	-	24
Other Medical Condition	109	79	-	-	184
Undetermined	1	5	-	-	6
Medical Causes Total	610	520	0	0	1,130
Reviews of 2010 Deaths: All External Causes of Death by Gender (N=334)					
	Male	Female	Unknown	Missing	Total
Vehicular	57	31	-	-	88
Asphyxia	43	35	-	-	78
Weapon (Including Body Part)	40	14	-	-	54
Fire, Burn or Electrocution	18	12	-	-	30
Drowning	19	9	-	-	28
Poisoning	8	8	-	-	16
Fall or Crush	9	-	-	-	9
Exposure	-	3	-	-	3
Other Injury	10	-	-	-	1
Undetermined/Unknown	13	14	-	-	27
External Causes Total	208	126	0	0	334
For 78 reviews, the cause of death could not be determined as either medical or external.					

Table 5: Child Population, Child Deaths and Reviews by County Type, 2010							
	Child Population		Child Deaths		Reviews Completed		Percent Deaths Reviewed
County Type	#	%	#	%	#	%	%
Rural Appalachian	340,024	13	288	15	218	14	94
Rural Non-Appalachian	403,976	15	208	13	206	13	99
Suburban	509,953	19	226	14	206	13	91
Metropolitan	1,477,009	54	913	58	912	59	100
Total	2,739,962	100	1,580	100	1,542	100	98

Table 6: Reviews of 2006-2010 Deaths by Manner of Death by Age, Race and Gender (N=8,247)

	Natural	Accident	Homicide	Suicide	Undetermined / Unknown	Total
Age	#	#	#	#	#	#
0-28 Days	3,563	67	6	-	52	3,688
29-364 Days	1,063	298	63	-	347	1,768
1-4 Years	450	244	102	-	39	835
5-9 Years	270	132	48	1	6	451
10-14 Years	313	170	28	56	11	578
15-17 Years	253	376	126	163	9	927
Unknown	-	-	-	-	-	0
Missing	-	-	-	-	-	0
Race*	#	#	#	#	#	#
White	3,804	963	158	181	262	5,368
Black	1,974	295	208	36	200	2,713
Other	90	16	-	3	2	111
Unknown	26	5	1	-	-	32
Missing	18	5	-	-	-	23
Gender	#	#	#	#	#	#
Male	3,287	818	246	154	265	4,770
Female	2,613	465	121	66	198	3,469
Unknown	2	-	-	1	-	2
Missing	10	1	-	-	1	12
Total	5,912	1,284	367	220	464	8,247

*173 cases with multiple races indicated were assigned to the minority race.

Table 7: Reviews of 2006-2010 Deaths: All Medical Causes of Death by Age (N=5,991)

	0-28 Days	29-364 Days	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Asthma	-	-	5	8	7	7	27
Cancer	1	5	52	68	82	38	246
Cardiovascular	111	50	41	20	27	32	281
Congenital Anomalies	498	228	104	32	38	22	922
Low Birth Weight	10	2	-	-	-	-	12
Malnutrition/Dehydration	-	6	2	-	-	1	9
Neurological Disorders	5	19	19	14	10	25	92
Pneumonia	20	76	39	19	22	15	191
Prematurity	2,381	167	7	3	-	-	2,558
SIDS	24	221	1	-	-	-	246
Other Infection	68	68	45	28	23	11	243
Other Perinatal Conditions	135	18	4	1	3	1	162
Other Medical Condition	314	195	133	79	103	101	925
Undetermined/Unknown	14	50	8	2	2	1	77
Medical Causes Total	3,581	1,105	460	274	317	254	5,991

Reviews of 2006-2010 Deaths: All External Causes of Death by Age (N=1,988)

	0-28 Days	29-364 Days	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Asphyxia	47	262	44	11	66	107	537
Vehicular	3	19	68	66	89	288	533
Weapon (Including Body Part)	4	41	67	25	36	176	349
Fire and Burns	2	12	65	40	17	10	146
Drowning	1	9	58	20	27	23	138
Poisoning	-	5	12	1	9	50	77
Fall or Crush	1	3	19	7	9	13	52
Exposure	1	3	5	-	-	-	9
Other Injuries	2	6	9	4	1	2	24
Undetermined/Unknown	14	99	6	2	1	1	123
External Causes Total	75	459	353	176	255	670	1,988

For 268 reviews, the cause of death could not be determined as either medical or external.

Table 8: Reviews of 2006-2010 Deaths: All Medical Causes of Death by Race (N=5,991)						
	White	Black	Other	Unknown	Missing	Total
Asthma	10	17	-	-	-	27
Cancer	197	39	8	1	1	246
Cardiovascular	201	74	5	-	1	281
Congenital Anomalies	657	240	14	7	4	922
Low Birth Weight	10	2	-	-	-	12
Malnutrition/Dehydration	7	2	-	-	-	9
Neurological Disorders	60	27	4	-	1	92
Pneumonia	133	53	4	1	-	191
Prematurity	1,363	1,151	27	12	5	2,558
SIDS	188	54	4	-	-	246
Other Infection	166	71	5	-	1	243
Other Perinatal Conditions	113	47	2	-	-	162
Other Medical Condition	699	202	15	4	5	925
Undetermined	44	30	2	1	-	77
Medical Causes Total	3,848	2,009	90	26	18	5,991
*128 cases with multiple races indicated were assigned to the minority race.						
Reviews of 2006-2010 Deaths: External Causes of Death by Race (N= 1,988)						
	White	Black	Other	Unknown	Missing	Total
Asphyxia	370	159	4	1	3	537
Vehicular	450	72	8	2	1	533
Weapon (Including Body Part)	161	187	-	1	+	349
Fire and Burns	100	44	1	-	1	146
Drowning	96	36	4	2	-	138
Poisoning	67	10	-	-	-	77
Fall or Crush	46	4	2	-	-	52
Exposure	7	2	-	-	-	9
Other Injuries	18	6	-	-	-	24
Undetermined/Unknown	48	75	-	-	-	123
External Causes Total	1,363	595	19	6	5	1,988
*34 cases with multiple races indicated were assigned to the minority race.						
For 263 reviews, the cause of death could not be determined as either medical or external.						

Table 9: Reviews of 2006-2010 Deaths: All Medical Causes of Death by Gender (N=5,991)					
	Male	Female	Unknown	Missing	Total
Asthma	13	13	-	1	27
Cancer	128	118	-	-	246
Cardiovascular	149	132	-	-	281
Congenital Anomalies	495	424	1	2	922
Low Birth Weight	5	7	-	-	12
Malnutrition/Dehydration	4	5	-	-	9
Neurological Disorders	43	49	-	-	92
Pneumonia	118	72	-	1	191
Prematurity	1,466	1,387	2	3	2,558
SIDS	139	106	-	1	246
Other Infection	136	107	-	-	243
Other Perinatal Conditions	88	74	-	-	162
Other Medical Condition	511	412	-	2	925
Undetermined/Unknown	41	36	-	-	77
Medical Causes Total	3,336	2,642	3	10	5,991
Reviews of 2006-2010 Deaths: All External Causes of Death by Gender (N= 1,988)					
	Male	Female	Unknown	Missing	Total
Asphyxia	324	212	-	1	537
Vehicular	339	194	-	-	533
Weapon (Including Body Part)	274	75	-	-	349
Fire and Burns	71	75	-	-	146
Drowning	95	43	-	-	138
Poisoning	45	32	-	-	77
Fall or Crush	44	8	-	-	52
Exposure	2	7	-	-	9
Other Injuries	17	7	-	-	24
Undetermined/Unknown	67	56	-	-	123
External Causes Total	1,278	709	0	1	1,988
For 268 reviews, the cause of death could not be determined as either medical or external.					

Table 10: Reviews of 2006-2010 Deaths by Year by Age, Race and Gender (N=8,247)						
	2006	2007	2008	2009	2010	Total
Age	#	#	#	#	#	#
0-28 Days	739	768	737	727	717	3,688
29-364 Days	366	364	371	340	327	1,768
1-4 Years	155	184	162	155	179	835
5-9 Years	116	87	89	78	81	451
10-14 Years	132	91	117	130	102	578
15-17 Years	200	221	199	171	136	927
Unknown	-	-	-	-	-	0
Missing	-	-	-	-	-	0
Race*	#	#	#	#	#	#
White	1,093	1,141	1,075	1,033	1,028	5,370
Black	571	542	579	540	482	2,714
Other	13	23	18	25	32	111
Unknown	19	7	3	3	-	32
Missing	12	8	-	-	-	20
Gender	#	#	#	#	#	#
Male	1,005	1,011	966	924	765	4,770
Female	698	701	709	677	678	3,463
Unknown	1	2	-	-	-	3
Missing	4	7	-	-	-	11
Total	1,708	1,721	1,675	1,601	1,542	8,247
* 173 cases with multiple races indicated were assigned to the minority race.						

Table 11: Reviews of 2006-2010 Deaths by Year by Cause, Circumstances and Preventability (N=8,247)

	2006	2007	2008	2009	2010	Total
	#	#	#	#	#	#
Medical Causes						
Prematurity	514	549	513	470	512	2,558
Congenital Anomaly	203	184	174	175	186	922
Cardiovascular	51	75	49	62	44	281
SIDS	75	55	43	45	28	246
Other Infections	56	44	56	52	35	243
Cancer	57	53	45	42	49	246
Pneumonia	45	43	36	33	34	191
Other Perinatal	23	36	47	32	24	162
Neurological	20	20	19	13	20	92
Asthma	5	11	4	3	4	27
Malnutrition/Dehydration	1	3	2	1	2	9
Other Medical	161	167	203	220	186	937
Undetermined/Unknown	26	25	9	11	6	77
External Causes	#	#	#	#	#	#
Asphyxia	119	113	119	108	78	537
Vehicular	128	116	115	86	88	533
Weapon (Including Body Part)	72	76	70	77	54	349
Fire and Burns	38	26	34	18	30	146
Drowning	25	31	27	27	28	138
Poisoning	17	10	19	15	16	77
Fall or Crush	13	9	8	13	9	52
Exposure	1	2	1	2	3	9
Other Injuries	10	6	3	5	1	25
Undetermined/Unknown	30	17	26	23	27	123
	#	#	#	#	#	#
Child Abuse & Neglect	33	38	36	34	24	165
Sleep-related Infant Deaths	183	178	168	153	148	830
	#	#	#	#	#	#
Probably Preventable-All Reviews	402	374	394	349	340	1,859
Year Total	1,708	1,721	1,675	1,601	1,542	8,247

Table 12: Reviews of 2006-2010 Deaths by County Type by Age, Race and Gender (N=8,247)

	Rural Appalachian	Rural Non- Appalachian	Suburban	Metropolitan	Total
Age	#	#	#	#	#
0-28 Days	368	380	460	2,480	3,688
29 – 364 Days	216	231	228	1,093	1,768
1-4 Years	130	132	123	450	835
5-9 Years	58	77	65	251	451
10-14 Years	84	106	85	303	578
15-17 Years	132	159	160	476	927
Race*	#	#	#	#	#
White	917	979	988	2,484	5,368
Black	65	78	115	2,455	2,713
Other	4	17	13	77	111
Unknown	1	8	2	21	32
Missing	1	3	2	14	20
Gender	#	#	#	#	#
Male	597	589	653	2,931	4,770
Female	388	494	465	2,116	3,463
Unknown	0	0	0	3	3
Missing	3	2	3	3	11
Total	988	1,085	1,121	5,053	8,247

* 173 cases with multiple races indicated were assigned to the minority race.

Table 13:
Reviews of 2006-2010 Deaths by County Type by Cause, Circumstances and Preventability (N=8,247)

	Rural Appalachian	Rural Non- Appalachian	Suburban	Metropolitan	Total
Medical Causes	#	#	#	#	#
Prematurity	209	199	296	1,854	2,558
Congenital Anomaly	116	108	129	569	922
Cardiovascular	32	39	36	174	281
SIDS	52	70	39	85	246
Other Infections	33	33	40	137	243
Cancer	37	40	30	139	246
Pneumonia	16	45	25	105	191
Other Perinatal	10	34	24	94	162
Neurological	14	10	9	59	92
Asthma	2	3	3	19	27
Malnutrition	0	3	0	6	9
Other Medical	140	152	151	482	925
Undetermined/Unknown	9	7	12	49	77
External Causes	#	#	#	#	#
Asphyxia	68	59	98	312	537
Vehicular	96	132	99	206	533
Weapon (Including Body Part)	36	34	34	245	349
Fire and Burns	30	31	12	73	146
Drowning	25	24	19	70	138
Poisoning	14	9	16	38	77
Fall or Crush	6	18	6	22	52
Exposure	0	0	2	7	9
Other Injuries	7	5	5	7	24
Undetermined/Unknown	4	4	2	113	123
	#	#	#	#	#
Child Abuse & Neglect	23	24	16	102	165
Sleep-related Infant Deaths	98	101	94	537	830
	#	#	#	#	#
Probably Preventable – All Reviews	292	309	258	1,000	1,859
Total	988	1,085	1,121	5,053	8,247

APPENDIX VIII

REFERENCES*

¹ National Center for Health Statistics and U.S. Census Bureau data. Processed through Ohio Department of Health, Vital Statistics, June 29, 2012. Note: For the Census data used in this report, persons with multiple races indicated were assigned by a complex algorithm including geographic area and proportions of all races in that area and other factors.

² Program Manual for Child Death Review. Ed.Covington T, Foster V, Rich S. The National Center for Child Death Review, 2005.

³ U.S. Census Bureau. Population Estimates. Annual Estimates of the Resident Population by Selected Age Groups and Sex for Counties: April 1, 2010 to July 1, 2011. Available at www.census.gov/popest/counties/asrh/2011/CC-EST2011-agesex.html.

⁴ National Center for Health Statistics and U.S. Census Bureau data. Processed through Ohio Department of Health, Vital Statistics, June 29, 2012.

⁵ National Center for Health Statistics and U.S. Census Bureau data. Processed through Ohio Department of Health, Vital Statistics, June 29, 2012.

⁶ National Center for Health Statistics and U.S. Census Bureau data. Processed through Ohio Department of Health, Vital Statistics, June 29, 2012.

⁷ National Center for Injury Prevention and Control. WISQARS Injury Mortality Reports, 1999 – 2009 page. Available at webappa.cdc.gov/sasweb/ncipc/leadcaus10.html.

⁸ Centers for Disease Control and Prevention. Self-directed Violence Surveillance: Uniform Definitions and Recommended Data Elements, 2011. Available at webappa.cdc.gov/violenceprevention/pdf/Self-Directed-Violence-a.pdf.

⁹ National Center for Injury Prevention and Control. WISQARS Injury Mortality Reports, 1999 – 2009 page. Available at webappa.cdc.gov/sasweb/ncipc/leadcaus10.html.

¹⁰ Prevent Child Abuse America. *What You Can Do: Remember the Risk Factors*. Available at www.preventchildabuse.org/help/remember_risk_factors.shtml.

¹¹ Ohio Department of Health. *Ohio Child Fatality Review Seventh Annual Report. September 2007*. Available at www.odh.ohio.gov/~media/ODH/ASSETS/Files/cfhs/child%20fatality%20review/ohiochildfatalityreviewannualreport2007-3.ashx.

¹² National Center for Health Statistics. *Death in the United States, 2010*. Available at www.cdc.gov/nchs/data/databriefs/db99.htm.

¹³ National Center for Health Statistics and U.S. Census Bureau data. Processed through Ohio Department of Health, Vital Statistics, June 29, 2012.

¹⁴Willinger M, James LS, Catz C. Defining the sudden infant death syndrome (SIDS): Deliberations of an expert panel, convened by the National Institute of Child Health and Human Development. *Pediatric Pathology*. 1991; 11:677-684.

¹⁵Centers for Disease Control and Prevention. Sudden Infant Death Syndrome (SIDS) and Sudden Unexpected Infant Death (SUID): Sudden, Unexpected Infant Death (SUID) Initiative page. Available at webappa.cdc.gov/sids/SUIDAbout.htm.

¹⁶ National Center on Birth Defects and Developmental Disabilities. *Child Development*. Available at webappa.cdc.gov/ncbddd/child/default.htm.

¹⁷ National Center for Health Statistics. *Deaths: Preliminary Data for 2010*. Available at webappa.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_04.pdf.

¹⁸ National Center on Birth Defects and Developmental Disabilities. *Child Development*. Available at webappa.cdc.gov/ncbddd/child/default.htm.

¹⁹ National Center for Injury Prevention and Control. WISQARS Leading Causes of Death Reports, 1999-2009 page. Available at webappa.cdc.gov/sasweb/ncipc/leadcaus10.html.

²⁰ National Center on Birth Defects and Developmental Disabilities. *Child Development*. Available at webappa.cdc.gov/ncbddd/child/default.htm.

²¹ National Center for Injury Prevention and Control. WISQARS Leading Causes of Death Reports, 1999-2009 page. Available at webappa.cdc.gov/sasweb/ncipc/leadcaus10.html.

²² National Center on Birth Defects and Developmental Disabilities. *Child Development*. Available at webappa.cdc.gov/ncbddd/child/default.htm.

²³ National Center for Injury Prevention and Control. WISQARS Leading Causes of Death Reports, 1999-2009 page. Available at webappa.cdc.gov/sasweb/ncipc/leadcaus10.html.

²⁴ Program Manual for Child Death Review. Ed.Covington T, Foster V, Rich S. The National Center for Child Death Review, 2005.

*All Internet sites referenced were last accessed July 25, 2012.

Ohio's State Health Improvement Plan (SHIP) - 2012

Priority: INJURY & VIOLENCE PREVENTION

Goal Statement: Promote public awareness, policy, programs and data that demonstrate that injury & violence are preventable.

The following strategies will be implemented. Each strategy will involve specific activities leading to identified outcomes that put Ohio on the path to achieving the stated goal within the next 24 to 36 months.

What Is Being Done		Key Partners	Funding Source	12-Month Outcome	24-Month Outcome
Strategy	Action Step				
Promote public & professional awareness of injury & violence as preventable public health issues.	Hold a forum of injury stakeholders to share key points from existing IVP plans.	Leadership groups of relevant IVP groups & coalitions (e.g., OSPF, OAESV, ODVN, SADVPP, OIPP, VIPP and OH-VDRS Advisory Group)	CDC	Identify strategies for cross-collaboration and promotion of IVP plans.	Annual forums will be held to reassess strategies.
	Identify shared branding campaign.			Branding campaign will be promoted across IVP groups.	Use & usefulness of branding will be assessed.
	Promote existing IVP state plans to multidisciplinary professionals.				
Implement IVP policy.	Identify priority policy issues from key IVP groups.	Leadership groups of relevant state IVP coalitions	CDC / TBD	Policy document with identified priorities created.	Measured success (e.g., data available, decision-makers educated, coalition mobilization, etc.) in promoting identified policy changes.
	Identify strategies for joint support of identified policy priorities.				
Identify IVP program needs and gaps.	Identify and promote evidence-based IVP (e.g., <i>Tai Chi: Moving for Better Balance</i> for older adult falls prevention)	OIPP Falls Coalition & Evidence-Based Injury Prevention Action Group	CDC / TBD	At least 30 <i>Tai Chi: Moving for Better Balance</i> classes will be held throughout Ohio.	Assess gaps in availability of <i>Tai Chi: Moving for Better Balance</i> training.

				Recommendations will be developed for additional IVP programming related to priorities	
	Identify gaps in IVP capacity at the state & local level (e.g., lack of local funding for injury prevention)			Gaps in IVP capacity will be identified and recommendations developed for addressing them.	
	Promote effective strategies (e.g., resiliency / asset building) and cross collaboration to intervene with youth around suicide, relationship violence and youth violence prevention.	Leadership groups of relevant state IVP coalitions; Ohio Adolescent Health Partnership		IVP leadership groups will support development of the IVP action plan within the Ohio Adolescent Health Plan	TBD by Ohio Adolescent Health Partnership
	Identify gaps in statewide youth violence prevention efforts and capacity	Leadership groups of relevant state and local violence prevention groups		Gaps in statewide youth violence prevention efforts will be identified	Recommendations will be developed for statewide youth violence prevention efforts
Improve IVP data quality and accessibility	Identify data gaps and develop a plan to address them through data systems	Leadership groups of relevant state IVP coalitions; OIPP Data Action Group members	CDC / TBD	IVP data gaps will be identified	IVP data plan will be developed with recommendations for improving Ohio IVP data
	Explore existing sources or identify potential new sources to address gaps				
	Support external-cause-of-injury (E-coding) and other improvements to data sources			Assess changes in E-coding in transition of hospitals from ICD-9 to ICD-10 coding	If needed per 12-month outcome, identify resources to host E-coding training for Ohio hospital billing coders

* **Abbreviations:** Injury & violence prevention (IVP); Ohio Suicide Prevention Foundation (OSPF); Ohio Alliance to End Sexual Violence (OAESV); Ohio Domestic Violence Network (ODVN), Sexual Assault & Domestic Violence Prevention Program (SADVPP), Ohio Injury Prevention Partnership (OIPP), Violence & Injury Prevention Program (VIPP); Ohio Violent Death Reporting System (OH-VDRS) Advisory Group

A. Ohio Trauma System: Historical Perspective

Date	Action
Prior to 1982	EMS Advisory Panel (EMS personnel and fire chiefs) existed within Ohio Department of Education
1982	Cleveland Medical Association of Medicine introduced resolution to the house of delegates from the Ohio State Medical Association (OSMA) calling for establishment of state-wide trauma system
1983 – 1985	Ohio COT task force developed with collaboration from OSMA; guideline for trauma system development proposed; not adopted
1988	Ohio Society of Trauma Nurse Coordinators (later Ohio Society of Trauma Nurse Leaders) created
1990	NHTSA assessment – recommendations assisted development of SB 98 (1992)
1992	Ohio Alliance of Trauma Registrars (OATR) began meeting
Nov 1992	SB 98 effective, created the Division of EMS under ODPS; created EMS Board; established Trauma Care Advisory Group (TCAG-later Trauma Committee); mandated the formation of a trauma registry; required formation of an EMS incident reporting system; required a report on the development of a state-wide trauma system; development of Regional Physician Advisory Boards (RPAB)
Jan 1993	18 members of EMS Board seated; TCAG members selected with Dr. Richard Fratianne as chair
Oct 1994	ODPS received grant from HRSA for trauma system development
Nov 1994	Trauma Standards and Accreditation Draft Document developed by Trauma Committee, submitted to legislature as required by SB 98
March 1995 – Dec 1996	Trauma Liaison (Sally Jo Zuspan) hired by DEMS to help establish trauma systems
May 1995	Trauma Committee drafted Ohio Trauma Systems Proposal (OTSP) outlining essential components of trauma system
Oct 1995	Trauma forums held throughout Ohio to address trauma concerns
Nov 1995	Development of Trauma Systems seminar held to generate consensus on issues
Dec 1995	16 ACS verified trauma centers (10 level I, 6 level II)
Nov 1995 - Feb 1996	ODPS contracted Udell Research Associates (Dr. John Udell) to analyze Ohio 1993 injury data (via OHA hospital discharge data); OHA partial compliance with request led to incomplete report
April 1996	Columbus Dispatch first published articles on trauma system
May 1996	EMS Board approved OTSP(see May 1995) but supported a voluntary system only
Aug 1996	Trauma Committee membership expanded; work groups developed; second article published in Columbus Dispatch
Nov 1996	Trauma Registry rules passed; Representative Schuck expressed interest in trauma legislation
Dec 1996	Trauma Liaison position of ODPS terminated; new position changed to Trauma Liaison / RAP administrative assistant
1997-1999	DEMS eliminated trauma position; Ohio Committee on Trauma (Ohio COT) hired Sally Jo Zuspan as lobbyist
Feb 1997	Columbus Dispatch published large series of articles on trauma systems; American Medical News published article contrasting the efforts of Oregon vs. Ohio in trauma system development
Feb 1997	Representative Schuck pledges to introduce trauma legislation; Rep Schuck

March 1997	meets with several trauma surgeons to start drafting legislation OSTNL, ONA, ENA, AORN develop a joint position paper supporting state trauma legislation
May 1997	Trauma Committee votes to proceed with trauma legislation; EMS Board votes down motion to proceed with trauma legislation
Aug 1997	Governor supports trauma legislation; meets with ODPS, ODH Directors and Rep Schuck
1998	The Central Ohio Trauma System (COTS) was formally established as the first regional trauma consortium
Jan 1998	HB 681 introduced by Rep Schuck
May 1998	HB 681 (Trauma legislation) died in committee.
1999	Ohio Trauma Registry established within ODPS /DEMS (home grown system); scope limited to patients with greater than 48-hour hospital admit
Jan 1999	Letter writing campaign for legislation # of Trauma Centers before legislation: 20 ACS verified trauma centers (at least 11 level I)
July 2000	Amended HB 138 (23 rd General Assembly) signed into law. Beginning November 3, 2002, hospitals cannot represent themselves as trauma centers unless they are verified by the ACS; regional protocols for the triage and initial stabilization / treatment of seriously injured patients must be developed; broadened the membership of the EMS Board with trauma representation; revised Trauma Committee to support the EMS Board in its work; integrity of trauma registry data was increased by adding risk adjustment parameters and confidentiality protections; funding thought trauma / EMS grant program; special studies analysis to provide information for further trauma system development-
Fall 2000	State Trauma Program Manager within ODPS (Mike Glenn) hired
Nov 2000	Re-organization of Trauma Committee; Joe Luria MD- first chair; Trauma Registry Advisory Subcommittee (TRAS) re-organized and placed as subcommittee under Trauma Committee (approval by EMS Board)
2001	Tri-State Trauma Coalition (TSTC) formally established as regional system in southwest region
June 2001	OHA / Ohio Committee on Trauma collaborated to sponsor a day-long seminar on becoming a Level III trauma center
October 2001	Data Program Manager for EMSIRS / Trauma Registry (Tim Erskine) hired
October 2001	EMS Director Module (on-line education) developed
October 2001	AIS 3 day coding class held for trauma registrars across state
Nov 2001	NTHSA re-assessment done for ODPS
Dec 2001	First Ohio Level III trauma center verified by ACS
Nov 2000 – Nov 2002	Ohio Trauma Committee developed recommendations and placed into legislative rules for field triage to trauma centers and trauma registry risk adjustment.
2002-2003	Regional trauma triage approvals
April - Nov, 2002	Workgroup of representatives from ODH, ODPS, Trauma Committee, EMS Board and OHA developed a Final Report on Provisional Trauma Center Designation. Submitted to ODH (Nick Baird) in Nov 2002
April 2002	5 module EMS Medical Director course developed by ACEP available on line
Oct 2002	OHA developed template of model transfer as required ORC
Nov 2002	Passage of SB 124 which incorporating an eighteen month provisional trauma center designation status that allows hospitals to operate as trauma centers while completes the ACS verification process
Nov 2002	HB 138 into effect

July 2003	Seven special studies returned to Trauma Committee with 1-2 page synopsis developed; Grant funding with distribution of funds began
July 2003	Trauma Committee developed State Trauma PI Workgroup to develop system for trauma PI at state level
Sept 2003	State Medical Director with DEMS appointed (JD Polk, DO)
Oct 2003	The EMS Board has approved the proposal to conduct a project collecting trauma data on patients admitted for less than 48 hours; TRAS will be leading this effort in 2004
Nov 2003	7 Commission Reports on EMS and Trauma Topics (7 Special Studies) sent to Governor Taft and the 125 th General Assembly; 1-2 page synopsis / study
March 2004	State PI Indicators (from Trauma Committee PI Workgroup) approved for implementation by Trauma Committee; approved by EMS Board April 2004
July 2004	State Medical Director appointed (Carol Cunningham MD) replacing Dr. Polk
Nov 2004	Ohio's received a federal grant for the CODES (Crash Outcome Data Evaluation System) projects
Nov 2004	Public health council adopted rules require a trauma center to report information to the director of health describing the trauma center's preparedness and capacity to respond to MCI and bioterrorism.
May 2005	Approval by Trauma Committee for regional PI reports to be placed on website
July 2005	Geriatric Workgroup started – chair Howard Werman, MD
Jan 2007	Hiring freeze at state level. Tim Erskine replaced Mike Glenn as ODPS position of Chief, Trauma Systems and Research
2007	Funding of National HRSA Trauma / EMS grants to states eliminated
Sept 2007	Approval of Geriatric Trauma Triage report – Trauma Committee Nov 2007; EMS Board Dec 2007
Oct 2007	2 hour required CE for trauma triage education approved
Nov 2007	Ohio Injury Community Planning Group (now OIPP) under ODH started meeting
March 2008	MTPSE assessment at state level led by OSTNL
Oct 2008	EMS Board accepted recommended changes, to include geriatric trauma triage
Dec 2008	Pre-hospital Geriatric Triage Rules passed and in effect
Jan 2009	Adoption of National EMS Scope of Practice as minimal standards (check on this)
Feb 2009	Subcommittee began meeting to begin development of Trauma System Plan
April 2009	2 hour web-based CE for Trauma Triage Rules available on-line
Sept 2009	4-year grant of \$273,727/year received by the Department of Health's Violence and Injury Prevention Program from the CDC to develop the Ohio Violent Death Reporting System (OH-VDRS). Ohio becomes the 18th state
Dec 2009	Geriatric Task Force Report published, approved by EMS Board
Feb 2010	The following tasks have been assigned by the EMS Board to the Trauma Committee: Work to develop a process for validation of the information in the trauma registry to assure that the data is accurate; make any specific recommendations for change in the handling of data; research the specific opportunities and ways to merge the data in specific registries; and research the staffing of other state's trauma systems.
June 2010	Trauma Visionary Committee started (5 EMS Board, 5 Trauma Committee members)
July 2010	Open forum / comments completed on Ohio Trauma Framework
Oct 2010	Final approval Trauma Framework (i.e. Trauma System Plan) by EMS Board
Feb 2011	NHTSA Technical Team Re-assessment completed
Feb 2011	EMS Board approved grant (priority 2) to fund a state ACS trauma system review (for 2012-13)
March 2011	Initial consideration / work on developing a joint registry (EMS, Trauma, Rehab)

Sept 2011	New titles of Emergency Medical Responder (EMR), EMT, Advanced EMT, and Paramedic will go into effect in Ohio by law.
Nov 2011	3 year required review of trauma triage rules due
Dec 2011	Metrics scorecard approved by Trauma Committee (ie to measure trauma system development)
Jan 2012	EMS Board adopted the Ohio EMS 2015 Strategic Plan, which includes Trauma Framework within content. All committees (with exception of Trauma Committee which is written in ORC) were sunsetted in order for re-organization
Feb 2012	EMS Board voted to realign the RPAB regions to match the current Department of Homeland Security regions
March 2012	New chairs of the 10 trauma workgroups established
July 2012	Grant awarded by state to begin process for ACS Trauma System review

Delaware County Special Needs Program

The program was started in 2004 to identify special needs children in Liberty Township (population of 174,000 individuals; north of Columbus, Ohio) who would benefit from a tailored EMS response when 911 systems were initiated. Initially 24 children were enrolled, but the value of the program was quickly appreciated and by February 2010, it had expanded into a county-wide, secure, web-based registry for all ages of citizens with special needs. Currently, a resident must have one of the following disabilities to participate: 1) lifesaving medications required more than twice a day; 2) sight, hearing, or speech issues; 3) ventilator or oxygen dependent; 4) has mandatory medical equipment in order to sustain life; 5) mental issues; 6) mobility issues; 7) language barrier; or 8) requires a service animal.

A coalition of expert partners from Delaware County was developed to institute this program by using their expertise and creating a unique item where the most vulnerable would be identified and plans could be developed and implemented, if required. Patients and families enroll by visiting a website (<http://www.delcospecialneeds.com>) and sending an email of inquiry. HIPPA form is signed by the family at time of enrollment with the ability of family to update as needed. Capt. Piwtorak received this email and assigns the case to one of nineteen liaisons established between all the Fire and EMS organizations involved in the program. The liaison is responsible for meeting the registrant and ensuring that information to be used by public safety personnel is accurate. Once entered into the registry, special needs patient name and medical information are identified on the computerized emergency dispatch map and linked with the computerized EMS dispatch alerts, as well as the Delaware County Office of Homeland Security and Emergency Management, directed by Brian Galligher. The special needs patient data appears on computer maps that correlate with such things as Red Cross shelters, areas prone to flooding and electrical grid service, to name a few applications. This innovative registry was created using hardware and software already being utilized by the Delaware County EMA.

This information allows all public safety workers, especially EMS personnel, the ability to be educated to the level of need of their specific population requirements. Some agencies have changed their response plans to accommodate the individual's need, while other have changed EMS protocols to adapt to the specific medical requirement that are needed prior to arrival at the hospital. The impact of this innovative and incredible program continues as Capt. Piwtorak recently partnered with Ohio Representative John Peterson and worked to change Ohio SB 129 to include verbiage in which cell phone taxes used by 911 systems could use up to \$25,000 to purchase hardware and software to for communities to develop a similar registry.

November 2003

State Board of Emergency Medical Services

Report to Governor Taft and the 125th General Assembly

Seven Reports on EMS and Trauma Topics

Ohio Department of Public Safety
Division of Emergency Medical Services





Table of Contents

Table of Contents	2
Executive Summary	4
Statutory Authority/Mandate	5
State Board of Emergency Medical Services	6
Trauma Committee	7
Introduction	8
Recommendations	11
Review of Studies from the Trauma Committee	14
Pediatrics	14
Adult/Geriatrics	16
Portable Electronic Reporting to Trauma Registry	17
Reporting of Autopsy Data	18
Trauma Education	20
The Role of Non Trauma Center Hospitals	22
Trauma and Minority Populations	24
Organizations/Agencies Invited to Comment	26

This publication is a report by the State Board of Emergency Medical Services prepared by the staff of the Division of Emergency Medical Services, from research and information supplied by a number of organizations contracted with by the Division, and with assistance from members of the state Trauma Committee. This publication contains the recommendations of the State Board of Emergency Medical Services and summaries of the studies and research conducted on behalf of the Board and the Division.

The State Board of Emergency Medical Services authorized the state Trauma Committee and the Division of EMS staff to prepare this report pursuant to the mandate of Am. Sub. H.B. 138 of the 123rd General Assembly.



Executive Summary

The 123rd General Assembly, with the passage of Am. Sub. H. B. 138, tasked the State Board of Emergency Medical Services with producing seven reports on a variety of topics related to EMS and Trauma. The Division of EMS, serving as the administrative arm of the State EMS Board, contracted with seven groups to produce studies and /or research that would assist the EMS Board in responding to this mandate. The scope of the topics that the EMS Board was required to report on is very broad. In many instances the studies and research generated additional questions that need to be addressed. The EMS Board understands that, nationally, there continues to be a lack of quality research data in the published literature, upon which EMS practice can be improved. This situation is slowly improving, but remains a serious obstacle to EMS and Trauma System development. Secondly the EMS Board has discovered that in Ohio there appears to be a general lack of interest or ability on the part of EMS agencies, trauma centers and hospitals, and professional societies of healthcare providers to engage in large scale, meaningful EMS and trauma system research. This is a multifactorial problem, which is beyond the scope of this report to detail. The low level of interest in performing EMS specific research related to the reports required by the General Assembly was a considerable concern and this resulted in an important lack of data upon which to make recommendations.

The EMS Board believes that all seven of these EMS/Trauma system reports would be better served with additional, more focused research and study. Adequate funding for research of this nature and scope is essential. The Board further feels that a comprehensive EMS and Trauma research agenda will be of immense value. A comprehensive research agenda, that supports the national EMS research agenda, will permit appropriate state level facilitation of high quality research that can be used to support and improve EMS system development. It will allow for focusing of Ohio's limited EMS and Trauma research funding on priority research that is scientifically sound and builds upon the current body of knowledge in EMS. It will limit duplication of efforts and smaller scale research that could be more effectively coordinated as part of larger scientific efforts or clinical trials. It will permit Ohio to seek or participate in larger federal EMS and Trauma care grant opportunities, thus further expanding the research skills and experience within EMS in Ohio.

Among the significant findings of these reports, the EMS Board has found that there are ongoing needs in the areas of education, training and equipment for care of specialty populations that include but may not be limited to, pediatric and geriatric patients. Continual adaptation of advancing technology in data collection and reporting should be encouraged and supported. Improved communication between trauma surgeons and county coroners may lead to better utilization of autopsy data. There are ongoing needs for trauma specific continuing education for EMS providers and consideration should be given to expanding the type, nature and availability of that continuing education. Full development of a state wide EMS and Trauma system has been successfully undertaken in a number of states. Evaluation of the effects of these efforts on all participants, from first responders to rehabilitation providers, as well as continual evaluation of Ohio's system development, is crucial.

Authority/Mandate

Am. Sub. H.B. 138 Section 3.

The State Board of Emergency Medical Services, with the advice and assistance of its trauma committee, shall study and evaluate the following matters

- (A) The status and needs of emergency medical services and adult and pediatric trauma care provided between this state and other jurisdictions.
- (B) Methods to improve specialized care provided by emergency medical services organizations to pediatric and geriatric trauma victims.
- (C) The feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study shall include an analysis of the cost of acquiring, maintaining, and using such devices, potential sources of funding, and training required to ensure effective use of the devices.
- (D) Methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner;
- (E) Methods to increase advanced trauma life support, basic trauma life support, and prehospital trauma life support training among appropriate health care providers, particularly in rural areas of the state.
- (F) The roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in this state, and methods to enhance those roles.
- (G) The causes and impact of trauma on minority populations in this state and methods to improve emergency medical services and trauma care for those populations. This study shall be conducted in cooperation with the Commission on Minority Health;

In conducting its studies and developing its findings and recommendations, the Board shall consult the appropriate committees and subcommittees of the Board; regional directors; regional physician advisory boards; organizations that represent physicians, nurses, and hospitals that care for emergency and trauma patients; emergency medical services organizations; appropriate governmental entities; and the Ohio State Coroner's Association, as appropriate.

Not later than three years after the effective date of this act, the Board shall report its findings and recommendations to the Governor, the General Assembly, and other appropriate authorities and organizations.



Ohio State Board of Emergency Medical Services

Chair

Mr. Mark Resanovich, EMT-P

Vice-chair

Dr. William Cotton, M.D.

Board Members

Chief Mark Burgess, EMT-P
Mr. Curtis Chandler, EMT-P
Ms. Darla Cooper, EMT-P
Ms. Nancy Dragani
Mr. David Fiffick
Dr. Richard Fratianne, M.D.
Ms. Kathy Haley, R.N.
Dr. Andrew Hawk, M.D.
Mr. James Holcombe, EMT-B

Mr. Carl Jordan, EMT-P
Mr. Martin Mace, EMT-I
Ms. Charlene Mancuso, R.N.
Mr. Mark Mankins, EMT-P
Mr. Mark Marchetta, EMT-P
Dr. William Rogers, M.D.
Mr. Joseph Toth, EMT-P
Chief Ray Walendzak, EMT-B

Interim Executive Director

Richard N. Rucker

Division of EMS Staff

Ms. Heather Reed, J.D.
Michael Glenn, R.N., Trauma Coordinator

State Trauma Committee

Dr. Joseph Luria, M.D., Chair

State Trauma Committee

Chair

Dr. Joseph Luria, M.D.

Vice-chair

Dr. Jay Johannigman, M.D., FACS

Committee Members

Ms. Nancie M. Bechtel, R.N., BSN, EMT-B

Ms. Melody Campbell, R.N., MSN

Dr. Guillermo Chacon, D.D.S.

Dr. John Crow, M.D.

Mr. William Crum

Chief Dan Ellenberger, EMT-P

Dr. William Emery, M.D., FACS

Ms. Kathy Haley, R.N., BSN

Ms. Lynn V. Horner

Mr. Jason Kinley, EMT-P

Dr. Michael Mackan, M.D., FACEP

Dr. Sidney Miller, M.D.

Mr. Mike Nelson, EMT-I

Dr. Greg Nemunaitis, M.D.

Ms. Jennifer Piccione, R.N., BSN

Ms. Jane Riebe, BA, CSTR

Dr. Michael Shannon, M.D.

Dr. Anthony Stallion, M.D.

Ms. Karen Weaver, R.N.

Dr. Howard Werman, M.D.

Ohio Department of Health Liaison

Dr. Virginia Haller, M.D.

Division of EMS Staff

Mr. Michael Glenn, R.N.

Ms. Heather Reed, J.D.



Introduction

Passage of Am. Sub. H.B. 138 by the 123rd General Assembly required the State Board of Emergency Medical Services to create reports on seven EMS/Trauma topics. Shortly after the appointment of the Trauma Committee in November of 2000, the determination was made that the Division of EMS and the State Board of EMS did not have the internal resources or expertise to conduct the required studies. The Division of EMS and the State Board of EMS agreed that under the direction of the Trauma Committee, individuals and or organizations with the appropriate expertise and resources would be contracted with to conduct the studies in preparation for the Board to submit a report to the Governor and General Assembly in November 2003. Initially the state supported university medical schools and their associated research departments were contacted and asked to submit quotes for performing one or more of the studies required by the legislation. After several months it was apparent that there was not sufficient interest from the medical schools. Only one organization was under contract with ODPS by the fall of 2001 for completion of one study looking at the role of non trauma center hospitals.

The studies required by the legislation were very broad and the amount of funding available to fund all seven studies was viewed to be minimal or inadequate by many of the potential researchers. A decision was made within the Division of EMS to invite a larger pool of organizations and/or individuals to participate by offering a grant for completion of supportive research projects or reports on topics related to the required reports. In most cases, researchers were asked to narrow the focus of their research or report. This was done to ensure that all of the required topics would be addressed and extrapolation of a more narrow report to a larger population or issue would be done when statistically appropriate and relevant. A call for proposals was made in January/February 2002. Proposals were received in March and six grants were awarded for completion of reports on six of the seven required topics, with one report being performed under a contract from the original request for quote process.

Based upon feedback from the organizations interested in assisting the Board complete these reports, reports on topics A and B were combined so that all pediatric issues were in one report, and all adult/geriatric issues were in another. The State Board of Emergency Medical Services, through the Division of EMS, awarded six grants and one contract, totaling \$563,044 to the following organizations to conduct research and/or develop the reports required for the Board.

- **Columbus Children’s Hospital (\$185,371)**
Report A, the status and needs of emergency medical services and pediatric trauma care provided between this state and other jurisdictions and methods to improve specialized care to pediatric trauma victims.

- **Riverside Methodist Hospital, Senior Health Services (\$65,366)**
Report B, the status and needs of emergency medical services and adult trauma care provided between this state and other jurisdictions; and methods to improve care to geriatric trauma victims.
- **St. Vincent Mercy Medical Center (\$61,442)**
Report C, the feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study shall include an analysis of the cost of acquiring, maintaining, and using such devices, potential sources of funding, and training required to ensure effective use of the devices.
- **Central Ohio Trauma System & Ohio State Coroner's Association (\$87,500)**
Report D, methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner.
- **Ohio Chapter, American College of Surgeons & Ohio Society of Trauma Nurse Coordinators (\$49,320)**
Report E, methods to increase advanced trauma life support, basic trauma life support, and prehospital trauma life support training among appropriate health care providers, particularly in rural areas of the state.
- **Hospital Council of Northwest Ohio (\$64,500)**
Report F, the roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in this state, and methods to enhance those roles.
- **Columbus Children's Hospital (\$49,545)**
Report G, the causes and impact of trauma on minority populations in this state and methods to improve emergency medical services and trauma care for those populations. This study shall be conducted in cooperation with the Commission on Minority Health.

Four of the seven organizations completed their projects under budget by a total of \$61,759.02. The total cost of grants and contracts to complete these studies was \$501,284.98. This does not include ODPS, Division of EMS staff time.



Six of the seven organizations completed their work on or before June 30, 2003. The seventh, Ohio Health, Senior Health Services, expects to have data collection completed and a report submitted by December 2003)

Given the very broad scope of these reports required by the legislation, the relatively short time frame for completion and minimal funding, it should be understood that these reports cannot be considered exhaustive, or comprehensive in nature. What is clear from the data in these studies is that additional research and study is required in all seven of these areas. The focus of future studies should be narrowed to address very specific issues, some of which can be extrapolated from data in these reports. A comprehensive and inclusive approach to evaluating and studying the EMS and Trauma system in Ohio is needed. An Ohio EMS and Trauma research agenda, supporting the national research agenda, is needed to ensure that the funding available in Ohio for EMS and Trauma research is utilized with maximum effectiveness to improve clinical care, support educational and injury prevention activities and support the needs for system development.

Recommendations

- A. The status and needs of emergency medical services and pediatric trauma care provided between this state and other jurisdictions and methods to improve specialized care provided by emergency medical services organizations to pediatric trauma victims.**
1. Additional, focused studies on pediatric trauma care needs in our state EMS and Trauma System are needed.
 2. Mutual aid is not a concern; appropriate support between EMS provider agencies exists.
 3. EMS agencies require additional preparation (education, equipment, protocols/procedures) for children with special needs.
 4. The majority of EMS providers need more pediatric education, specifically in assessment, airway management and trauma management.
 5. There is a significant deficit of pediatric education and equipment, efforts to provide additional education and equipment need to be made.
 6. Medical Directors need to be more involved in EMS agencies requests for funding from the EMS/Trauma Grant program.
- B. The status and needs of emergency medical services and adult trauma care provided between this state and other jurisdictions and methods to improve specialized care provided by emergency medical services organizations to geriatric trauma victims.**
1. Additional, focused studies on adult trauma care needs in our state EMS and Trauma System are needed.
 2. Efforts should be made to support geriatric trauma research in areas of prehospital triage parameters and resuscitation.
- C. The feasibility of recording and reporting information to the state trauma registry by means of portable electronic devices, such as electronic notepads. The study shall include an analysis of the cost of acquiring, maintaining, and using such devices, potential sources of funding, and training required to ensure effective use of the devices.**
1. Additional, focused studies on electronic reporting of data to the state EMS and Trauma Registries are needed.
 2. Personal handheld devices, specifically the Palm Pilots tested, proved to be unfeasible for the collection of trauma registry data.
 3. Collection of registry data as directly as possible from the patient and family with concurrent entry into electronic format will have significant benefits both in cost savings and accuracy.
 4. Additional research into the use of wireless technology should be supported.



D. Methods to ensure that autopsies are performed on appropriate trauma victims and autopsy data are reported to the state trauma registry in a timely manner.

1. Additional, focused studies on the role of the county Coroner and data from autopsy reports to the state EMS and Trauma registries are needed.
2. The greatest barriers to performing autopsies on trauma victims are cost, family opposition, and lack of county coroner office staff.
3. Consensus needs to be developed between Ohio coroners and trauma medical directors on mechanism(s) of injury that require an autopsy.
4. Trauma medical directors do utilize the results of autopsies on trauma victims. Mechanisms to ensure that this data is accessible need to be in place.
5. No mandate to perform autopsies on trauma victims should be made without also providing for adequate financial and human resources for the county coroners, medical examiners or agencies/organizations performing the autopsies.
6. A single form (i.e. the death certificate) should be used statewide to report all required information as opposed to the creation of a special form just for injury reporting.
7. Autopsy reports should utilize a standardized format.
8. Efforts to promote complete documentation on the death certificate should be made.
9. The death certificate should include a field(s) to record the E codes (External Cause of Injury Code).
10. Resources need to be provided to county coroners to enable them to complete reports with tools that are designed to disseminate the information in an efficient and complete manner.

E. Methods to increase advanced trauma life support, basic trauma life support, and prehospital trauma life support training among appropriate health care providers, particularly in rural areas of the state.

1. Additional, focused studies on trauma education in Ohio are needed.
2. Exploring new options in education using existing technologies could improve accessibility and variety of courses, as well as resolve location issues.
3. On-line training, interactive educational software, and long distance education are options that should be evaluated for enhancement in learning opportunities.
4. Expanding trauma education programs beyond the basic level would be helpful in expanding continuing education options.

5. Statewide guidelines or standards for trauma education could also help identify the amount of trauma education needed.
6. Better communication about existing courses is needed to partially address issues with accessing courses.
7. Further study in the cost of education and investigating options for funding of trauma education is needed.

F. The roles hospitals that are not trauma centers play in the state trauma system and regional trauma systems in this state, and methods to enhance those roles.

1. Additional, focused studies on roles that all health care facilities play in the state EMS and Trauma System is needed.
2. The majority of hospitals, both trauma centers and non trauma centers, reported that they saw positive impacts, or reported no negative impacts, as a result of trauma system implementation. This should be monitored as the system matures.
3. Given that House Bill 138 has only been in operation since November of 2002, it was not possible to collect statistical data from the hospitals to determine what effects the trauma system changes have had on the non-trauma hospitals. A full year of data will be required to conduct the post-test and compare with the pre-test data collected during this project. Thus, a post-test should be conducted with Ohio hospitals in 2004 or 2005 to allow for at least a year's worth of experiences under the new trauma system guidelines. These data should be compared to the data collected through this project to determine the actual effect of House Bill 138 on the non-trauma centers.
4. For additional insight into the effects of House Bill 138, the State Trauma Committee believes the collection of objective data versus perception data would be more meaningful toward trauma system development.

G. The causes and impact of trauma on minority populations in this state and methods to improve emergency medical services and trauma care for those populations. This study shall be conducted in cooperation with the Commission on Minority Health.

1. Additional, focused studies on the impact of trauma on minority and specialty populations in Ohio are needed.
2. Information regarding race and ethnicity should be collected in such a manner as to be consistent and comparable between data sets such as the U.S. Census, the Ohio Bureau of Vital Statistics Death Certificate, the Ohio Trauma Registry and the EMS Incident Reporting System.
3. There are significant injury patterns, and causes specific to children in



minority populations. Additional research and increased efforts in injury prevention programming are needed.

4. Access to EMS by minority populations does not appear to be a problem, however additional research of this may be needed to assure that minority populations have ready access EMS in all areas of Ohio.

Trauma Committee Review of the Studies and Research

Trauma Committee Review of Special Study for Report A: “Identification of Issues Related to the Care and Management of Pediatric Trauma Patients Located Along the Border of Ohio”

General Description/Stated Goals:

This study focuses on the identification of issues related to the care and management of pediatric trauma patients located within 20 miles of the Ohio-West Virginia border within HSA regions 5 & 6. EMS Medical Directors, air medical physicians, EMS coordinators, and EMS providers were surveyed with regard to mutual aid concerns, transport of pediatric patients across state borders, availability of pediatric education and equipment, as well as availability of pediatric resources such as pediatric policies, protocols, and medications. Pediatric run reports from the study area were also reviewed.

Key findings:

1. Thirty two percent of EMS providers had taken a pediatric specific training course.
2. Only twelve and one half percent of agencies have all of the state recommended BLS equipment.
3. Eleven percent of the agencies surveyed are missing appropriate pediatric sized bag-valve-masks.
4. Seventy five percent of ALS units have transport monitors and even less had pediatric electrodes and defibrillator capability.
5. Fifty three percent of EMS agencies had pediatric length/weight dose charts and only seventy-six percent had resuscitation drugs and IV fluids.
6. Forty one percent of EMS coordinators indicated the need for pediatric specific equipment.
7. Ninety six percent of EMS coordinators indicated the need for more pediatric training but find cost and travel prohibitive.

8. Ninety two percent of EMS coordinators would be interested in applying for grant funding to obtain pediatric equipment and training.
9. Eighty percent of the EMS coordinators did not have protocols for children with special needs.
10. The average transport time to the closest hospital was 25.4 minutes, however run report review identified average accumulated time for a pediatric transport was 58.7 minutes.
11. All of the physician responders identified pediatric education as critical. Money and distance were listed as barriers.
12. EMS medical directors responded that they wanted assistance with review of pediatric run reports and were unaware of pediatric resources currently available to their agencies.
13. Based on run report review, the use of mutual aid does not appear to be an issue for the study region.
14. In general, there were limited issues regarding the interstate transport of pediatric trauma patients. Ranked by frequency, EMS providers listed (1) no issues, (2) longer transport times, (3) concerns over medical/legal issues, (4) service area left uncovered, (5) discrepancies in standards of care between states, and (6) discrepancies in the qualifications of the responders between states.

Strengths:

1. There is an adequate literature review to ground the study.
2. The investigators contacted a large group of rural providers. They received very good response rates for the air medical directors, EMS medical directors and EMS coordinators. The EMS providers responded to a mailed survey at a rate to be expected using this method.
3. The study resulted in the clear identification of needs for the EMS system in southeast Ohio:
 - a. EMS training in pediatrics that is locally provided and inexpensive.
 - b. Pediatric equipment by the majority of BLS and ALS units.
 - c. Training and protocol development for children with special healthcare needs.
4. Usable data was obtained using a methodology that is easily replicable.

Weaknesses:

1. Readers must be careful not to generalize the study results to other border areas of Ohio.
2. The authors state that there are no published studies regarding transport of patients across state lines or on mutual aid agreements. They do comment that some of the transport times seem excessive. Benchmark data or guidelines should be provided for comparison to justify such observations.
3. There is no information indicating the EMS agencies surveyed have attempted to obtain funding for equipment or training from available grant programs.
4. The bar graphs used to illustrate the data in Section 8 are confusing. The authors should either re-design the graphs or provide directions as to how to read the graph.



Comment:

This is a nicely designed and reported study regarding the adequacy of resources to respond to pediatric emergencies along the southeast Ohio border. The authors identify several major areas of concern related to training, equipment, protocol development and case review. The study should be replicated in other regions to gain a more complete picture of pediatric trauma care within Ohio. At a minimum, the authors indicate a need to facilitate resources for this area of the state. In a big picture sense, this report indicates a strong need for data driven trauma program improvement throughout the state.

Trauma Committee Review of Special Study for Report B: “Stand Up For Senior Independence Research-Preliminary Data”

General Description/Stated Goals:

This purpose of this study is to evaluate a program for decreasing falls in individuals over the age of sixty years. Study subjects are approached for enrollment if they experienced two falls in their home during a 30 day period. Local EMS providers, independent living housing workers, and health care providers identify potential study participants. Once enrolled, subjects are screened for risk factors linked with frailty and falling. Specific interventions were provided as necessary. The primary outcome was the number of falls post-intervention.

Key findings:

1. Issues related to the home environment, dementia, and nutrition were identified in study subjects.
2. Sixty-five percent of the patients enrolled experienced no falls 3 months after their intervention.

Strengths:

1. Reducing falls in older adults is a good goal.

Weaknesses:

1. Special Study # 3 is supposed to address the status and needs of emergency medical services and adult trauma care between this state and other jurisdictions, and methods to improve care to geriatric trauma victims. The study does not address this topic.

2. There is no needs assessment data to support the research.
3. There is a low enrollment rate for study subjects (40%).
4. There is a high drop-out rate for study subjects (30%).
5. There is no control group. How do the authors know that other forces did not account for the results they measured?
6. There is no consideration for other factors that may result in falls. This would include medications, neuromuscular dysfunction, vision impairment, mental retardation, etc.
7. There is conflicting data in the study. The authors state that “100% of the research subjects decreased their number of falls post intervention.” In one of the tables, however, 11% of the research subjects experienced three falls three months post-intervention.

***Trauma Committee Review of Special Study for Report C:
“Ohio Department of Public Safety HB 138 Special Project #6 Final Report”***

General Description/Stated Goals:

The purpose of this project was to study the feasibility of recording and reporting information to the Ohio Trauma Registry with portable electronic devices. The authors installed and tested a single software application and began testing it in January 2003. This report summarizes their experience.

Key findings:

Numerous problems were encountered. Most of the difficulties were related to the limited data capacity of the device tested. After four months, the authors concluded that portable handheld devices were not appropriate for this purpose and that laptops afforded the best approach for collecting data in a cost efficient and accurate manner. Implementation and testing of a wireless laptop computer system for recording trauma registry information is ongoing.

Strengths:

1. There is an adequate literature review to support the study.
2. The study identifies important limitations to the product and software studied.

Weaknesses:

1. This study does not meaningfully address the intent of the trauma legislation:
 - a. There was no listing/review of what products were available from alternative vendors.



- b. The authors tested only one system prior to abandoning hand held technology. There is no mention of why this was done.
2. The conclusions are limited by the technology and software used. There should have been some consideration for other handheld systems.
3. The study did not address potential sources of funding or training requirements for such a system.
4. The financial report on page 9 is unclear. How do the bold-faced values on the first line (untitled) related to the “Total” line?
5. On page 15, a reference to “typographical errors” is made. The reviewers believe the authors are referring to transcription errors. Typographical errors can be made whether writing down the information or entering it into an electronic database.

Comment on Study Recommendations:

The authors state that additional research into the use of wireless laptop computers should be supported. The information in the report does not support the notion that handheld technology should be abandoned for the purpose of reporting to the Ohio Trauma Registry. The State Trauma Committee believes that research into the use of all wireless technology, including handheld units, should be supported.

***Trauma Committee Review of Special Study for Report D:
“The Nature of Injury Related Autopsies in Ohio”***

General Description/Stated Goals:

The objectives of this study include:

1. Determine which injury types are appropriate for autopsy:
 - a. Determine rate of autopsy for these injury types.
 - b. Determine barriers to autopsy performance for these injury types.
2. To identify which stakeholders utilize autopsy data and for what purpose.
3. To survey the state county coroners, medical examiner, and a sampling of trauma medical directors for suggestions on how data might be submitted to the Ohio Trauma Registry.

These objectives were addressed through a review of death certificates from 1996-2001 and surveys sent to all Ohio coroners/medical examiner, coroners from neighboring states, and Ohio medical directors.

Key findings:

1. Sixty percent of unintentional injury deaths have an autopsy.
2. Sixty percent of intentional self-injury deaths have an autopsy.
3. Ninety-eight percent of homicides have an autopsy.
4. Ohio coroners indicated that among patients deemed appropriate for autopsy, only two percent did not receive an autopsy because of a barrier:
 - a. Barriers included cost, family opposition, and personnel.
5. Ohio and non-Ohio coroners consider trauma medical directors and EMS professionals infrequent users of autopsy data.
6. Trauma medical directors consider themselves and EMS professionals frequent users of autopsy data.
7. Trauma medical directors believed an autopsy after a motor vehicle crash was substantially more important when compared to Ohio coroners.
8. Much of the injury data included in the death certificate is missing (e.g. 59% of ICD9-10 data).
9. Over the five year study period, 2,936 injury deaths were not reviewed by a coroner, according to Ohio Vital Statistics. The consensus of the Ohio State Coroner's Association is that coroners are currently not being notified in these cases.
10. Ohio coroners expressed non-support for the creation of a new form and process to report autopsy injury data to the Ohio Trauma Registry.
11. Forty percent of coroners usually or always prepare their reports on manual typewriters.
12. While the majority of Ohio coroners are not in favor of a standardized reporting format, the non-Ohio coroners and Ohio trauma medical directors find this a reasonable request.

Strengths/Comment:

This is an extremely well done study that sends a simple message. There is a communication gap between coroners and trauma medical directors regarding the collection of autopsy data and how it is/should be utilized. Trauma medical directors want more autopsy information. Ohio coroners believe the information will serve no purpose and tax an already overburdened system. The solution is for the trauma care providers and coroners to outline a specific plan for the use of autopsy data. This would include when an autopsy is performed, what data is necessary to obtain and report, and how the data will be used to improve trauma care in the state. There should be a performance improvement process to insure appropriate deaths are being reported to the coroners and that appropriate information from autopsies is being reported. Another necessary step is to provide adequate funding and resources for obtaining autopsy information. Electronic reporting of autopsy information should be explored.

Weaknesses:

1. There is no data that indicates how Ohio compares to other states with regard to autopsy reporting.
2. The study indicates that there is a place on the death certificate to indicate if a case was reviewed by a coroner. This is incorrect. The death certificate has a place to indicate if the case was reported to the coroner.

Trauma Committee Review of Special Study for Report E: “HB 138 Special Projects #7: Evaluating Trauma Education”

General Description/Stated Goals:

The objectives of this study included:

1. Identify which trauma education courses are currently offered throughout Ohio.
2. To ascertain the number and size of the different trauma education courses offered in Ohio.
3. To determine what courses are most utilized by trauma care professionals.
4. To evaluate the barriers to offering trauma educational courses.

Surveys regarding accessibility, availability, barriers, and perceptions of trauma education in Ohio were developed and distributed to EMS providers, nurses, and physicians who care for trauma patients. Information regarding course offerings and other types of trauma education were collected from training centers and course coordinators. Perceptions regarding barriers to attending trauma education courses were also solicited at a state stakeholders meeting (EMS Board/Trauma Committee retreat). The data were categorized by population density, regions, and other factors.

Key findings:

1. Seventy eight percent of surveyed EMS providers indicated attendance of least one trauma course. BTLIS was the most common course (73%)
2. Sixty three percent of EMS providers indicated certification in at least one trauma course.
3. Forty two percent of EMS providers believe they are receiving the necessary education to provide quality trauma care.
4. Lack of financial support, frequency of courses, and having to take courses while off –duty were the most common barriers to trauma education (Urban EMS providers were more likely to attend a trauma course during normal working hours).

5. Sixty-seven percent of surveyed nurses indicated attendance of at least one trauma course. Sixty percent hold a course certification. The most common course attended was TNCC followed by BTLS.
6. Nurses cite time off work, lack of financial support as the major barriers to attending trauma courses.
7. Seventy-five percent of physicians indicated completion of a trauma course. ATLS was the most common course attended. Time off work and frequency of courses were cited as the major barriers.
8. Perceptions regarding course availability did not seem to differ with regard to population density.

Strengths:

1. This was a large and difficult undertaking. The surveys addressed the objectives.
2. The literature review demonstrates that trauma education results in improved knowledge and skill level. There is also literature available which supports the need for continuing trauma education. A 1990 study showed that BTLS skills deteriorate after approximately 18 months of initial training. (Prehospital and Disaster Medicine 5:137-144.)
3. There was an excellent distribution of EMS responses with regard to geography.
4. The recommendations could serve as a basis for more objective studies related to trauma education.

Weaknesses:

1. The results may be biased due to the low return rate (10%-25%) of surveys from EMS providers, nurses and physicians.
2. The survey format was necessary given the nature of the study. The value of this report is the issues it identifies. These issues will require more objective study (which the authors clearly point out). It must still be stated that the document is mostly comprised of perceptual data. Therefore the recommendations for increasing access to education are not evidence based.
3. There were no questions related to whether EMS agencies took advantage of existing programs for funding trauma education (i.e. the EMS Grants Program).
4. The document states that the ACSCOT developed the BTLS course. BTLS was developed by an independent group of EMS physicians under the guidance of John Campbell, MD.
5. The tables should have been better labeled.

***Trauma Committee Review of Special Study for Report F:
“The Roles of Hospitals That Are Not Trauma Centers In The State Of Ohio’s
Trauma System”***

General Description/Stated Goals:

The goals of this project included:

1. Profiling existing Ohio non-trauma center resources in terms of emergency care, laboratory, blood bank, in-patient care, diagnostic capabilities, surgical intensive care, and rehabilitation.
2. Profiling existing geographical relationships between non-trauma centers and trauma centers.
3. Measuring the impact of state trauma triage protocols on non-trauma hospitals.
4. Determining the level of collaboration between current non-trauma hospitals and trauma center hospitals on issues regarding patient care and follow-up.

To accomplish these goals, statistical information from hospitals was collected. Fact sheets identifying the number of trauma centers, projected number of trauma centers, number of staffed beds, number of ED injury visits, number of OR cases, and number of trauma center transfers within individual regions and throughout the state were developed. Additionally, subjective observations regarding the effect of the trauma legislation were compiled.

Key findings:

1. Ninety-six percent of all hospitals consider themselves to be very or somewhat familiar with Ohio’s trauma system.
2. Ninety percent of all hospitals thought trauma related communications were timely, useful, and understandable.
3. Over two-thirds of the respondents said they need more information about the trauma system. At least forty percent of all hospitals wanted more information about trauma performance improvement, peer review, and hospital trauma protocols.
4. Forty-three percent of hospitals had problems implementing required trauma system elements.
5. Twelve percent of hospitals believe trauma system implementation had a negative effect on their community.
6. Non-trauma centers were more likely to report a negative impact of the trauma legislation when compared to trauma centers.

Strengths:

1. The response rate to the survey was excellent (100%).

2. The regional and state data sheets provide good baseline data with regard to number of trauma centers as well as emergency department, ICU, acute care and pediatric beds, and emergency department visits for injuries.
3. The authors correctly identify that performing the study 6 months after trauma system implementation is too short of a time span.
4. The report identifies areas for state educational initiatives regarding the state trauma system.
5. It may be useful to compare the perceptions identified in the study to more objective measures of the effect of the trauma legislation.

Weaknesses:

1. The study title misrepresents the content. There is no discussion of the “role” of acute care hospitals in the trauma system.
2. Most of the report contains opinions which are not supported by fact. For instance, opinions regarding the effect of the trauma legislation on quality of trauma care were presented without any supporting data for these opinions. This is true for both the positive and negative effects stated in the study.
3. The study included only hospitals. EMS organizations, public officials, and local citizens could have provided helpful perceptions regarding the role of the non-trauma hospital.
4. Data for number of operative cases, and number of acute care hospital patients transferred to a trauma center are not trauma specific.
5. The study would have better served trauma system development if it had asked the hospitals what indicators should be measured to evaluate the trauma system so that baseline data could be collected.
6. The authors recommend the study be repeated one year after trauma system implementation. The effects of the trauma system would be better measured by waiting at least two years after implementation.

Comment on Study Recommendations:

The authors recommend one-on-one interviews with a random selection of non-trauma hospital CEO's and Emergency Supervisors to further gauge the effect of the trauma legislation. The State Trauma Committee believes the collection of objective data would be more meaningful toward trauma system development.



Trauma Committee Review of Special Study for Report G: “The Impact of Trauma on Minority Children”

General Description/Stated Goals:

The objectives of this study included:

1. Identify causes and outcomes of injuries among Ohio’s pediatric minority populations.
2. Identify rate of injury with regard to cause and outcome by location for each minority group.
3. Compare the rates of missing data across minority groups and location.
4. Compare the rates of patients discharged to rehabilitation facilities with an Injury Severity Score of > 16 across minority groups.
5. Compare the time from 911 call logged to arrival in the emergency department across minority groups. The times for Caucasian patients were used to determine if there were differences across racial groups.

These objectives were met by reviewing the records of children listed in the trauma registries of the regional pediatric trauma centers in Ohio. Patients were included in the final study group if they were less than 16 years of age, transported directly from the scene, and admitted to the hospital for the treatment of an injury (or died in the emergency department). Data from the US Census (2000) and Ohio Vital Statistics were also used in this evaluation.

Key findings:

1. Year 2000 census data indicates that minorities accounted for sixteen percent of Ohioans less than 16 years of age. (African Americans-12.3%, Native Americans-0.1%, Asians, 0.3%, Hispanic-1.1%, and Other-2.2%)
2. There were 1900 injury deaths in children from 1996-2001. Twenty-seven percent were of them were among minority children.
3. Of the 6084 direct from the scene admissions to regional pediatric trauma centers from 1998-2001, thirty-four percent (2060) were among minorities. African Americans accounted for twenty-eight percent of the total admissions.
4. African Americans have the highest rate of death and injury per 100,000 children. The relative risk of African Americans to injury death and trauma admissions is two to three times as great as the Caucasian population. Hispanics are at equal risk when compared to whites. Native Americans are at a little less risk and Asians are at substantially less risk when compared to Caucasians.

5. Hospital length of stay for minorities was the same as for Caucasians.
6. Risk of injury admission relative to the white population was led by burns (6.6 times as likely as Caucasians), followed by pedestrian injuries, gunshot wounds, assaults, drowning, and crush injuries.
7. The pattern of suicide injuries suggests prevention interventions should begin around age 10.
8. There was no relationship between distance to an EMS agency and the proportion of minorities within a given census block. In urban areas most residents are within three miles of an EMS agency regardless of minority status.

Strengths/Comment:

1. The study should provide valuable information for directing targeted injury prevention initiatives across the state.
2. The study maximized the use of data available in Ohio. There was good explanation of the data including strengths and limitations.
3. The study presents a clear data-based observation of how injuries among minority children compare to those in the Caucasian population.

Weaknesses:

1. While not practical, the study would have potentially been strengthened if all injured children would have been included. (That is, not only admissions directly from the scene to a trauma center.) The result is an underreporting of minority groups who may live in more rural areas of the state.
2. The study report could be strengthened by a literature review of how injury rates and deaths have historically compared between different races/ethnicities.
3. The authors should have included recommendations for addressing the differences observed.

Organizations

The following agencies and organizations were invited to review a preliminary copy of the studies and research conducted for this report and to provide feedback and comments to the Division of EMS for inclusion in the final publication of this report. Seven of these organizations requested copies of one or more of the research studies, however, none provided feedback or comments for inclusion in the final publication of this report.

Alliance of Ohio Trauma Registrars
Association of Ohio Children's Hospitals*
Association of Ohio Health Commissioners
Governors Council on People with Disabilities
Health Forum of Ohio*
Northern Ohio Firefighters
Ohio Ambulance and Medical Transportation Association
Ohio Association of Critical Care Transport
Ohio Association of Emergency Medical Services
Ohio Association of Professional Firefighters
Ohio Chapter of the American Academy of Pediatrics
Ohio Chapter of the American College of Emergency Physicians*
Ohio Chapter of the American College of Surgeons*
Ohio Dental Association
Ohio Emergency Medical Technician Instructor Association
Ohio Fire Chiefs Association
Ohio Hospital Association*
Ohio Instructor Coordinators Society*
Ohio Nurses Association
Ohio Orthopedic Society
Ohio Osteopathic Association
Ohio Rehabilitation Association
Ohio Society of Physical Medicine & Rehabilitation
Ohio Society of Trauma Nurse Coordinators
Ohio State Coroners Association
Ohio State Council Emergency Nurses Association
Ohio State Firefighters Association
Ohio State Medical Association
Ohio State Neurological Society
Ohio Department of Health
Ohio Rehabilitation Services Commission*

* Requested a copy of one or more reports

Research Studies

Complete copies of the seven research studies performed in support of this report are available from the Department of Public Safety, Division of Emergency Medical Services. Copies may be obtained by sending a written request to

Ohio Public Safety
Division of EMS, 1st Floor
EMS/Trauma Special Reports
1970 W. Broad St.
Columbus, Ohio, 43223

Or via an e-mail request to mglenn@dps.state.oh.us.

Please include your name and a complete mailing address

Electronic Copies (PDF format) may be downloaded from the EMS website, under the Trauma link at http://www.state.oh.us/odps/division/ems/ems_local/default.htm



Table of Contents

Executive Summary	3
Common Themes and Core Recommendations to Prevent Injury in Ohio	4
Introduction and Background	7
Acknowledgments	8
Message from the Commission Chair	10
The Commission's Work	11
Overview of Injury in Ohio	12
Overall Goals	13
Intentional Vs. Unintentional Injuries	17
Costs and Consequences	18
Risk Factors	19
Low Income	19
Age	20
Young Ohioans	20
Older Ohioans	22
Gender	23
Race and Ethnicity	23
Geography	23
Common Themes	24
The Cost-Benefit of Injury Prevention	24
The Need for Improved Injury Surveillance	25
The Need for Increased Statewide Coordination of Efforts	26
The Role of Alcohol	27
Prevention Concepts and Strategies	28
Core and Expanded, Injury-Specific Recommendations to Prevent Injury in Ohio	30
Appendix	35
Appendix A	36
Anatomic and Physiologic Features that Increase Children's Risk for Injury	36
Anatomic and Physiologic Features that Increase Older Persons' Risk for Injury	37
Behavioral and Developmental Features that Increase the Occurrence of Injury	38
Appendix B: Ohio Injury Data Sources	39
Appendix C: National Injury Data Sources	42
Appendix D: House Bill 138, Section 6	44
Appendix E: U.S. Injury Rate Tables, Healthy People 2010	45
References	46

Reports for individual injury areas (e.g. fire/burn, motor vehicle-related injury, etc.)
are available electronically at
www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm



Photo courtesy of the National SAFE KIDS Campaign

Injury is the leading cause of death and disability for Ohioans ages 1 through 34 and the 6th leading cause of death for all age groups.

More than 5,000 Ohioans are killed each year from injury-related causes.

Motor vehicles and firearms are the leading causes of injury death overall.



EXECUTIVE SUMMARY

The Ohio Commission on the Prevention of Injury

Ohio's 123rd General Assembly passed House Bill 138 authorizing a statewide trauma system in November 2000. Section Five of this comprehensive legislation required the Ohio Department of Health to form a commission on the prevention of injury, with particular emphasis on the pediatric and geriatric populations in Ohio. The result of the commission's work is this comprehensive report examining the current status of injuries in Ohio with recommendations for future action. The report includes information on unintentional injuries, such as motor vehicle traffic crashes, falls, and drowning, and intentional injuries, including suicide, homicide and family violence. It is intended to guide subsequent statewide activities, including adoption of a state strategic plan for injury prevention, to make Ohio a safer and healthier place to live, work and play.

The Injury Problem

The consequences of injury can be far-reaching and severe. Injuries are the leading cause of death and disability for Ohioans ages 1 through 34 and the sixth leading cause of death for all age groups. More than 5,000 Ohioans are killed each year from injury-related causes. Motor vehicles and firearms are the two leading causes of injury death overall. Of the millions of Ohioans who survive injuries, many suffer long-term consequences such as permanent disability, time lost from work and family, costly medical expenses and pain and suffering. Injury leads to huge societal costs as well, amounting to billions of dollars annually in health care expenses, lost productivity, rehabilitation and criminal justice system expenses among others. The good news is that injuries largely follow predictable patterns and are therefore, preventable.

Common Themes

The consensus-based process used to develop this report led to the identification of the following overarching themes. These themes provide the foundation for core recommendations in this report. Risk factors and prevention strategies for unintentional and intentional injuries often differ, however there are factors common to both. Further examination of these common factors or intersection points will facilitate consolidating prevention efforts, and potentially reducing program-related costs. Decision makers and advocates addressing both should decide where consolidation efforts make sense.

- **Injuries are costly. Injury prevention saves lives and money.**
Injuries are associated with long-term disability, requiring in-depth and long-term health care services, reducing the participating workforce and consuming already scarce public resources. Investment in prevention programs prevents the much higher costs of dealing with injury consequences.
- **Improved injury surveillance efforts and program evaluation are needed.**
Monitoring changes in injury frequency and patterns is necessary for planning and evaluation. Deaths caused by injuries are captured statewide, however, deaths only represent the tip of the iceberg of the injury problem. Injury data in Ohio are incomplete and inadequate for nearly all injury categories.
- **Improved statewide coordination of programs is needed.**
Many statewide and local prevention efforts are underway, each targeting the injury problem from a unique perspective. Improved statewide coordination of injury prevention efforts would benefit all involved.
- **Injuries disproportionately affect those living in poverty, and the young and the old.**
Special programs targeted at these populations are important.
- **Alcohol use is an important risk factor for injury.**
Alcohol and other drug abuse is a far more complicated issue than can be addressed comprehensively in this report. There is a clear association between alcohol use and increased risk for injury.
- **Legislation can be an effective strategy for preventing injuries.**
Where appropriate, state and local legislation and policies that lead to the prevention of injuries should be enacted or strengthened, and their effects should be evaluated.

Conclusions

This report serves as a starting point. The most challenging work lies ahead in addressing the recommendations resulting from the commission's work. A coordinated statewide effort is needed to more effectively target limited resources and share information among those working to prevent injuries in Ohio. The identification of high-risk groups for injury prevention efforts is critical because resources are scarce. Improved statewide data are clearly needed to identify patterns of injury and associated risk factors. Injury prevention efforts are cost-effective and can save state dollars in health care expenses, worker compensation claims, law enforcement and criminal justice-related costs, rehabilitation expenses and lost productivity.

Common Themes and Core Recommendations to Prevent Injury in Ohio

Theme: *Injuries are costly. Injury prevention saves lives and money.*

A. Seek creative and collaborative solutions to funding.

1. Enhance communication and collaboration among key stakeholders.
2. Encourage insurance companies, employers and others to cover injury prevention programs and services to reduce health-care costs.

B. Provide state funding that adequately addresses injury - a leading cause of morbidity and mortality in Ohio.

Theme: *Improved injury surveillance efforts and program evaluation are needed.*

C. Improve injury surveillance efforts.

1. Develop and maintain injury data infrastructures as discussed below. Collect cost and payer information when possible to allow cost/benefit analyses of injury prevention interventions.
2. Form an ongoing, interagency workgroup to review and make recommendations regarding data needs and opportunities. The workgroup should consider coordination, linking and quality improvement of data-collection efforts. It should include representatives familiar with the relevant databases. This group should explore:
 - Funding opportunities to support data linkage.
 - Mechanisms to improve quality and access to data.
3. Continue to provide support for the:
 - Development and maintenance of the Ohio Emergency Medical Services Incident Reporting System (EMSIRS) and the Ohio Trauma Registry through the Ohio Department of Public Safety.
 - Implementation of the Ohio Youth Risk Behavior Survey (YRBS) and the Ohio Behavioral Risk Factor Surveillance Survey (BRFSS).
 - Collection of licensed child care center serious injury data through the Ohio Department of Job and Family Services.

4. Support new uses of injury data through:
 - The development of a Crash Outcomes Data Evaluation System (CODES) in Ohio. CODES links traffic crash reports, Emergency Medical Services Incident Reporting System (EMSIRS) data and hospital discharge data. Funding is available from the National Highway Traffic Safety Administration.
 - Ohio's participation in the Centers for Disease Control and Prevention's (CDC's) National Violent Death Reporting System (NVDRS).
 - External cause of injury coding (e-coding) of and increased access to the full set of Ohio hospital discharge data.
5. Create a permanent and stable funding mechanism for the development of:
 - A statewide emergency department surveillance system that uses the CDC's *Data Elements for Emergency Department Systems*. (www.cdc.gov/ncipc/pub-res/deedspage.htm)
 - A statewide coroners' database.
 - A statewide school injury surveillance system.
 - An occupational injury surveillance system based on the U.S. Bureau of Labor Statistics injury data collection system.
 - A statewide toxic exposure data collection system.
 - Incentives (e.g., related grant funding, etc.) to improve records completion for all statewide injury databases.

D. Promote the use of injury prevention guidelines and evaluation measures that are based upon current evidence-based research and literature.

As part of the statewide coalition (described below), create a committee with responsibility for ongoing review of the effectiveness of prevention programs.

Common Themes and Core Recommendations to Prevent Injury in Ohio

Theme: Improved statewide coordination of programs is needed.

E. Coordinate the development of leadership and infrastructure to identify, promote and respond to injury prevention needs at the state and local level.

1. Implement recommendations from the State and Territorial Injury Prevention Directors' Association's (STIPDA) report, *An Assessment of the Ohio Injury Program, March 19-22, 2001*.
2. Strengthen the structure and funding of the Ohio Department of Health's Injury Prevention Section to provide technical assistance, training and coordination of activities, and support to state and local injury prevention efforts.
3. Create a statewide, interdisciplinary injury prevention coalition and provide a permanent funding mechanism to hire a full-time coordinator.

F. Coordinate EMS, trauma care and public health agencies with other injury prevention programs at the national, state and local levels to increase collaboration.

1. Increase interagency collaboration and coordination between state agencies and organizations concerned with the prevention of injury, in particular the Ohio departments of Health and Public Safety, including the EMS Board and Trauma Committee, the Bureau of Workers' Compensation, Ohio departments of Education, Mental Health, Aging, Transportation, Natural Resources and other relevant agencies.

G. Promote the use of coordinated, community prevention programs - that are multifaceted, evidence-based, and use effective evaluation by public health agencies, trauma centers, emergency medical services and other programs.

1. As part of the statewide coalition, create a committee with responsibility for injury prevention education.

2. Increase awareness, through statewide public education programs, that injury is a preventable public health problem and promote strategies for prevention through collaborative community programs.
 - Create an injury prevention Web site, listserve and toll-free referral number.
 - Promote materials to health care, government, and other groups working with at-risk populations.
3. Provide relevant training on injury surveillance and prevention strategies for professionals including: policy makers, law enforcement, nurses, physicians, EMS, teachers, child care professionals, extended care facility and senior care workers, employers, public health professionals and others.
4. Incorporate age-appropriate education on injury prevention, life skills, conflict resolution, parenting skills, bullying and other related issues into school curricula. Provide and promote standardized training materials for classroom use by teachers and other school professionals.

Theme: Injuries disproportionately affect those living in poverty, and the young and the old.

H. Promote injury prevention programs that focus on populations most at risk based on injury surveillance. Children and older adults living in poverty should be high priority.

Theme: Alcohol use is an important risk factor for injury.

- I. Fund and support initiatives that address prevention of alcohol and other drug-related injuries. These initiatives should include education, legislation, coalition building, and screening and intervention by health care professionals.

Common Themes and Core Recommendations to Prevent Injury in Ohio

Theme: Legislation can be an effective strategy for preventing injuries.

J. Enact or strengthen state and local legislation and policies which lead to the prevention of injuries.

1. The statewide coalition should monitor and advocate for policies and legislation which enhance the safety of Ohioans.
2. Provide information and resources to relevant agencies to support injury prevention legislation.
3. Enact legislation and policy to prevent injuries. Refer to pages 31-32 for specific policy and legislative recommendations.



Photo courtesy of the National SAFE KIDS Campaign



INJURY IN OHIO

A Report from the
Ohio Commission on the Prevention of Injury

November 2003

Acknowledgments

COMMISSION CHAIR

Gary A. Smith, MD, DrPH
Director, Center for Injury Research & Policy,
Columbus Children's Research Institute, Children's Hospital,
Ohio Chapter/American Academy of Pediatrics.

STEERING COMMITTEE MEMBERS

Christy Beeghly, MPH
Center for Injury Research and Policy
Columbus Children's Hospital

Lowell W. Gerson, PhD
Northeastern Ohio Universities College of Medicine
Ohio Public Health Association

William D. Hayes, PhD
Assistant Deputy Director
Ohio Health Plans
Ohio Department of Job and Family Services

Benita Jackson, MD, MPH
Ohio State University
School of Public Health

Dee Jepsen, MS
Ohio State University Extension
Food, Agriculture & Biological Engineering

Wendy J. Pomerantz, MD, MS
Children's Hospital Medical Center
Division of Emergency Medicine
Ohio Chapter AAP

Mike Smeltzer, MPH
Columbus Health Department
Ohio Public Health Association

COMMISSION MEMBERS

Sandy F. Anderson, MBA, MSN, RN
Regional Trauma Consultant
OhioHealth
Ohio Society of Trauma Nurse Coordinators

Anne R. Bacon
Ohio EMS for Children Program Coordinator
Ohio Department of Public Safety

Robert Brown, MD
Columbus Children's Hospital
Ohio Coalition on Suicide Prevention

William G. Crum
Trauma Victim Advocate

A. Peter Ekeh, MD, MPH, FACS
Department of Surgery
Wright State University

Edward Lamp, PhD
Trauma Victim Advocate

Beverley Laubert
Chief of Elder Rights Division
Ohio Department of Aging

Melinda Moore
Ohio Coalition on Suicide Prevention

Cheryl Markino
Director of Public Relations
Ohio Osteopathic Association

Eric Marsh, MSN, RN
Program Manager, Pediatric Trauma Center
Rainbow Babies & Children's Hospital of
University Hospitals of Cleveland

Sidney F. Miller, MD, FACS
Department of Surgery
Wright State University School of Medicine

Lisa A. Pardi, MSN, RN, CPNP
Akron Children's Hospital
Ohio Children's Hospital Association

Dave Spencer
Supt. of Safety & Hygiene
Ohio Bureau of Workers' Compensation

Hilary A. Stai
Assistant Chief of Elder Rights Division
Ohio Department of Aging

Rich Van Horn
Deer Creek State Park
Ohio Department of Natural Resources

Owen Wagner
Division of Labor & Worker Safety
Bureau of Occupational Safety and Health
Ohio Department of Commerce

OHIO DEPARTMENT OF HEALTH STAFF

Jamie M. Blair, APRN, BC, Chief,
Bureau of Community Health Services
and Systems Development

Charlene Buckner, RN
Injury Prevention Section

James Bryant, MD, Chief
Bureau for Children with Medical Handicaps

Nan Alexander Migliozi, MSN, RN, Chief
Injury Prevention Section

Mike Moser, RS
Injury Prevention Section

Melvin Stallworth
Injury Prevention Section

Joyce Wells, MSN, RN
Graduate Student Practice Placement
Capital University

OTHER ACKNOWLEDGMENTS

Special thanks go to the following individuals for their work in supporting the commission:

Virginia Haller, MD, Ohio Department of Health, for her devoted support of and invaluable insights into the commission's work and report preparation.

Pamela Leimbach, administrative assistant, Ohio Department of Health, Bureau for Children with Medical Handicaps for her administrative support in scheduling and coordinating meetings, and in recording, preparing and distributing commission meeting minutes in an always reliable and timely manner.

Mike Glenn, RN, State Trauma Coordinator, Ohio Department of Public Safety for his support throughout the process.

Christy Beeghly, MPH, Center for Injury Research and Policy, Columbus Children's Hospital, for her knowledge and input regarding injury prevention and her outstanding contributions to the preparation of the commission's report.

We would like to acknowledge the following organizations for their contributions:

The Ohio State Medical Association for providing refreshments and excellent accommodations for the Commission's meetings.

The National SAFE KIDS Coalition, the USDA Natural Resources Conservation Service and the AAA Foundation for Traffic Safety for permission to use their photographs throughout the report chapters.

Printing of this report was made possible through the support of the Ohio Department of Health, with partial support from the Ohio Department of Public Safety.

This report is dedicated to the memory of Rich Van Horn, Ohio Department of Natural Resources.

Message from the Commission Chair

November, 2003

Dear Colleagues,

Injury is the great modern plague, and Ohio's challenge is clear. We must apply to injury the same public health approaches that have been successful in combating many other diseases and public health problems. Prevention of injury is within our grasp.

The magnitude of the injury problem in Ohio is staggering. Injury claims the lives of more than 5,000 Ohioans each year and is the leading cause of death and disability among Ohio citizens from age one through 34 years. The costs and long-term consequences of injury on the healthcare system, the workplace, and among survivors and their families are enormous. By any measure, injury is the most significant public health problem facing our state's population.

The Ohio Commission on the Prevention of Injury, whose creation was authorized by House Bill 138 in the year 2000, brought together experts in multiple disciplines from across the state. This report is the product of two years of work by commission members. It is a consensus document that incorporates the best information available on existing and potential injury prevention programs in Ohio. Though there are many existing activities to prevent injuries in our state, there are also critical gaps in our efforts to address the problem. There is a lack of injury surveillance systems that would provide the information needed to focus our limited resources more effectively. Ongoing prevention efforts too often lack coordination among state and local agencies and groups in the private sector. Indeed, many other states lead Ohio in efforts to prevent injury among their citizens. While acknowledging the successes of ongoing programs, this report makes recommendations for improvement of existing programs and implementation of new injury prevention efforts.

I wish to thank the members of the commission for their hard work and dedication. I am impressed by the collective knowledge, commitment and compassion that this group has demonstrated during the development of this report. I wish to thank Director Nick Baird, MD and Dr. Virginia Haller and other members of the Ohio Department of Health for their support of the Commission's work. I also wish to recognize and thank the representatives of other Ohio governmental agencies, the state legislature, and other professional and advocacy groups from around the state for their invaluable contributions to the commission's report. Special thanks goes to Ms. Pamela Leimbach for her administrative assistance, and to Ms. Christy Beeghly for her outstanding contributions to the final report.

It is my hope, and that of the entire commission, that this report will serve as a guide for new statewide efforts to combat the leading public health problem of injury. This report provides a blueprint for a state strategic plan for the prevention of injury. Through increased collaboration of state government, professional and advocacy organizations, and the private sector, and with increased commitment of resources that are commensurate with the magnitude of this public health problem, the high financial costs of injury will be reduced, and Ohioans will enjoy safer and healthier lives.

Gary A. Smith, MD, DrPH
Director, Center for Injury Research and Policy
Columbus Children's Research Institute, Children's Hospital

The Ohio Commission on the Prevention of Injury

The Commission's Work

Ohio's 123rd General Assembly passed House Bill 138, authorizing a statewide trauma system in November 2000. Section Five of this legislation required the Ohio Department of Health to form a multi-disciplinary commission on the prevention of injury, with particular emphasis on the pediatric and geriatric populations in Ohio (*Appendix D contains the full text of Section Five of H.B. 138*).

In October 2001, commission members from across the state first gathered to discuss the current status of injuries and prevention efforts in Ohio. They developed a strategy and over the next two years, regularly convened to produce a consensus-based report.

Committees were formed to examine existing injury policies, programs and data sources, and document needs. Commission members identified chapter topics, drafted and carefully reviewed chapters, and achieved consensus in issuing recommendations. Common themes and needs emerged after assessing individual injury areas. The process resulted in core recommendations for improving injury prevention efforts in Ohio. The result of the commission's work is this comprehensive report examining the current status of injuries in Ohio with recommendations for future action. Reports for individual injury areas (e.g. fire/burn, motor vehicle-related injury, etc.) are available electronically at www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm

Goals

The long-term goal of the Ohio Commission on the Prevention of Injury is to reduce injury and injury-related death to Ohioans. Implementation of the commission's report recommendations will facilitate achievement of this goal.

The commission largely used Healthy People 2010 (HP 2010) as a guideline for setting goals for Ohio. HP 2010 is a statement of national health objectives designed to identify the most significant preventable threats to health and to establish national goals to reduce these threats. The objectives are built on scientific knowledge and are designed to measure progress over time. Thirty-nine HP 2010 objectives relate to unintentional and intentional injury. HP 2010 objectives related to injury are defined throughout this report for most of the injury topics and, where available, Ohio injury rates are compared to those of the country as a whole. Additional information about HP 2010 and the methods used to set national goals can be found at www.healthypeople.gov/default.htm.



Photo courtesy of the National SAFE KIDS Campaign

INJURY IN OHIO

Defining the Problem

Injury can be defined as physical damage caused by a transfer of energy to tissues of the body. This energy can come in various forms, kinetic/mechanical, thermal, chemical or electric. Injury also can be caused by a lack of needed elements such as heat or oxygen. Injury can result from unintentional (accidental) or intentional acts.

Injuries are largely classified by the:

- Events and activities that preceded them (e.g. motor vehicle-related, occupational-related).
- Outcome or result of the transfer of energy (e.g. traumatic brain injury, burns).
- Intention of the acts causing the injury (e.g. abuse, suicide, homicide).

This report will group injuries into these categories to organize a discussion of the topics. Overlap among these categories exist, for example, motor-vehicle crashes can cause traumatic brain injuries and burns can be used as a form of abuse. The report's chapters reflect this overlap as appropriate.

Throughout this report, "unintentional injuries" will be used to describe those injuries resulting from accidents. The word "accident" suggests something unpredictable, random and therefore not preventable. Most injuries are predictable and preventable. Using the word "accident" hides this fact.

Given the perspective that injuries are predictable and preventable, action can be taken to intervene. Epidemiologic studies and surveillance systems provide information to identify how, when and where injuries typically occur. We can identify who may be at the highest risk for injuries. We can also target interventions to prevent specific types of injuries.



Photo courtesy of the National SAFE KIDS Campaign

Individual Injury Area Reports

The common themes and core recommendations found in this report are based on the findings of individual injury area reports (e.g. fire/burn, motor vehicle-related injury, etc.) that are available electronically at: www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm

CDC State of Ohio Injury Profile

The Centers for Disease Control and Prevention has created injury profiles for each state to document the injury problem and compare states against a national profile. Ohio's profile can be found at: www.cdc.gov/ncipc/StateProfiles/sip_oh.pdf

Overall Goals

Reduce injury deaths of all causes and intents.

Goal	37.0 deaths per 100,000 (better than the best state)
OH 1998	43.7
US 1998	54.4

Data Source: NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates.

Reduce deaths caused by unintentional injuries.

HP 2010 Goal	17.5 deaths per 100,000
OH 1998	29.5
US 1998	35.0

Data source: National Vital Statistics System (NVSS), CDC, NCHS.

Reduce deaths caused by violence.

Goal	10.0 deaths per 100,000 (better than the best state)
OH 1988	13.8
US 1998	18.0

Data Source: NCHS Vital Statistics System for numbers of deaths. Bureau of Census for population estimates.

Reduce hospital emergency department visits caused by injuries.

HP 2010 Goal	126 hospital emergency department visits per 1,000.
OH	Identify baseline
US 1997	131

Data source: National Hospital Ambulatory Medical Care Survey (NHAMCS), CDC, NCHS.

Increase the number of states and the District of Columbia with statewide emergency department surveillance systems that collect data on external causes of injury.

HP 2010	All states and the District of Columbia.
OH	No system in place
US 1998	12 States

Data source: External Cause of Injury Survey, American Public Health Association (APHA).

Increase the number of states and the District of Columbia that collect data on external causes of injury through hospital discharge data systems.

HP 2010	All states and the District of Columbia.
OH	System exists but data is not easily accessed
US 1998	23 States

Data source: External Cause of Injury Survey, American Public Health Association (APHA).

DATA

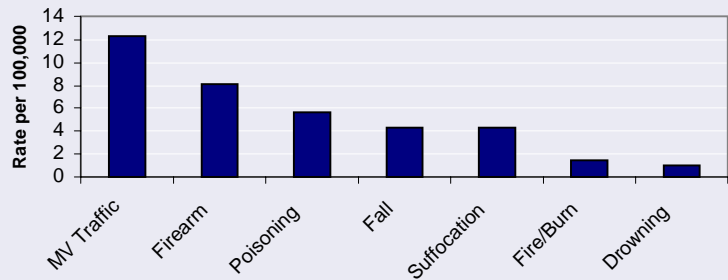
Injury is one of the great modern plagues. When ranked among other public health problems, injury is arguably the leading threat to the health and well being of the general population in the United States. In 2000, intentional and unintentional injuries caused more than 148,000 deaths, 1.4 million hospitalizations and 29.5 million emergency department (ED) visits in the United States.

Injury is the leading cause of death and disability for Ohioans ages 1 to 34 and the sixth leading cause of death for all age groups. Thousands of Ohioans are killed each year from injury-related causes. More than 5,100 Ohioans died from injuries in 2000. Motor vehicle traffic, firearms, poisoning, falls, suffocation, fire/burn and drowning are the leading causes of injury death per 100,000 Ohioans (*Figure 1*). During 1999-2000, Ohio's injury death rate was 45.8 deaths per 100,000, which was less than the national rate of 54.0 but still higher than the HP 2010 target of 37.0 deaths per 100,000.

Injury death rates have remained relatively constant in the United States during the 20th century. In contrast, disease rates have declined (*Figure 2*). By 1980, death rates from tuberculosis and gastrointestinal disorders had declined by 99 percent compared to the turn of the century. Death rates from influenza and pneumonia declined by 85 percent. The decreased rates were a result of a focused energy and application of scientific principles to disease control. Infectious disease rates have decreased due to a better understanding of disease etiology, improved treatment and sanitary conditions, and targeted prevention

Figure 1.

Leading Causes of Injury Death per 100,000 Ohioans, 1999-2000



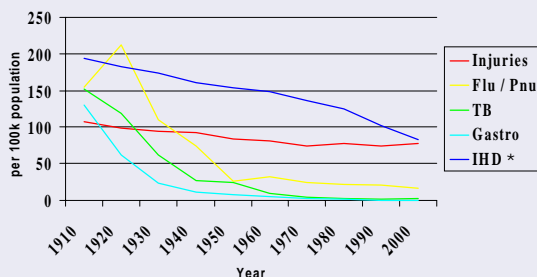
efforts. In contrast to disease, during this century, injury death rates have declined by only 30 percent. Injury is at present responsible for three times as many deaths as are influenza and pneumonia.

Unintentional causes lead to the greatest proportion of injuries and injury-related death. During one year in Ohio, unintentional injury fatalities exceed that of 12 jet crashes, each causing 260 casualties. Imagine one large jet crash every month in Ohio. This is the equivalent in fatalities to those that resulted from the 2001 terrorist attack on the World Trade Center. For the entire United States, annual injury fatalities equal more than 360 jumbo jet crashes with no survivors. That is nearly one jet crash **each day**. Such catastrophic events would merit immediate public action and attention. However, because injury deaths occur in isolation or in small clusters, they often go unnoticed except by those directly affected by the loss.

During one year in Ohio, the number of deaths caused by unintentional injuries exceeds that of one large jet crash per month, each causing 260 casualties.

Figure 2.

Death Rates from Injuries and Other Causes, United States, 1910 - 2000



* Ischemic Heart Disease



Many perceive these deaths to be accidents, unforeseen tragedies happening by chance. They are not.

The leading causes of unintentional injury death in Ohio are motor vehicle traffic, falls, poisonings, suffocations, fire/burns and drowning. Motor vehicle traffic accounted for 40 percent of unintentional injury deaths in 1999-2000.

When measured in Years of Potential Life Lost (YPLL), injuries account for almost one-third of all premature death (YPLL before age 65) in

the United States. They account for more YPLL than heart disease, cancer and stroke combined, which are the next leading causes of YPLL in the United States. Injury accounts for so many YPLL because it is the leading cause of death from ages 1 - 34 years.

In Ohio during 1999-2000, injuries accounted for the most YPLL before age 65 (*Figure 3*) and unintentional injuries alone accounted for the second most YPLL, after cancer (malignant neoplasms).

Figure 3.

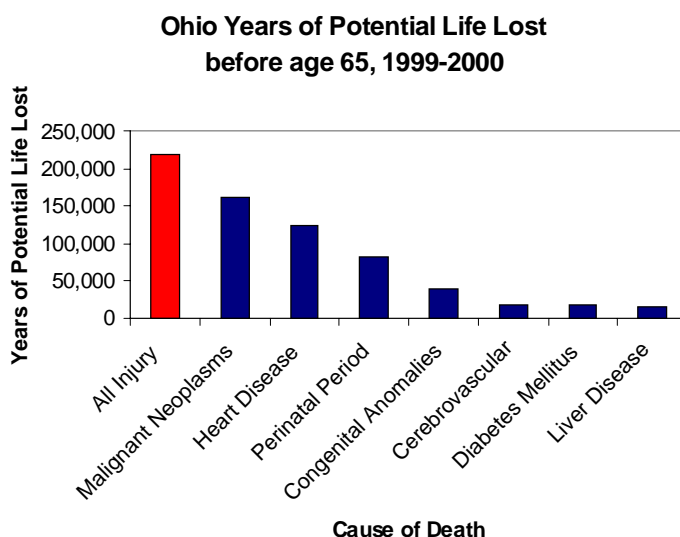
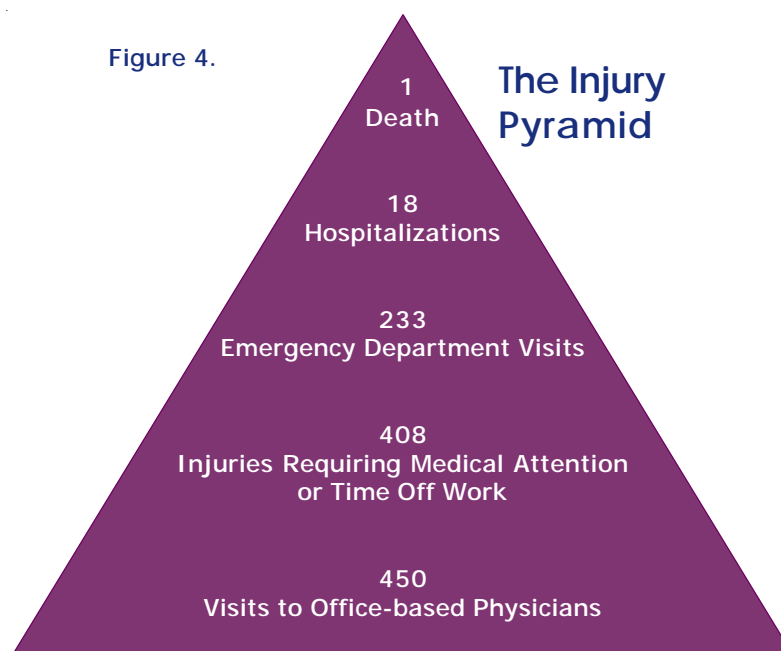


Figure 4.



Source: National Center for Health Statistics (1999)

Although fatalities are the most severe and final consequence of injuries, they represent only the tip of the iceberg when examining the burden of injury. The injury pyramid (*Figure 4*) depicts that for each injury death in the United States, there are approximately 18 hospitalizations and 233 emergency department visits. At this time, we do not have corresponding Ohio data for non-fatal injuries, however, estimates can be made based on the injury pyramid. Given that approximately 5,000 Ohioans die from injuries each year, the Ohio injury pyramid is presented below (*Figure 5*).

Of the millions of Ohioans who survive injuries, many suffer long-term consequences such as permanent disability, time lost from work and family, costly medical expenses and pain and suffering.

During 2000 in the United States, unintentional falls were the leading cause of non-fatal injury for all ages, followed by unintentional struck by/against and unintentional motor vehicle occupant as the second and third causes, respectively (*Figure 6*). Corresponding Ohio-specific data is not available for non-fatal injuries.

Figure 5.

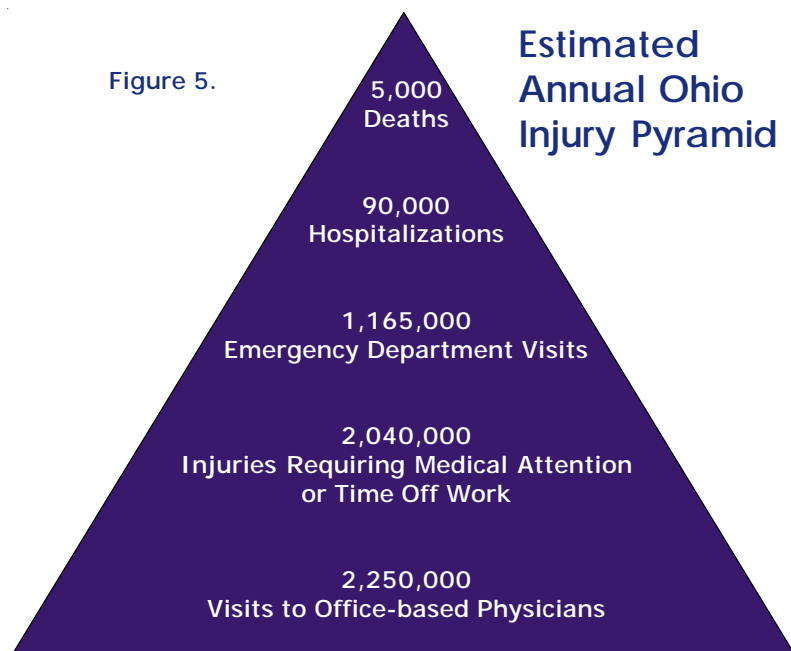
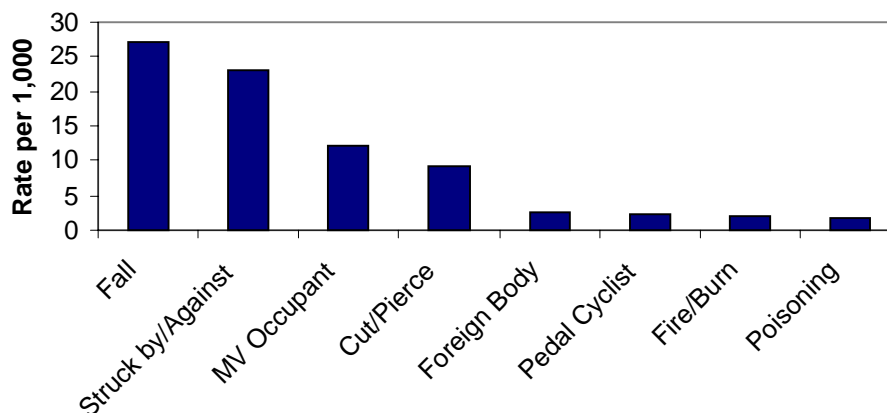


Figure 6.

**Leading Causes of Non-fatal Injury in the U.S.
per 1,000, 2000**



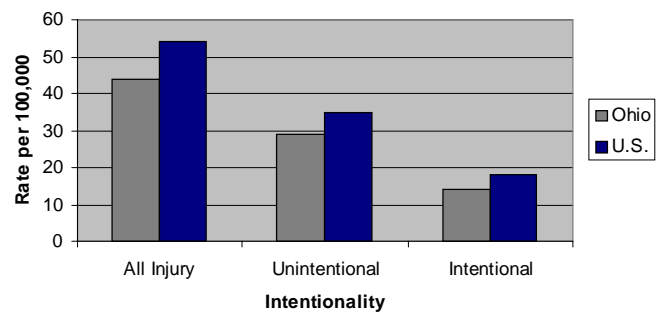
INTENTIONAL Vs. UNINTENTIONAL

This report discusses injuries resulting from both intentional and unintentional acts. There are clearly fundamental differences in the underlying causes of intentional and unintentional injuries. Efforts to prevent intentional injuries often involve more complex issues including mental health, family and group dynamics.

Approximately two-thirds of injuries are unintentional and one-third are intentional (*Figure 7*). During 1999–2000 in Ohio, the violence-related injury death rate was 13.8 per 100,000 compared to the U.S. rate of 16.9 per 100,000. These figures include suicides, homicides and legal intervention. Homicide alone was within the top eight leading causes of death in Ohio during 1999–2000 for all age groups from 1 to 44 years. The violence-related injury death rate in Ohio varies by age group and race (*Figure 8*). Black individuals in age groups from 15 to 39 years suffer the highest intentional injury death rates.

Figure 7.

Ohio and U.S. Injury Death Rates, 1998

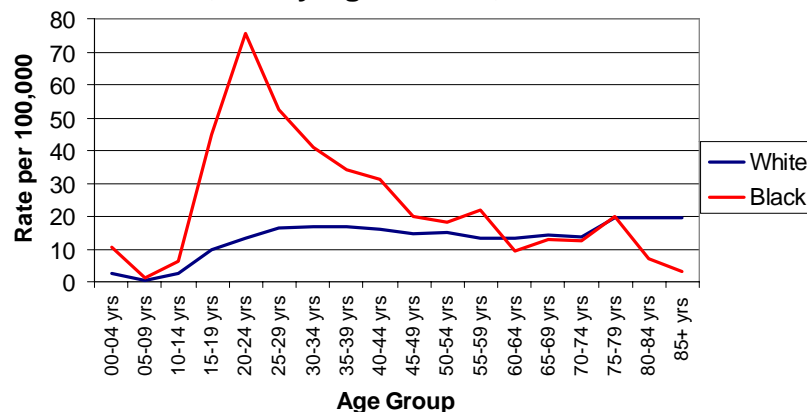


Nationally, nonfatal violence-related injury rates increase up to age 24 and then decrease with age. During 2000, injury rates ranged from 217.5 per 100,000 ages 0-4, to a high of 1,828.6 per 100,000 ages 20-24, to a low of 50.3 per 100,000 ages 85 and older. The leading cause of violence-related nonfatal injury for all age groups is struck by/against assault followed by self-harm poisoning, however, the leading causes vary considerably among age groups.

Although there are fundamental differences in addressing intentional and unintentional injuries, factors common to both exist. Examining these common factors or intersection points will facilitate consolidating prevention efforts, and possibly reducing program-related costs. It is critical that planners and decision makers from concern with either type of intent sit at the table and decide where consolidation makes sense. Specific examples of such approaches are outlined in the intentional injury chapters that can be found online at www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm.

Figure 8.

Ohio Intentional Injury Death Rates per 100,000 by Age & Race, 1996-1998



COSTS & CONSEQUENCES

The greatest cost of injury is measured in human suffering and loss. At the same time, the financial repercussions are staggering. In the United States, more than \$224 billion is spent annually on medical care, rehabilitation and lost income and productivity resulting from injury. The federal government pays about \$12.6 billion each year in injury-related medical costs and about \$18.4 billion in death and disability benefits. Insurance companies and other private sources pay approximately \$161 billion (*CDC Injury Fact Book 2001-2002*). Injury-related deaths and disabilities have a profound negative effect on the productivity of the U.S. workforce.

The total monetary cost of fatal injury incidences in Ohio from 1993 to 1997 for persons aged 24 years and younger was more than \$1 billion (*Table 1*). This total includes medical, legal, administrative costs and estimated lifetime productivity loss. Motor vehicle-related deaths account for 53 percent and firearm-related deaths account for 28 percent of the costs.

In State fiscal year (SFY) 2002, Ohio Medicaid provided health care services associated with an *inpatient diagnosis* of trauma for 11,616 people. Ohio Medicaid spent more than \$201 million in state and federal funds in SFY 2002 for services directly related to their trauma. This figure

understates total trauma spending because it does *not* include prescription drug or skilled nursing facility costs for services related to their trauma, and it does not include anyone with an outpatient diagnosis of trauma.

A recent assessment of injury-related Ohio Medicaid spending over a four-year period reveals the following. In SFY 1999, 9,096 Ohio Medicaid consumers used health care services due to a trauma incident occurring during SFY 1999. These consumers spent approximately \$235 million in total health care expenditures during the first year after the injury. One-third, or at least \$78 million, of these health care expenditures was directly related to the injury. Over the four-year period following the trauma incident, Ohio Medicaid spent \$566 million in total health care expenditures for this group, of which \$92.8 million was directly tied to the trauma.

Those connected with the victim also experience the consequences of the injury. A non-injured spouse may need to provide full-time care to a disabled spouse, resulting in loss of work productivity and possibly lost income for two individuals. Children are profoundly affected when parents are injured and can no longer care for them. These significant costs are more difficult to calculate.

Table 1.

Ohio Fatal Injury Incidences, Estimated Costs for Ages 0-24, 1993-97				
Cause of Death (All Intents)	Total Monetary Cost of Injuries	Total Years Potential Life Lost	Mean Annual Frequencies	Average Rate/100,000
MV Traffic	\$545,152,173.00	27,948	456.6	11.6
Firearm	\$298,899,271.00	16,753	279.6	7.1
Fire/Burn	\$48,015,535.00	3,599	51.8	1.3
Drowning/Submersion	\$47,796,514.00	3,219	48.8	1.2
Suffocation	\$47,382,041.00	3,223	48.6	1.2
Poisoning	\$20,877,871.00	1,152	19.4	0.5
Falls	\$11,856,837.00	732	11.6	0.3
Other Transport	\$10,343,542.00	596	9.8	0.3
Non MV Pedestrian	\$9,218,230.00	593	9.2	0.2
Cut/Pierce	\$5,139,705.00	287	4.8	0.1
Machinery	\$4,409,630.00	257	4.2	0.1
Struck by/Against	\$3,451,992.00	243	3.6	0.1
Non MV Pedal Cyclist	\$1,207,458.00	77	1.2	0
Natural/Environmental	\$818,553.00	50	0.8	0
Total	\$1,054,569,352.00	58,729	1042.8	26.6
Source: Children's Safety Network National Injury Data Technical Assistance Center and Children's Safety Network Economics and Insurance Resource Center.				

RISK FACTORS

Factors that place a certain group of individuals at a higher risk for injury must be identified to effectively target prevention efforts. Risk factors vary according to the type of injury, however, there are some risk factors that are common to nearly every injury category.

LOW INCOME

Poverty is a risk factor for injury. Children from low income families are twice as likely to die in a motor vehicle crash, four times more likely to drown and five times more likely to die in a fire (*NSKC, Children at Risk Fact Sheet. Washington, DC, 2003*).

Approximately one out of 10 Ohioans were defined as having poverty status in 1999. Fourteen percent of children younger than 18 years and 8 percent of elders older than 64 years were living in poverty.

For these individuals, housing may be substandard and more hazardous. They may be living in neighborhoods with busy streets and without safe recreation spaces for children. In addition, increased exposure to physical hazards and lack of access to health care are contributing factors affecting the occurrence and severity of injury. Individuals living in poverty may not have access to prevention education or the resources to obtain safety devices such as child safety seats, bicycle helmets and smoke alarms. Other factors related to low income that may increase one's risk for injury include single-parent households, lack of education and young maternal age.

Violence and poverty have been positively correlated. Stress and frustration may lead to a higher likelihood of abuse and participation in violence-related activities.

Children from low-income families are twice as likely to die in a motor vehicle crash, four times more likely to drown and five times more likely to die in a fire.



Photo courtesy of the National SAFE KIDS Campaign

AGE

As recognized by the legislators who drafted House Bill 138, age is a significant factor affecting the occurrence and severity of injury. Children and older adults are disproportionately affected by injuries. As a result, the commission was given a specific mandate to emphasize the injury prevention needs of these groups. Where relevant, the authors of the report's chapters have brought attention to these issues.

Young Ohioans

Children are not small adults. They are developmentally, anatomically and physiologically different than adults. These differences place them at greater risk for injury and affect the severity of the injury. In addition, the developmental and cognitive abilities of children play a significant role in their vulnerability to injury. Appendix A contains tables listing some of the physical differences and describing the injury risks to children by age group.

Injuries take a significant toll on the young. Former Surgeon General C. Everett Koop said on the subject of childhood injury, "If some infectious disease came along that affected one out of every four children in the United States, there would be a huge public outcry and we would be told to spare no expense to find the cure – and to be quick about it."

- During the preschool, elementary and middle school years, injury accounts for approximately as many deaths as all other causes combined.
- Every day in the United States, more than 28,000 youth ages 19 years and younger are injured seriously enough to require medical treatment in an emergency department, totaling more than 10 million annually.
- Each year in the United States, more than 17,000 youth ages 19 years and younger will die as a result of injury (22.5 per 100,000). More than 630 will die in Ohio (20.0 per 100,000).
- Injuries have been the leading cause of death in children for nearly 40 years.
- One in four children will suffer an injury during the next year that will require medical attention.
- It is estimated that as many as 90 percent of unintentional injuries can be prevented.

Regardless of how the injury problem is measured, injury rises to the top of the list of public health threats to children.



**"If some infectious disease came along that affected one out of every four children in the United States, there would be a huge public outcry and we would be told to spare no expense to find the cure – and to be quick about it."
Former Surgeon General
C. Everett Koop**



Infants and Young Children

During the first year of life, risk of death due to injury is very high. In absolute numbers, more children die due to injury during this year than during any single one-year period during the preschool and early school years.

During 1999-2000 in Ohio, the unintentional injury death rate for infants younger than 1 year of age was 33 per 100,000. This is the highest age-specific unintentional injury death rate until age 17. The leading causes of unintentional injury death for infants are suffocation, fire/burn, motor vehicle traffic and drowning. Suffocation accounted for 72 percent of the deaths in 1999-2000.

For young children aged 1 to 4 years, fire/burn, motor vehicle traffic crashes and drowning accounted for 72 percent of unintentional injury deaths in Ohio during 1999-2000. Homicide was the second leading cause of death for this age group.

Children

For children aged 5 to 14 years, motor vehicle crashes, drowning and fire/burns accounted for more than 72 percent of the unintentional injury deaths in Ohio during 1999-2000. For children ages 5 to 9 years, homicide was the fourth-leading cause of death. For children ages 10 to 14 years, suicide was the third-leading cause and homicide was the fifth-leading cause of death. Firearms are the cause of death in nearly half of the homicides for ages 5-14.

For children ages 1 to 14, the leading cause of non-fatal intentional injury is struck by/against assault, followed by sexual assault.



Teens and Young Adults

During the teenage and young adult developmental period, risk-taking behavior, use of alcohol/other drugs and peer pressure contribute to a high risk for unintentional and intentional injury.

During 1999-2000 in Ohio, unintentional injuries, suicides and homicides were the three leading causes of death, respectively for youth ages 15 to 19. Firearms were the cause of death in 67 percent of homicides and 46 percent of suicides. Suffocation was the cause of death in 40 percent of suicides in this age group.

The Ohio Youth Risk Behavior Survey (YRBS) is a biennial survey conducted among 2,000 randomly sampled Ohio high school students to assess health-related risk factors. Summary findings related to unintentional and intentional injury from the 1999 YRBS are described below.

From 1993 to 1999, fewer teens reported carrying a weapon such as a gun, knife or club both on and off school property. Fewer students were involved in physical fights. Although Ohio's teenagers are less violent than in past years, there is still room for improvement. Fourteen percent of female students have been forced to have sexual intercourse when they did not want to. One out of 10 students were hit, slapped or physically hurt by their boyfriend or girlfriend in the last 12 months. Eight percent of Ohio high school students actually attempted suicide in 1999.

More Ohio teens are buckling up. Sixteen percent of teens reported that they never or rarely wore a seatbelt when riding in a car in 1999, a 33 percent decrease over the 24 percent in 1997 but still too high. Very few teens are wearing a helmet while riding a bicycle (92 percent rarely or never wear one). Helmet use while riding a motorcycle is more frequent, with 39 percent rarely or never wearing a helmet. Unfortunately, there has been a 41 percent increase in the percentage of teens who drive a vehicle after drinking alcohol (12 percent in 1993 to 17 percent in 1999). Trend data from 1993 through 1999 indicate a steady increase in males, females, white and African-American students driving a car or other vehicle after drinking alcohol.

Nationwide, unintentional struck by/against was the leading causes of non-fatal injury followed by motor vehicle traffic as the second-leading cause for ages 15-19.

Older Ohioans

At the other end of the age continuum, elders have an elevated risk for injury (*Figures 9 & 10*). As with children, anatomical, physiological and cognitive changes help to explain the heightened risk. Sight, balance and coordination may wane which may lead to a fall. Elders may be socially isolated and dependent leading to a higher risk for abuse or suicide. Reaction times may increase leading to risk for motor vehicle crashes. Poor sight or decreased mental capacity may lead to unintentional medication overdoses or poisonings. In addition, physical changes may lead to greater severity of injuries and less resiliency. Appendix A contains tables listing some of the physical and cognitive changes that cause greater injury risk for elders.

Ohio's population 60 years and older comprises more than 15 percent of the state's total and the percentage who are 85 years and older is rising steadily. If ignored, the injury problem to elders will grow as more Ohioans age into the risk category.

In Ohio during 1999-2000, motor vehicle traffic was the leading cause of unintentional injury death, followed by falls and suffocation for ages 65 to 74. For those over the age of 75 years, falls account for the most unintentional injury deaths, followed by motor vehicle traffic and suffocation. Nationwide, unintentional falls are the leading cause of nonfatal injuries in this age group also.



Figure 9.

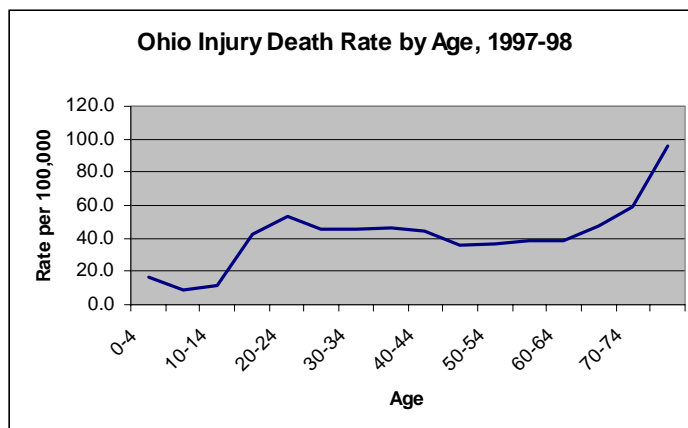
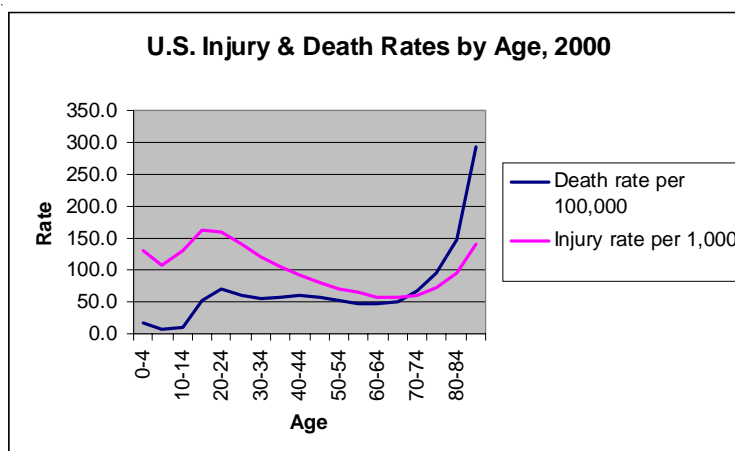


Figure 10.



GENDER

At most ages and for most causes of injury, males are at higher risk than females. Males are at higher risk than females for motor vehicle crashes, falls, drowning, homicide and suicide completion.

Although in general males are at an increased risk for injury, females are at an increased risk for specific injuries. These include hip fractures from fall-related injuries, intimate partner violence and sexual assault. Females are at much higher risk for fatal and nonfatal injury from intimate partner violence. In a national survey, one out of four women reported being raped or physically assaulted by an intimate partner at some time in their lives; only 8 percent of men reported such as experience. Women are more likely to attempt suicide than men.



Photo courtesy of the National SAFE KIDS Campaign

RACE AND ETHNICITY

Racial disparities in injury rates have been noted. African Americans have the highest overall injury rate of nearly all other racial and ethnic groups. However, many of these differences disappear when socioeconomic status is controlled. Racial disparities appear to relate more to living in impoverished neighborhoods as discussed above, than with race or ethnicity.

African Americans in Ohio are disproportionately more likely to be living in poverty, and thus are at an increased risk for injury. More than 25 percent of African Americans in Ohio are living in poverty, compared to 8 percent of whites.

For Ohio African Americans aged 15-24 and 25-34 years, homicide exceeded unintentional injuries as the leading cause of death in 1999-2000. Homicide was the fourth- and fifth- leading cause of death respectively, for whites in these age groups.

GEOGRAPHY

Individuals living in rural areas are at greater risk from unintentional injury-related death than those living in urban areas. Rural areas are less likely to have organized systems of trauma care, resulting in prolonged response and transport times. Nearly one-fourth of Ohio's population lives in rural areas as defined by the U.S. Census Bureau.

In contrast, living in an inner city places one at greater risk for nonfatal injuries than those living in rural and suburban areas. Proximity to quality medical care may affect injury survival rates in urban areas.



*Photo courtesy of USDA Natural Resources Conservation Service,
<http://photogallery.nrcs.usda.gov>*

COMMON THEMES

The consensus-based process used by the commission members to develop this report led to the identification of common, overarching themes. These themes provided the foundation for core recommendations in this report. A brief discussion of the manner in which these recurring themes affect injury will be discussed.

THE COST BENEFIT OF PREVENTION

Injuries are extremely costly to individuals and society. The good news is that prevention efforts confer benefits outweighing the costs.

If bicycle helmets, working smoke alarms and child vehicle restraints were considered as important for health as immunizations and other preventive medications (e.g. blood pressure medication), millions of dollars would be saved. A paradigm shift is indicated that views safety interventions as a part of routine health and wellness – a “vaccine” against injury. Those entities benefiting from the prevention of injuries include insurance companies, health care facilities, employers and government.

Following are a few examples of the cost benefit of preventing injuries:

- For every dollar spent on a bicycle helmet, \$30 is saved in direct medical care costs and other costs to society.
- For every dollar spent on a child safety seats, \$32 is saved in direct medical costs and other costs to society.
- For every dollar spent on a smoke alarm, \$69 can be saved in fire-related costs.
- For every dollar spent on poison control centers, \$7 is saved in medical costs.

If bicycle helmets, working smoke alarms and child vehicle restraints were considered as important for health as immunizations and other preventive medications (e.g. blood pressure medication), millions of dollars would be saved.



Photos courtesy of the National SAFE KIDS Campaign

THE NEED FOR IMPROVED INJURY SURVEILLANCE

Strategies to prevent and reduce injury take a population-based approach similar to other public health strategies to prevent and control disease. Comprehensive, population-level injury data, which is lacking in Ohio, is important for a number of reasons. Decision makers and program administrators use injury data to assess needs and identify funding priorities. Program planners and coordinators use data for quality improvement and program evaluation. Health care institutions use data for quality improvement purposes. Data linkages provide a view of the entire spectrum of injury from risk factors to costs, outcomes and long-term impact on society.

The lack of statewide injury surveillance impedes our ability to adequately describe the injury problem in Ohio. Several injury databases recommended by the Centers for Disease Control and Prevention and the State and Territorial Injury Prevention Directors Association are either in their infancy stages of development, being contemplated or have not been explored in Ohio. Existing Ohio injury databases include death records, EMS incident reporting, a statewide trauma registry, child abuse/neglect reports, adult protective services, traffic crash reports, crime statistics, fire incident reporting, occupational-related injuries, child fatality review, hospital discharge and farm-related injuries. A table further describing the data available from each of these sources, restrictions to access the data and the years for which data are available, can be found in the Appendix.

Most of these databases exist in isolation at this time. They are housed and controlled by separate agencies and are not linked to other sources of data. Analysis and reporting of the data occurs often within this context and



Photo courtesy of the National SAFE KIDS Campaign

without a broader perspective of the data's use to other groups. These databases will be most useful if continuing discussions guide analysis of the data. A workgroup should be formed including representatives familiar with those databases. This group can identify opportunities for linkage and sharing of data as well as broader reporting and uses of the data

to improve administrative decision-making abilities. They can also make recommendations for the development of new surveillance systems.

A statewide injury surveillance system that tracks all injuries is a most pressing need. This system should include injuries treated at urgent care centers, emergency

departments and hospitals, and it should have the capability to link injury records from events preceding the injury to long-term outcomes. Injury data from schools, child care centers and long-term care facilities are useful sources that should be considered.

Ohio will have the opportunity to focus injury prevention activities on the needs of high risk populations in this state as data collection grows and data analysis matures. This is preferred to implementing programs based on the assumption that the Ohio population mirrors that of the nation.

A statewide injury surveillance system that tracks all injuries is a most pressing need. This system should include injuries treated at urgent care centers, emergency departments and hospitals, and it should have the capability to link injury records from events preceding the injury to long-term outcomes.

THE NEED FOR INCREASED STATEWIDE COORDINATION OF EFFORTS

Many statewide and local prevention efforts are underway, each targeting the injury problem from a unique perspective. Participation on the commission provided members with the opportunity to view injuries from a broader perspective than that of their parent organizations. For example, those regularly addressing intentional injuries to children learned about the problem of injuries occurring in the workplace. Those focusing on pediatric injury prevention had the opportunity to learn how elders are disproportionately affected by injury as well. Members learned about new resources and sources of data available to them. Due to the important knowledge and resources shared by commission members, it is apparent that improved statewide coordination of injury prevention efforts would benefit all involved.

Interagency collaboration and coordination between state agencies and organizations concerned with the prevention of injury should be enhanced. Key organizations include the Ohio departments of Health and Public Safety, including the EMS Board and Trauma Committee, the Bureau of Workers' Compensation, Ohio departments of Education, Mental Health, Aging, Job and Family Services, Transportation, and Natural Resources. In addition, representatives from other stakeholder organizations should be invited to collaborate at the state level. These groups include the Ohio Hospital Association, the Ohio Children's Hospital Association, elder advocacy groups, Commission on Minority Health, Ohio PTA Association, Ohio Public Health Association, Association of Ohio Health Commissioners, MADD, regional trauma groups, law enforcement organizations, etc.

State-level infrastructure and leadership requires continuing support to increase coordination of efforts. This support will enable the provision of technical assistance, training, and coordination to state and local injury prevention efforts.

One strategy to increase coordination involves the creation of a statewide, interdisciplinary injury prevention coalition. The coalition would increase sharing of resources and data, and eliminate duplication of efforts. Funding for a full-time coordinator should be provided. Key responsibilities of this position should include the following:

- Facilitate the translation of report recommendations into action.
- Seek ways to improve communication, such as through the creation of a state injury prevention Web site, listserve and newsletter.
- Reduce duplication of prevention efforts, such as through the creation of a single point of contact toll-free referral number.
- Improve access to injury data.
- Seek additional funding for statewide coalition efforts.
- Improve the dissemination of well-evaluated and evidence-based prevention strategies.
- Facilitate the coordination of new committees/work groups developed as a result of the report recommendations.
- Serve as a state-level advocate for injury prevention, particularly focusing on the needs of the young and the old, the impoverished and other high-risk groups.
- Cultivate and coordinate expertise in various risk areas, such as through the development of a speaker's bureau and media contact list.

THE ROLE OF ALCOHOL

Alcohol is a risk or contributing factor in almost every category of injury, both intentional and unintentional. One of the most dramatic examples is the effect that alcohol has had on motor vehicle crashes. In 2002, alcohol was a factor in 40 percent of the motor vehicle injury-related deaths in Ohio. Alcohol use has also been linked to a substantial number of the injuries and deaths resulting from falls, fires and drownings. It also contributes to the incidence of physical fighting, homicide, suicide, family violence and sexual assault. Alcohol has been found to play a role in more than half of homicides and sexual assaults, more than half of burns, almost half of hypothermia and frost bite cases, and 40 percent of falls.

There are multiple ways in which alcohol and other drug use increases the risk for injury.

Intoxication:

- Decreases the level of alertness.
- Impairs motor function, diminishing coordination and balance, and increasing reaction time.
- Impairs judgment and results in poor decision making.
- Diminishes perception and cognitive abilities.
- Increases risk taking behavior and feelings of invulnerability (especially among adolescents and young adults).
- Reduces inhibitions and intensifies feelings of anger and depression.
- Is associated with increased violent behavior.

Additionally, chronic use may render a person more medically fragile, resulting in more severe injuries and less resiliency.

Although alcohol and other drug treatment approaches are somewhat beyond the scope of this report, the commission advocates for continued support of successful initiatives that address prevention of alcohol and other drug-related injuries. For example, programs that limit youth access to alcohol, provide treatment for those who abuse alcohol and other drugs, counsel high-risk groups about the role of alcohol in injury and enforce relevant laws are likely to have a measurable effect on injury rates.



Photo courtesy of the AAA Foundation for Traffic Safety



PREVENTION CONCEPTS & STRATEGIES

A science of injury prevention has emerged through the work of pioneers, such as William Haddon and Susan Baker, who have shown that injuries, like diseases, have predictable epidemiologic patterns and are largely preventable. Injury research and prevention efforts have gained the attention of the U.S. Congress, especially following the publication of *Injury in America: A Continuing Public Health Problem* by the National Research Council and the Institute of Medicine in 1985. In June 1992, a National Center for Injury Prevention was created at the Centers for Disease Control and Prevention (CDC) in Atlanta.

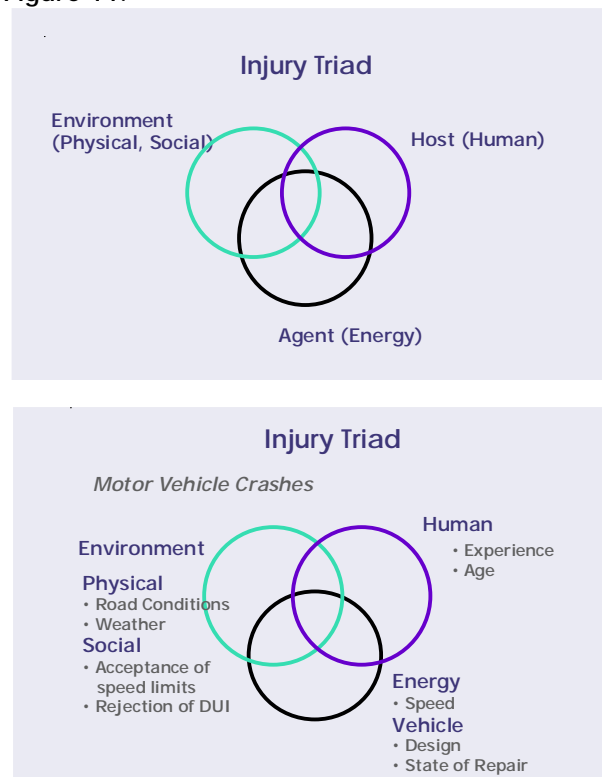
The Injury Triad

Contributing factors to injury are generally divided into three groups: host, environment (often subdivided into sociocultural and physical) and agent factors, frequently called the epidemiologic triad. The agent in the case of injury is the energy that is transferred or the cause of energy (e.g. fire/heat, car, gunshot, fall). The injury triad (Figure 11) presents examples of these factors for the case of motor vehicle crashes. Using prevention strategies that attack the injury triad from all directions will have the greatest likelihood of success. Therefore, a combination of strategies that address all of the factors, including host, environment and agent factors, should be used. Strategies should be prioritized based on the availability of resources and the highest probability of success.

The Injury Can be Prevented without Preventing the Event

A key concept in injury-prevention science is preventing the injury without preventing the event. For example, a child can be in a car crash but be protected by a properly fitting restraint system. The amount of energy transferred to the body does not exceed tissue tolerances and no injury occurs. However, given a similar crash where a child is improperly secured and is ejected from the vehicle, a serious injury is almost certain to occur due to the large amount of energy transfer. Injury-causing agents will be difficult to eliminate but we can modify many host and environment factors to mitigate energy transfer and reduce the risk of serious injury.

Figure 11.

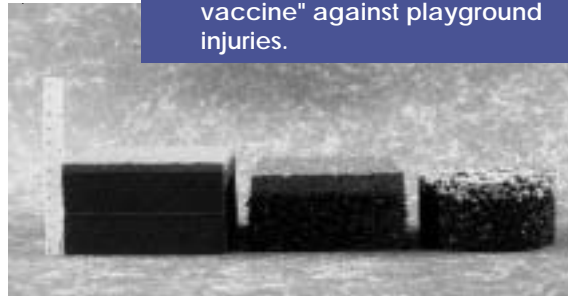


Use Passive Strategies When Possible

The epidemiologic triad (host, agent, environment factors) has been used to understand medical illnesses for more than a century. Regarding medical illnesses, we know that vaccines (passive strategy) are more effective public health tools than attempting to change behavior in high-risk groups (active strategy). This concept can also be applied to the science of injury control. When educational or other active strategies are used, they should be coupled with passive strategies when possible. These strategies do not require action by an individual for protection to occur. Using playground injuries as an example, an individual does not need to know that the playground equipment was designed to prevent entrapment. Passive protective strategies are very much like vaccines. The protection is automatically present, and the protective strategy will go into action when needed. "Technological vaccines" such as energy-absorbing playground surfacing, stationary activity centers (as opposed to wheeled baby walkers), flame-retardant sleepwear, roll-over protective structures on tractors, child-resistant medication packaging and

the motor vehicle airbag have been successfully employed to prevent a variety of types of injury. In addition, other passive strategies such as sidewalks, window guards and pool fences are used to separate individuals from potential hazards.

Unitary Rubberized Playground Surfacing: A "technological vaccine" against playground injuries.



parents that they should use child restraints is simply not enough.

Enactment and enforcement of laws and policies also are recommended strategies for preventing injuries. For example, employers can develop workplace policies that protect employees from harm. State government can enact legislation requiring the use of bicycle helmets.

Supervision Alone Fails to Prevent Injury

Injury prevention theory dictates that strategies requiring frequent action or vigilance on the part of an individual are least likely to succeed. Adult supervision is the most common active strategy recommended to prevent injury to children. Although supervision is clearly desirable, when used alone it frequently fails to prevent injury. Many consumer product-related injuries to children occur with an adult immediately present at the moment of injury. Because injuries take only a moment to occur, and characteristically occur unexpectedly, and because even the best parent in the world cannot watch their child 100 percent of the time, supervision alone cannot be relied on to effectively prevent injury.



As discussed above in regard to the epidemiologic triad, multifaceted prevention programs that combine strategies are most likely to be effective. For example, a successful program to increase booster seat use among young children could involve the following strategies.

- Spreading awareness of the importance of booster seat use through a public awareness campaign in partnership with local media.
- Offering booster seat educational courses to parents of young children.
- Providing booster seat distribution programs in low-income, high-risk communities.
- Enacting legislation requiring children to be restrained in an appropriate restraint until the adult seat belt fits them properly.
- Working with law enforcement to raise awareness of new laws and available resources.
- Designing motor vehicles with built-in child restraint systems.

Effective Active Strategies

There are, however, injury-prevention strategies that inevitably rely on behavior change. Engineers can design a better bicycle helmet, but it will prevent head injury only if it is used consistently and properly. Therefore, active strategies need to be developed and evaluated to determine the most effective methods for changing behavior and therefore, reducing the risk of injury. We know from health education and behavior theories and the experiences of other public health issues that knowledge alone does not change behavior. Most people know that cigarette smoking is hazardous to one's health. This fact does not prevent millions of people from using tobacco products daily. Educational strategies must reduce real and perceived barriers to positive behavior change. In the case of child restraints, barriers to use may be inability to read installation instructions or not being able to afford the restraint. Although an important first step, informing

Injury Prevention Occurs in the Community

Unlike some diseases that can be effectively prevented without leaving the clinician's office, injury cannot be effectively fought without attacking it where it occurs in the community. Instead of providing vaccination against infectious diseases in the office or clinic, injury prevention programs use "technological vaccines" in the home and community (such as energy-absorbing surfaces under playground equipment or airbags in motor vehicles) to passively "immunize" against injury. Injury prevention strategies involving collaboration and community involvement are more likely to be successful. Coalition development is a strategy that has been effectively used to mobilize communities to address the injury problems that most affect them.

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

In addition to common themes and core recommendations, this section outlines injury-specific recommendations developed through consensus. Supporting information for injury-specific recommendations can be found in individual reports on the subjects. These documents are available electronically at www.state.oh.us/odps/division/ems/ems_local/trauma/trauma_commissions.htm.

Theme: Injuries are costly. Injury prevention saves lives and money.

A. Seek creative and collaborative solutions to funding.

1. Enhance communication and collaboration among key stakeholders.
2. Encourage insurance companies, employers and others to cover injury prevention programs and services to reduce healthcare costs.

B. Provide state funding that adequately addresses injury - a leading cause of morbidity and mortality in Ohio.

Theme: Improved injury surveillance efforts and program evaluation are needed.

C. Improve injury surveillance efforts.

1. Develop and maintain injury data infrastructures as discussed below. Collect cost and payer information when possible to allow cost/benefit analyses of injury prevention interventions.
2. Form an ongoing, interagency workgroup to review and make recommendations regarding data needs and opportunities. The workgroup should consider coordination, linking and quality improvement of data collection efforts. It should include representatives familiar with the relevant databases. This group should explore:
 - Funding opportunities to support data linkage.
 - Mechanisms to improve quality and access to data.
3. Continue to provide support for the:
 - Development and maintenance of the Ohio Emergency Medical Services Incident Reporting System (EMSIRS) and the Ohio Trauma Registry through the Ohio Department of Public Safety.
 - Implementation of the Ohio Youth Risk Behavior Survey (YRBS) and the Ohio Behavioral Risk Factor Surveillance Survey (BRFSS).
 - Collection of licensed child care center serious injury data through the Ohio Department of Job and Family Services.
4. Support new uses for injury data through:
 - The development of a Crash Outcomes Data Evaluation System (CODES) in Ohio. CODES links traffic crash reports, Emergency Medical Services Incident Reporting System (EMSIRS) data and hospital discharge data. Funding is available from the National Highway Traffic Safety Administration.
 - Ohio's participation in the Centers for Disease Control and Prevention's (CDC's) National Violent Death Reporting System (NVDRS).
 - External cause of injury coding (e-coding) of and increased access to the full set of Ohio hospital discharge data.
5. Create a permanent and stable funding mechanism for the development of:
 - A statewide emergency department surveillance system that uses the CDC's *Data Elements for Emergency Department Systems*. (www.cdc.gov/ncipc/pub-res/deedspage.htm)
 - A statewide coroners' database.
 - A statewide school injury surveillance system.
 - An occupational injury surveillance system based on the U.S. Bureau of Labor Statistics' system.
 - A statewide toxic exposure data collection system.
 - Incentives (e.g., related grant funding, etc.) to improve records completion for all statewide injury databases.

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

Injury-specific Data Surveillance Recommendations:

6. Create a standardized list of data elements or report form for child maltreatment reporting in health care facilities. Create a database to track maltreatment-related injuries.
7. Encourage the development and use of standardized elder abuse assessment tools, record keeping and referral tracking systems in health care facilities. Create a database to track injuries resulting from elder abuse.
8. Encourage the development and use of standardized intimate partner violence assessment tools, record keeping and referral tracking systems in health care facilities. Create a database to track injuries resulting from intimate partner violence.
9. Encourage the development of Domestic Violence Fatality Review in all 88 counties based on existing county programs and the Ohio Child Fatality Review Program.
10. Classify burn and fire injuries of greater than 5 percent body surface area as a reportable disease and develop a surveillance database.
11. Develop a poison exposure surveillance system to include deaths, hospitalizations, emergency department visits and all exposure incidents reported to Ohio poison control centers.
12. Create a statewide surveillance system to track suicide attempts and completions.
13. Create a statewide surveillance system to track firearm-related injuries.
14. Require law enforcement traffic crash reports to collect information on potential distractions.

D. Promote the use of injury prevention guidelines and evaluation measures that are based upon current evidence-based research and literature.

As part of the statewide coalition (described below), create a committee with responsibility for ongoing review of the effectiveness of prevention programs.

Theme: Improved statewide coordination of programs is needed.

E. Continue to develop leadership and infrastructure to identify, promote, and respond to injury prevention needs at the state and local level.

1. Implement recommendations from the State and Territorial Injury Prevention Directors' Association's (STIPDA) report, *An Assessment of the Ohio Injury Program, March 19-22, 2001*.
2. Strengthen the structure and funding of the Ohio Department of Health's Injury Prevention Section to provide technical assistance, training and coordination of activities, and support to state and local injury prevention efforts.
3. Create a statewide, interdisciplinary injury prevention coalition and provide a permanent funding mechanism to hire a full-time coordinator.

Injury-specific Recommendations

4. Create a permanent and stable funding mechanism for voluntary home visit programs of two years or greater duration per client in an effort to prevent child maltreatment. Target high-risk groups such as low-income families, families having children with disabilities and single parents without support.
5. Create a permanent and stable funding mechanism to maintain statewide suicide prevention and response initiatives.
6. Provide incentives for local government to construct "safe" communities for cyclists and pedestrians.
7. Create a permanent and stable funding mechanism to sustain the operation of the three existing regional poison control centers in Ohio.
8. Provide funding for a coordinated, annual, statewide smoke alarm awareness day to offer inspections, battery replacements and new installations as needed to low income families, families with young children and older adults.

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

9. Provide funding for a multifaceted statewide campaign to increase helmet use among bicycle and other non-powered vehicle users. The campaign should include education, helmet subsidies or giveaways, and legislation.
10. Provide funding for a statewide education and awareness program to prevent unintentional poisoning by elders and children younger than 5 years, and evaluate its effectiveness.
11. Implement a statewide outreach and education program to raise awareness among potential employers of the policies and regulations in existence to protect youthful workers from injury.
12. Implement a statewide awareness and education program targeting parents about firearm-related injuries.
13. Provide increased support of child restraint distribution, installation and education programs.
14. Establish and support driving alternatives to serve older drivers with a diminished ability to drive

F. Coordinate and link EMS, trauma care and public health agencies with other injury prevention programs at the national, state and local levels to increase collaboration.

1. Increase interagency collaboration and coordination between state agencies and organizations concerned with the prevention of injury, in particular the Ohio departments of Health and Public Safety, including the EMS Board and Trauma Committee, Bureau of Workers' Compensation, Ohio departments of Education, Mental Health, Aging, Transportation, Natural Resources and other relevant agencies.

Injury-specific Recommendations:

2. Encourage a collaborative response to intimate partner violence and child maltreatment in all counties.
3. Encourage a collaborative response to elder abuse in all counties.

G. Promote the use of community prevention programs - that are multifaceted, evidence-based and use effective evaluation by public health agencies, trauma centers, emergency medical services and other programs.

1. As part of the statewide coalition, create a committee with responsibility for injury prevention education.
2. Increase awareness through statewide public education programs that injury is a preventable public health problem and promote strategies for prevention through collaborative community programs.
 - Create an injury prevention Web site, listserve and toll free referral number.
 - Promote materials to health care, government and other groups working with at-risk populations.
3. Provide relevant training on injury surveillance and prevention strategies for professionals including: policy makers, law enforcement, nurses, physicians, EMS, teachers, child care professionals, extended care facility and senior care workers, employers, public health professionals and others.
4. Incorporate age-appropriate education on injury prevention, life skills, conflict resolution, parenting skills, bullying and other related issues into school curricula. Provide and promote standardized training materials for classroom use by teachers and other school professionals.

Injury-specific Recommendations:

5. Provide funding for and require the development of a standardized six-hour child maltreatment training curriculum for licensed child care centers. This responsibility should be given to the Ohio Department of Job and Family Services, Child Care Licensing Section. The training is currently required in the Ohio Administrative Code.
6. Support evidence-based programs for youth that provide instruction in life skills and anger management to encourage positive solutions and nonviolent responses to conflicts and problems.

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

Theme: *Injuries disproportionately affect those living in poverty and the young and the old.*

H. Promote injury prevention programs that focus on populations most at risk based on injury surveillance. Children and older adults living in poverty should be high priority.

Theme: *Alcohol use is an important risk factor for injury.*

I. Fund and support initiatives that address prevention of alcohol- and other drug-related injuries. These initiatives should include education, legislation, coalition building, and screening and intervention by health care professionals.

Theme: *Legislation can be an effective strategy for preventing injuries.*

J. Enact or strengthen state and local legislation and policies which lead to the prevention of injuries.

1. The statewide coalition should monitor and advocate for policies and legislation which enhance the safety of Ohioans.
2. Provide information and resources to relevant agencies to support injury prevention legislation.
3. Enact legislation and policies to prevent injuries.

Injury-specific Recommendations:

4. Enact state legislation based on the American Academy of Pediatrics' Residential Swimming Pool Safety Act:
 - Require four-sided fencing on all new residential swimming pool construction.
 - Require four sided fencing be added to all existing residential swimming pools at the time of sale of the house.
 - Provide a one-time tax credit of \$100 to add four-sided fencing to any existing residential swimming pool.

5. Expand existing state legislation to require that all persons riding in a boat shorter than 18 feet in length, regardless of age, wear a personal flotation device.
6. Mandate the installation of protective window guards on windows not designated as emergency exits in multiple-residence dwellings where young children may live.
7. Enact legislation requiring new public and school playgrounds to be constructed according to the U.S. Consumer Product Safety Commission's (CPSC) guidelines for playground surfacing and equipment. Encourage communities to renovate existing playgrounds accordingly.
8. Support federal legislation to reinstate flammability standards for children's sleepwear, particularly for children ages 0-7 years. Enact similar state legislation.
9. Support national standards mandating "fire-safe" cigarettes.
10. Enact legislation requiring helmet use by bicycle and other non-powered vehicle riders when riding on public roads.
11. Support legislation requiring energy-absorbing handlebars and other safety design improvements on new bicycles.
12. Enact a stronger motorcycle helmet law that applies to riders of all ages. (Current law applies only to riders younger than age 18.)
13. Support increased enforcement of Ohio's recently enacted .08 percent blood alcohol concentration (BAC) law for motor vehicle operators.
14. Increase penalties for driving under the influence of alcohol and other drugs.
15. Increase penalties for underage alcohol drinkers, their parents and those who provide alcohol to underage drinkers.
16. Enact legislation requiring children's products sold in Ohio to conform to the safety standards of the Consumer Product Safety Commission. Prohibit the sale of recalled products. (See Children's Product Safety Act at www.kidsindanger.org for model legislation).

Common Themes and Expanded, Injury-specific Recommendations to Prevent Injury in Ohio

17. Create a task force to review child maltreatment laws and recommend improvements. This group should consider:
 - Requiring standard terminology and objectivity in defining abuse.
 - Developing an objective, medical definition of abuse for health care professionals. The American Academy of Pediatrics has a definition of physical abuse.
 - Banning the use of corporal punishment in schools and other institutions where children receive care.
18. Create a task force to review other state laws and issue recommendations for improving Ohio's domestic violence law. This group should consider the following:
 - Include dating partners, male and female, who have never married or cohabited in Ohio domestic violence law.
 - Increase penalties for a violation of sections A and B of ORC 2919.25.
 - Require training of health care professionals as outlined in ORC 4723.25; ORC 4731.282; ORC 4732.141 to be mandatory.
19. Create a task force to review elder abuse laws and recommend improvements. This group should consider:
 - Requiring standard terminology and objectivity in defining elder abuse.
 - Developing an objective, medical definition of abuse for health care professionals.
20. Enact state legislation addressing the following firearm-related issues: Juvenile Possession Law, Child Access Prevention Law, and 'Safe Gun' standards.
21. Enact statewide primary restraint legislation for all motor vehicle occupants and support enforcement.
22. Improve the child restraint law to include:
 - Required booster seat use for children in the 4 to 8-year-old range.
 - Restriction of children 11 years of age and younger from being front seat passengers, unless there is no alternative seating.
23. Enact ATV (all-terrain vehicle) safety legislation to include the following:
 - Required helmet use for operators and riders.
 - Restricted sale to and use of ATVs by children aged 15 years and younger.
 - Required safety training and state certification for operators.



Appendix

ANATOMIC AND PHYSIOLOGIC FEATURES THAT INCREASE THE OCCURRENCE AND/OR SEVERITY OF INJURY IN CHILDREN

<u>General</u>	The surface-to-volume ratio of children is high. Dehydration can easily occur from overheating or sunburn. Also, rapid growth rates mean children's coordination and motor skills may be poorly developed in relation to their physical size.
<u>Airway</u>	Airway is smaller and more flexible. Airway is easier to obstruct with both food and nonfood objects. Tongue is larger.
<u>Breathing</u>	Normal ventilation requires minimal work. Respiratory rate decreases with age and varies with excitement, fear, anger, fever or pain. Stress may double respiratory rate. Most infants less than 6 months do not breathe through their mouth; they are nose breathers. Higher respiratory rates mean increased exposure to airborne toxins, for example smoke from house fires.
<u>Head</u>	Head is large relative to the child's body. The child's higher center of gravity makes falls more likely. Strangulation can occur in crib or high chair. Head is likely to impact in falls and car crashes.
<u>Neck</u>	Infant's short neck makes it difficult to palpate a carotid pulse and to intubate. Discrete movement of the infant's neck can block the airway. Fulcrum of neck movement is higher than in adult.
<u>Chest and Lungs</u>	Pediatric bony cage is less rigid, more compressible than the adult. Children have a decreased risk of rib fractures but an increased risk of pulmonary contusion.
<u>Abdomen And Pelvis</u>	Abdominal wall poorly developed. Abdominal organs less protected by rib cage organs are large in relation to the abdominal cavity.
<u>G.I.</u>	Increased intestinal absorption increases likelihood of poisoning from nitrates, lead, or medications.
<u>Mouth</u>	Chewing mechanism not fully developed. Risk of choking and aspiration from foods, for example popcorn, nuts or chips.
<u>Back, Spine And Bones</u>	Children grow at rapid rate; coordination not consistent with growth. Bones are porous, flexible and can splinter and bend with stress causing spiral fractures and splintering.
<u>Skin</u>	Skin is thin relative to adults. Full thickness burns occur at lower temperatures.

ANATOMIC AND PHYSIOLOGIC FEATURES THAT INCREASE THE OCCURRENCE AND/OR SEVERITY OF INJURY IN OLDER PERSONS

<u>General</u>	Decrease in physiologic reserves, slowing of central nervous system response, drug metabolism changes, decreases in body mass, muscular atrophy and high frequency of pre-existing medical conditions.
<u>Airway</u>	Loss of protective reflexes in swallowing increases likelihood of choking on food.
<u>Breathing</u>	Decreased protective mucous and deconditioning (lack of fitness) opens the lungs to toxic exposure.
<u>Head</u>	Changes in cognitive ability, concentration and memory can mask symptoms of traumatic brain injury.
<u>Neck</u>	Thinning of intervertebral discs and shortening of vertebral bodies increase the difficulty of intubation.
<u>Back, Spine and Bones</u>	Osteoporosis increases risk of fractures.
<u>Skin</u>	Loss of subcutaneous tissue and thinning skin increase likelihood of injury after a bump and chances of thermal burns.
<u>Mouth</u>	Poor dentition and false teeth may increase risk of choking.
<u>Visual and Auditory Acuity</u>	Loss of vision and hearing increase risk of motor vehicle crashes and falls.
<u>Balance, Strength, Coordination</u>	Decreases in balance strength and coordination increase risk of falling and damage from a fall.

BEHAVIORAL AND DEVELOPMENTAL FEATURES THAT INCREASE THE OCCURRENCE OF INJURY

Infants

- Completely dependent on care giver
- Require constant supervision
- Unable to verbally communicate and report events
- Explores by mouthing objects; spends a lot of time sucking
- Rapid changes in motor abilities and mobility
- Begins to turn over and grasp objects

Resulting injury risks:

- Falls when left unattended or from infant walkers
- Suffocation and aspiration of small items
- Child maltreatment
- Electrical cord mouth burns
- Burn deaths in house fires

Toddlers or Preschoolers

- Curious, exploratory and impulsive
- Requires constant supervision
- Imitative of adult behavior with lack of awareness regarding potential danger
- Increased motor abilities
- Higher center of gravity
- Oral exploration puts objects in mouth

Resulting injury risks:

- Falls from stairs and windows
- Scald burns
- Drowning
- Child maltreatment
- Poisonings

Elementary School Age

- More mature motor skills
- May recognize dangerous situations but lack experience or judgment to make appropriate and safe decisions
- Increased mobility
- Increased independence
- Unable to assess speed and time of oncoming traffic

Resulting injury risks:

- Pedestrian injuries
- Bicycle, skateboard, scooters, in-line roller blading injuries
- Playground injuries

Young Adolescent

- Dynamic period of change and transition
- Need for peer approval and influenced by peer pressure
- Curious, experimental, risk-taking behavior and feelings of immortality
- More agile, increased strength and abilities, however may lack experience in appropriate decision-making skills
- Increased involvement in sports and recreational activities
- Increased independence
- Imitate behavior of older adolescents and adults
- Increased incidence of depression, experimentation with drug/alcohol use
- Impulsive

Resulting injury risks:

- Car occupant and motorcycle injuries
- Sports injuries
- Bicycle, skateboard, scooters, in-line roller blading injuries
- Drug and alcohol abuse
- Violence related injuries
- Sexual assault and dating violence
- Suicide and suicide gestures

Older persons

- Social isolation
- Depression
- Cognitive impairment (memory/judgement)
- Increased leisure time
- Prescription drug effects/interactions
- Lack of public transportation

Resulting injury risks

- Slips, trips and falls
- Motor vehicle crashes
- Poisonings
- Elder abuse
- Suicide

Ohio Data Sources for Injury Surveillance										
Data Source	Mandatory Submission	Each Record Indicates an Individual	U.S. Standard Classification Code Used*	Electronic Records	Records Span What Years	Restrictions on Access to Records	Fee for Data	State Data Available	Linked to any other Data Set	Sponsoring Organization/ Contact
Fatality Data										
Bureau of Vital Statistics Death Certifs.	Y	Y	Y	Y	1959 - present	N	Y	Y	Y	State Registrar 614-466-9229 dwhouse.odh.ohio.gov/
Census of Fatal Occupational Injuries (CFOI)	Y	Y	Y	Y	1992- present	Y	N	Y	N	Ohio Department of Health (614) 466-4183 www.bls.gov/home.htm
Child Fatality Review (CFR)	Y	Y	Y	Y	2001- present	Y	N	Y	N	Ohio Department of Health/Division of Family & Children Services www.odh.state.oh.us/ODHPrograms/cfr/cfr1.htm
Coroner's Reports	No statewide system exists at this time. Contact local coroner									
Nonfatal Injury Data										
Integrated Traffic Record System (ITRS) - Traffic Crash Records	Y	N Incident based	Y	Y	1982- present	Y	N	Y	N	Ohio Department of Public Safety www.state.oh.us/odps/crash_reports.htm
EMS Incident Reporting System	Y	Y	Y	Y	2002- present	Y	N	Y	N	Ohio Department of Public Safety, Division of EMS 1-800-233-0785 www.ohiopublicsafety.com
Ohio Trauma Registry	Y	Y	Y	Y	2000- present	Y	N	Y	N	Ohio Department of Public Safety, Division of EMS 1-800-233-0785 www.ohiopublicsafety.com
Farm Fatality and Injury Database of Ohio (FFIDO)	N	Y	N	Y	1955- present	Y	N	Y	N	The Ohio State University

*Based on national standard coding formats for that type of data.

Ohio Data Sources for Injury Surveillance										
Data Source	Mandatory Submission	Each Record Indicates an Individual	U.S. Standard Classification Code Used*	Electronic Records	Records Span What Years	Restrictions on Access to Records	Fee for Data	State Data Available	Linked to any other Data Set	Sponsoring Organization/ Contact
Child Care Incident/Injury Report Database	Y	Y	N	Y	July 2003-present	Y	N	Y	N	Ohio Department of Job & Family Services – Child Care Licensing Section
Poison Center Data	No statewide system exists at this time – Contact the Central Ohio Poison Center at Columbus Children's Hospital (614.722.2643), the Cincinnati Drug and Poison Information Center at the Children's Hospital Medical Center of Cincinnati (http://www.cincinnatichildrens.org/svc/prog/dpic/statistics.htm) and the Greater Cleveland Poison Control Center for Ohio data.									
Emergency Department Data	No statewide system exists at this time									
School Injury Data	No statewide system exists at this time									
Cost Data										
Hospital Discharge Data	N	Y	Y	Y	1990-present	Y	Y	Y	N	Ohio Hospital Association www.ohanet.org/
Medicaid Data	Y	Y	Y	Y	1997–present	Y	Y	Y	N	Ohio Department of Job and Family Services
Bureau of Workers Compensation Injury Claims Data	Y	Y	Y	Y	1993-present	Y	N	Y	N	Ohio Bureau of Worker's Compensation www.ohiobwc.com/
Investigation/Criminal Records										
Adult Protective Services	No statewide system exists at this time. Records are maintained at the county Job and Family Services agencies for a minimum of 3 years.									
Child Protective Services Central Registry	Y	Y	N	Y	1966-present	Y	N	Y	N	Ohio Department of Job and Family Services

*Based on national standard coding formats for that type of data.

Ohio Data Sources for Injury Surveillance										
Data Source	Mandatory Submission	Each Record Indicates an Individual	U.S. Standard Classification Code Used*	Electronic Records	Records Span What Years	Restrictions on Access to Records	Fee for Data	State Data Available	Linked to any other Data Set	Sponsoring Organization/ Contact
Ohio Incident Based Reporting System (Crime Statistics)	N	N Incident Based	Y	Y	1999 - present	Y	Not known at this time	Not statewide	N	Ohio Department of Criminal Justice Services www.oibrs.ohio.gov/
Ohio Fire Incident Reporting System (OFIRS)	Y	N Incident-based	Y	Y	1987-present	N	N	Y	N	Ohio Department of Commerce Divisio of the State Fire Marshal www.com.state.oh.us/sfm/default.htm
Injury Risk Factor Surveillance										
Behavioral Risk Factor Surveillance System (BRFSS)	N/A	Y	Y	Y	Biennial	Y	N	Y	N	Ohio Department of Health/Center for Public Health Data & Statistics (614) 728-9180
Youth Risk Behavioral Surveillance System (YRBSS)	N/A	Y	Y	Y	1993 Biennial	Y	N	Y	N	Ohio Department of Health, Division of Family and Community Health Services; (614) 466-4718
Ohio Annual Observational Seat Belt Survey	N/A	Y	Y	Y	1991-present	Y	N	Y	N	Ohio Department of Public Safety Governor's Highway Safety Office www.state.oh.us/odps/ghso/ghsohome.html

*Based on national standard coding format for that type of data.

Appendix C

National Data Sources for Injury Surveillance					
Data Source	Years Data Collected	Restrictions on Access to Aggregate Data	Fee for Data	State Data Available	Sponsoring Organization/ Contact
WISQARS (Web-based Injury Statistics Query and Reporting System)	1981 – present	N	N	Y	Centers for Disease Control and Prevention www.cdc.gov/ncipc/wisqars/
Fatality Analysis Reporting System (FARS) Traffic-related fatalities	1999-present	Not for law Others by request	N	Y	National Highway Traffic Safety Administration www.nhtsa.dot.gov/people/nscsa/fars.html
National Occupant Protection Use Survey (NOPUS)	1994-present	N	N	N	National Highway Traffic Safety Administration www-nrd.nhtsa.dot.gov/departments/nrd-30/nscsa/
National Electronic Injury Surveillance System (NEISS)	1979-present	N	N	N	Consumer Product Safety Commission www.cpsc.gov/library/neiss.html
National Hospital Discharge Survey	1990, 1994-1998	N	N	N	Centers for Disease Control and Prevention – National Center for Health Statistics www.cdc.gov/nchs/about/major/hdasd/nhds.htm
National Ambulatory Medical Care Survey	1990-2000	N	N	N	Centers for Disease Control and Prevention – National Center for Health Statistics www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm
National Hospital Ambulatory Medical Care Survey	1992-2000	N	N	N	Centers for Disease Control and Prevention – National Center for Health Statistics www.cdc.gov/nchs/about/major/ahcd/ahcd1.htm
Healthcare Cost and Utilization Project (HCUP)	1988-2001	N	N	N	Agency for Healthcare Research and Quality www.ahrq.gov/data/hcup/
National Incident Based Reporting System (NIBRS) (Crime data)	1997-present	N	N	N	U.S. Department of Justice Bureau of Justice Statistics www.ojp.usdoj.gov/bjs/nibrs.htm
National Child Abuse and Neglect Data System (NCANDS)	1995-present	N	N	Y	U.S. Department of Health and Human Services Administration for Children and Families www.calib.com/nccanch/pubs/factsheets/ncands.cfm
National Data Archive on Child Abuse and Neglect	Varies by dataset	Y	Y	Y	Family Life Development Center, Cornell University www.ndacan.cornell.edu/index.html

National Data Sources for Injury Surveillance					
Data Source	Years Data Collected	Restrictions on Access to Aggregate Data	Fee for Data	State Data Available	Sponsoring Organization/ Contact
National Crime Victimization Survey	1973-present	N	N	N	Bureau of Justice Statistics www.ojp.usdoj.gov/bjs/welcome.html
National Archive of Criminal Justice Data	Varies by database	N	N	Y	www.icpsr.umich.edu/NACJD/index.html
National Fire Incident Reporting System	1974 - present	N	N	Y	U.S. Fire Administration www.nfirs.fema.gov/
Toxic Exposure Surveillance System (TESS)	1983-present	N	N	N	American Association of Poison Control Centers www.aapcc.org/poison1.htm
The National EMS Information System	Not presently collecting data	N/A	N/A	N/A	www.nemsis.org/
The National Pediatric Trauma Registry	No longer collecting data	N	N	N	www.nptr.org/

Appendix D

Section 5 of Amended Substitute House Bill 138 as enacted by the 123rd General Assembly, November 2000

The Director of Health shall organize and coordinate a temporary commission to determine how to better prevent traumatic injuries in this state. The commission's study shall include, without limitation, consideration of how to improve public safety education and how to prevent pediatric and geriatric injuries.

The Department of Public Safety, Department of Natural Resources, Department of Agriculture, Department of Education, Commission on Minority Health and Bureau of Workers' Compensation shall participate in and assist with the commission's study.

Within 120 days after the effective date of this act, the director shall appoint to the commission appropriate public health authorities, entities that conduct safety research and education, and advocates for injured persons. Commission members shall have expertise in injury prevention, broadly represent relevant disciplines, and represent all regions of the state.

Within 120 days after the effective date of this act, the Speaker of the House of Representatives shall appoint to the commission one member of the majority party and one member of the minority party in the House of Representatives and the President of the Senate shall appoint to the commission one member of the majority party and one member of the minority party in the Senate.

In conducting its study and developing its recommendations, the commission shall consult and cooperate with the Trauma Committee of the State Board of Emergency Medical Services. The commission shall conclude its study and disband not later than three years after the effective date of this section, whereupon the director shall transmit the commission's findings and recommendations to the Governor, General Assembly, chief executive of each state agency specified in this section, and other appropriate persons.

Appendix E: From Healthy People 2010, United States

Total Population, 1997	Injury-Related Hospital Emergency Department Visits
	Rate per 1,000
TOTAL	131
Race and ethnicity	
American Indian or Alaska Native	DSU
Asian or Pacific Islander	DSU
Asian	DSU
Native Hawaiian and other Pacific Islander	DSU
Black or African American	182
White	127
Hispanic or Latino	DSU
Not Hispanic or Latino	DSU
Black or African American	DSU
White	DSU
Gender	
Female	116
Male	146
Education level	
Less than high school	DNC
High school graduate	DNC
At least some college	DNC

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.
Note: Age adjusted to the year 2000 standard population.

Total Population, 1998	Unintentional Injury Deaths
	Rate per 100,000
TOTAL	35.0
Race and ethnicity	
American Indian or Alaska Native	59.9
Asian or Pacific Islander	17.6
Asian	DNC
Native Hawaiian and other Pacific Islander	DNC
Black or African American	39.5
White	34.8
Hispanic or Latino	30.2
Cuban	22.5
Mexican	32.1
Puerto Rican	28.8
Not Hispanic or Latino	35.1
Black or African American	40.7
White	34.6
Gender	
Female	22.1
Male	49.4
Education level (aged 25 to 64 years)	
Less than high school	54.5
High school graduate	41.5
At least some college	17.4
Select populations	
American Indian or Alaska Native males	83.6
Black or African American males	60.8
Hispanic males	46.2
White males	48.7

DNA = Data have not been analyzed. DNC = Data are not collected. DSU = Data are statistically unreliable.
Note: Age adjusted to the year 2000 standard population.

References:

- American Fact Finder, U.S. Census Bureau, Census 2000.
- An Assessment of the Ohio Injury Prevention Program*, March 2001, State and Territorial Injury Prevention Directors Association.
- Children's Safety Network National Injury Data Technical Assistance Center & Children's Safety Network Economics and Insurance Resource Center, *1993-97 Multiple Causes of Death File CD-Rom Series*, prepared by NCHS, Division of Vital Statistics and Division of Data Services.
- Colorado Injury Prevention Strategic Plan: 2003-2008*. Denver, CO: Colorado State Emergency Medical and Trauma Services Advisory Council: 2003.
- Fatal Analysis Reporting System (FARS) Web-Based Encyclopedia, National Center for Statistics and Analysis, National Highway Traffic Safety Administration, 2002.
- Guide to Community Preventive Services: Systematic Reviews and Evidence Based Recommendations*, Centers for Disease Control.
- Healthy People 2010, Centers for Disease Control and Prevention.
- Injury Fact Book 2001-2002*, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2001.
- National SAFE KIDS Campaign (NSKC). *Childhood Injury Fact Sheet*. Washington (DC): NSKC, 2003.
- Report of the Ohio Post-Critical Trauma Care Commission*, October 2003.
- Results from the *Ohio Youth Risk Behavior Survey*, 1999.
- Ohio Department of Health, Information Warehouse, 2003.
- Ohio Medicaid Spending, Ohio Department of Job and Family Services
- Safe States: Five Components of a Model State Injury Prevention Program and Three Phases of Program Development*. Atlanta, GA., State and Territorial Injury Prevention Directors Association, 1997.
- Systematic Reviews of Childhood Injury Prevention Interventions*, Harborview Injury Prevention and Research Center, University of Washington (<http://depts.washington.edu/hiprc/childinjury/index.htm>)
- Vermont Injury Prevention Plan 2001.
- Web-Based Injury Statistics Query and Reporting System (WISQARS), *Fatal and Non-fatal Injury Reports*, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

November 2003



Report of the

Post-critical trauma care commission



TABLE OF CONTENTS

Executive summary	5
Introduction and background	9
A Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio	19
Rehabilitation Service Locator	29
A statewide system of resource facilitation	33
Meeting the educational needs of children who have had traumatic injuries	41
Substance abuse and traumatic injury	49
The Ohio Trauma Follow-up Registry	55
Appendices	60

*“Trauma care
is a continuum
that stretches from
injury prevention
to work force –
school re-entry.”*

Joseph W. Luria, M.D.,
*Chair, State Trauma
Committee
Cincinnati Children’s
Department of Pediatrics*



EXECUTIVE SUMMARY

The Centers for Disease Control and Prevention (CDC) reported that, in 1999, 150,000 Americans died from injuries, and one in 10 survived an injury serious enough to require at least an emergency room visit (CDC Injury Research Agenda, 2002). Injuries are the leading cause of death for people ages 1 to 44. Of all hospital stays, 8 percent are due to injuries. Traumatic brain injury, spinal cord injury and burns tend to result in more serious and long-term consequences. It is estimated 5.3 million Americans have long-term disabilities from traumatic brain injury, with 80,000 new cases added each year. Another 200,000 Americans have disabilities due to traumatic spinal cord injury, with 11,000 new cases annually. Beyond limitations on movement and thinking, persons who survive traumatic injuries often experience post-traumatic stress disorder, depression, substance abuse, and problems at school, work or family.

According to data reported to the Ohio Trauma Registry, in the four-year period between Jan. 1, 1999, and Dec. 31, 2002, 78,200 Ohio citizens survived traumatic injuries severe enough to require at least two days of hospitalization or transfer to a trauma center. Falls and motor vehicle crashes accounted for two-thirds of these injuries. Traumatic brain injury and spinal cord injury resulted in the most severe injuries. Of these two types of injuries, 78 percent were due to falls and vehicular crashes.

Legislative authority and commission membership

Recognizing the importance of addressing this public health concern for the well-being of Ohio citizens, the Ohio General Assembly enacted House Bill (H.B.) 138 November 2000, creating the Post-critical Trauma Care Commission. H.B. 138 required the director of health organize and coordinate a temporary commission “to determine how to improve the accessibility, affordability, quality, and cost effectiveness of post-critical adult and pediatric trauma care.” The commission was required to complete its work by Nov. 3, 2003.

H.B. 138 also delineated a variety of participants for the commission and required the director of health appoint representation from those organizations and entities identified in the legislation. The enabling legislation established that “[C]ommission members shall have expertise in rehabilitation and retraining of injury victims, broadly represent relevant disciplines, and represent all regions of the state.” H.B. 138 required mandatory members, including representatives from the majority and minority parties of both houses of the Ohio General Assembly and certain specified state agencies as follows:

Ohio Bureau of Workers’ Compensation



Ohio Department of Aging



Ohio Department of Health



Ohio Department of Job and Family Services



Ohio Rehabilitation Services Commission



All five of these agencies have indicated their support for this final report. In fulfilling the charge for broad representation among many potential stakeholders, 28 organizations and associations were invited to nominate a primary and alternate representative to the commission. Agencies and organizations subsequently represented and supporting this report were:

Ohio Association of Health Plans	Ohio Farm Bureau Federation
Ohio Business Coalition on Health	Ohio Public Health Association
Ohio Department of Public Safety	Ohio Rehabilitation Association
Ohio Department of Alcohol and Drug Addiction Services	The Salvation Army
Ohio Department of Education	Ohio Legal Rights Service
Ohio Fire Chiefs’ Association	American Physical Therapy Association
Ohio Hospital Association	Association of Ohio Philanthropic Homes, Housing and Services for the Aging
Ohio Nurses Association	Ohio State Chiropractic Association
Ohio Psychological Association	Ohio Association of Professional Fire Fighters
Ohio State Medical Association	Ohio Society of Trauma Nurse Coordinators
Brain Injury Association of Ohio	Ohio Osteopathic Association
Ohio Association of Rehabilitation Facilities	State Trauma Committee
Ohio Children’s Hospitals Association	Central Ohio Trauma System

Findings

The state’s system of delivering trauma services, and its enabling legislation, adequately address first response, transport to a trauma center, and reporting to the Ohio Trauma Registry. The system does not address post-critical trauma care adequately, with little or no attention given to reverse transport, follow-up services, and the roles of non-trauma center hospitals and other post-acute care providers in an overall state system of trauma services. The lack of systematic resources for persons with traumatic injuries increases the occurrence of unmet needs resulting in additional medical complications, loss of productivity, recurring injury, and reduced life satisfaction.

Post-critical trauma care of individuals coping with the consequences of an injury for which they have no preparation presents its own unique and complex set of challenges to patients, caregivers, health-care professionals, educators, and society at large. While the aftermath of a traumatic injury is challenging for many reasons, difficulties this patient population has accessing appropriate services via the existing health and human service systems are paramount.

Transitioning from the hospital or other acute-care setting into work, home, school, and community should be as seamless as possible to meet adequately the individual needs of persons requiring post-critical trauma care. Patient, family and provider access to up-to-date and comprehensive information concerning the array of resources that may be available in a community is key to successful community reintegration. However, in the end, the foundation for successful reintegration of the post-critical trauma care patient consists of access to services of the patient’s choice, mutual respect for the strengths that patients and professionals bring to the reintegration process, early and ongoing consumer and family involvement, and promotion of self-direction and decision making.

Through deliberation, a series of recommendations evolved intended to address selected aspects of identified shortcomings in the current service delivery systems. The following recommendations are detailed in subsequent chapters of this report. Crucial to identifying topics and developing recommendation was the overarching goal of improving the accessibility, affordability, quality, and cost effectiveness of post-critical trauma care.

Recommendation 1: Providers and health-care facilities delivering post-critical care to trauma patients should adopt and comply with a patient bill of rights and responsibilities that recognizes the unique needs of those undergoing rehabilitation and recovery, and contributes to an effective and responsive patient-care program.

Recommendation 2: A rehabilitation service locator should be created and maintained to allow patients, their families, and acute-care providers to identify sources of needed follow-up rehabilitation services and compare salient characteristics of available providers.

Recommendation 3: To address the lifetime needs of Ohio citizens with disability due to injury, a system of resource facilitation should be established that provides access to information and services, increases the capacity for community support, and, as needed, coordinates services for individuals and their families.

Recommendation 4: To ensure the most appropriate educational experience for children who have had traumatic injuries, hospital and school personnel need additional training on issues for educational re-entry; classroom teachers need access to resources about reintegrating these students; and mechanisms are needed to ensure providers, internal and external to the school system, take a coordinated approach. More research is needed on educating students who have incurred traumatic injuries.

Recommendation 5: Organizations and agencies with an interest in minimizing the effects of substance use disorders on injury outcomes should be convened to identify opportunities for improving secondary substance abuse prevention and treatment for persons during and following trauma care.

Recommendation 6: A follow-up registry should be established to provide information about the long-term complications and outcomes for trauma-care patients. Data collection methodology should be an extension of the existing Ohio Trauma Registry and should provide information for local, regional and statewide prevention programming and health-care service planning.

Recommendation 7: Within the broader framework of responsibility for injury and trauma, leadership concerning longer-term issues and needs following traumatic injury should have a single, identifiable, and permanent location within Ohio’s state government.



“The findings and recommendations presented in the Commission’s comprehensive and thoroughly researched report are sobering, yet hopeful.”

Tom Hayes
Director,
Ohio Department of Job
& Family Services

INTRODUCTION AND BACKGROUND

The Centers for Disease Control and Prevention (CDC) reported that, in 1999, 150,000 Americans died from injuries, and one in 10 survived an injury serious enough to require at least an emergency room visit (CDC Injury Research Agenda, 2002. See Injury Fact Sheet in appendix A). Injuries are the leading cause of death from in people ages 1 to 44. Of all hospital stays, 8 percent are due to injuries. It is estimated that 5.3 million Americans have long-term disabilities from traumatic brain injury, with 80,000 new cases added each year. Another 200,000 Americans have disabilities due to traumatic spinal cord injury, with 11,000 new cases annually. Injuries to limbs, the back, and eyes, as well as burn injuries, also are causes of disability. Beyond limitations on movement and thinking, persons who survive traumatic injuries often experience post-traumatic stress disorder, depression, substance abuse, and problems in school, work or family.

Trauma or traumatic injury means severe damage to or destruction of tissue that creates a significant risk of loss of life; loss of a limb; significant, permanent disfigurement; significant, permanent disability; and is caused by blunt or penetrating injury; exposure to electromagnetic, chemical, or radioactive energy; drowning, suffocation, or strangulation; a deficit or excess of heat. (O.R.C. 4765.01(N))

Trauma care means the assessment, diagnosis, transportation, treatment, or rehabilitation of a trauma patient by emergency medical personnel or by appropriately credentialed health-care professionals within the prescribed scope of practice.

Trauma center is any hospital verified by the American College of Surgeons.

Pediatric patient is a patient younger than 16 years of age.

Adult or geriatric patient is a patient who is not a pediatric patient.

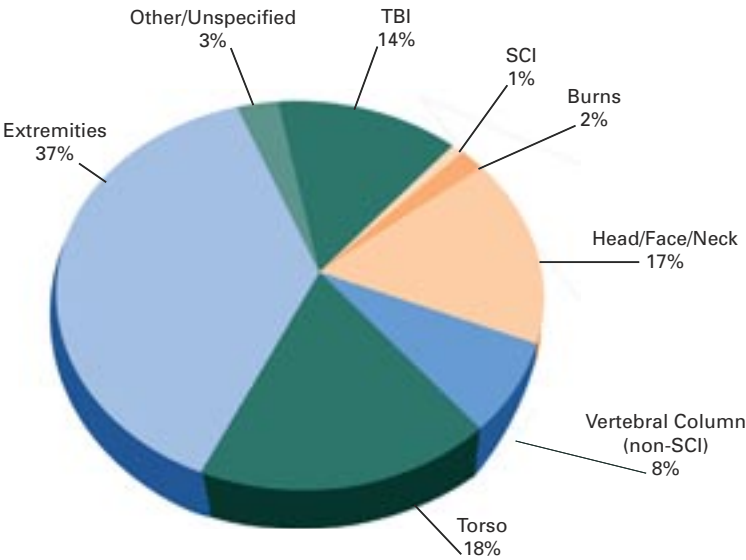
Post-critical trauma care refers to recognizing the needs of trauma patients requiring or undergoing rehabilitation and recovery care or services following release or transfer from a trauma center.

Over the past four years Ohio hospitals participating in the Ohio Trauma Registry reported that 78,205 patients survived traumatic injuries and were discharged from the hospital (see Figure 1). One in five patients had traumatic brain injury, spinal cord injury, or burns as their primary injury.

Injury patterns

N=78,205 (survivors)
January 1999 – December 2002

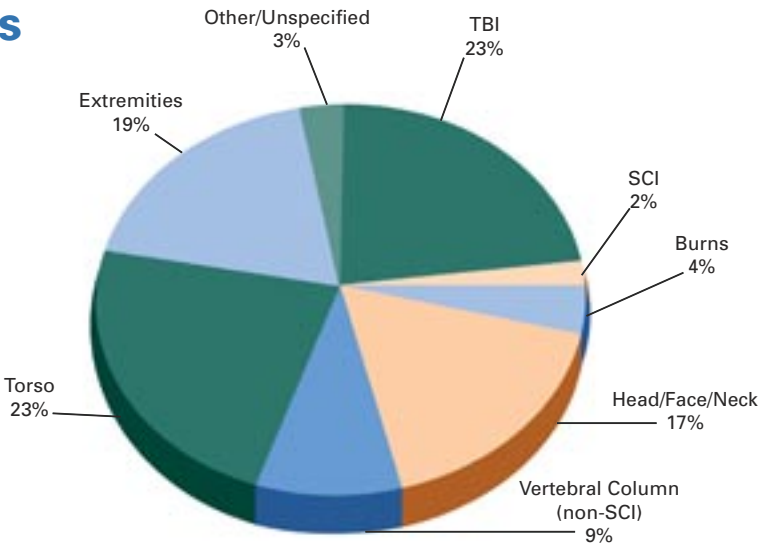
Injury Patterns based upon ICD-9-CM Diagnosis Code groups utilized in the Barell Matrix. Inj Prev 2002;8:91-6



This graph depicts trauma patients whose length of stay in the intensive care unit was three or more days. Although there are many factors that affect a patient’s length of stay in the intensive care unit, a higher severity of injury is one main reason. Thirty percent of these patients suffered traumatic brain injury, spinal cord injury or burns.

Injury patterns
Length of stay in the ICU ≥ 3 days

Injury patterns based upon ICD-9-CM Diagnosis Code groups utilized in the Barell Matrix. Inj Prev 2002;8:91-6

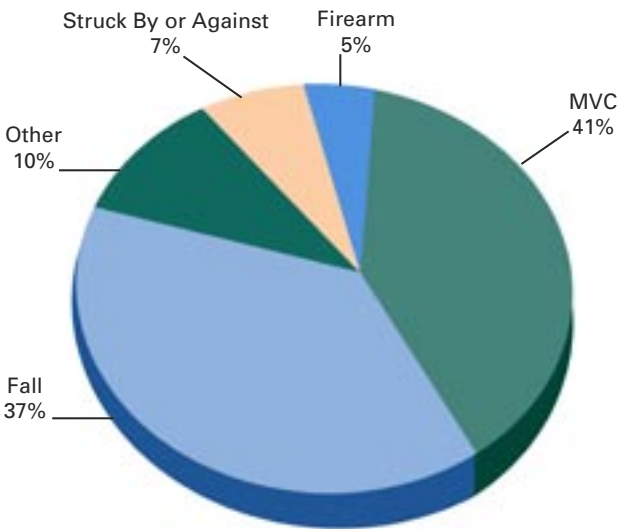


This graph shows the top five causes or mechanisms of injury that produced a primary injury to the spinal cord, severe enough to be reported to the Ohio Trauma Registry. Motor vehicle crashes, (including pedestrians and pedal cyclists) and falls account for more than 75 percent of all spinal cord injuries.

Top five causes of Spinal Cord Injury (SCI)

N=1,250 (survivors)
01/01/99 - 12/31/02

Cause of injury based upon ICD-9-CM External Cause of Injury Codes
MMWR 1997;46(RR-14)

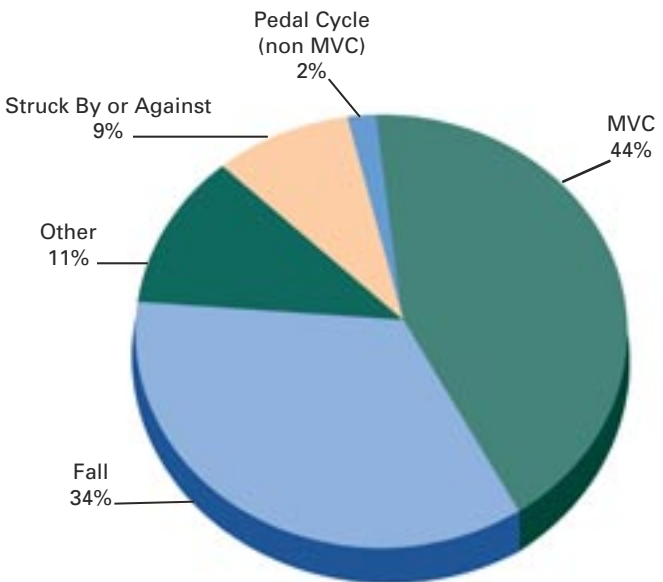


This graph describes the top five causes or mechanisms of injury that produced a primary traumatic brain injury, severe enough to be reported to the Ohio Trauma Registry. Motor vehicle crashes, (including pedestrians and pedal cyclists) are the leading cause, followed closely by falls. Together they account for 78% of all traumatic brain injuries.

Top five causes of Traumatic Brain Injury (TBI)

N=18,731 (survivors)
01/01/99 - 12/31/02

Cause of injury based upon ICD-9-CM External Cause of Injury Codes
MMWR 1997;46(RR-14)



Commission authority

Recognizing the importance of addressing this public health concern for the well-being of Ohio citizens, in November 2000 the Ohio General Assembly enacted H.B. 138, creating the Post-critical Trauma Care Commission. (The full text of section 6 of Amended Substitute H.B. 138 as enacted by the 123rd General Assembly is included in appendix B.) H.B. 138 required the director of health organize and coordinate a temporary commission “to determine how to improve the accessibility, affordability, quality, and cost effectiveness of post-critical adult and pediatric trauma care.” The commission was required to complete its work by Nov. 3, 2003.

Appointments to the commission began March 2001, and the inaugural meeting was held July 2001, at the Ohio Department of Health. John D. Corrigan, Ph.D., from the department of physical medicine and rehabilitation at The Ohio State University, was appointed as commission chair and Cynthia Iske, M.S. O.T.R./L., from Children’s Hospital of Columbus was appointed as commission vice chair.

Guiding principles

Although in some contexts, post-critical trauma care is considered one component of the broader concept of trauma care, this report distinguishes it as a discipline with standards of care, treatment, and follow-up tailored to specific medical, social, psychological, and educational needs resulting from a traumatic incident that occurs post-injury and has potential lifetime consequences.

Post-critical trauma care of individuals coping with the aftermath of an injury for which they have no preparation presents its own unique and complex set of challenges to patients, caregivers, health-care professionals, educators, and society at large.

Post-critical trauma care is challenging for many reasons, chief among them is that it is often difficult for this patient population with diverse needs to fit easily into existing service systems.

The foundation for successful reintegration of the post-critical trauma-care patient into the home and community consists of access to services of the patient’s choice, mutual respect for the strengths patients and professionals bring to the reintegration process, early and ongoing consumer and family involvement, and promotion of self-direction and decision making.

Patient and provider access to up-to-date and comprehensive information concerning the broad array of post-critical trauma care resources available in a community is key to successful rehabilitation.

Transitioning from the hospital or other acute care setting into work, home, school, and community living should be as seamless as possible to meet adequately the specialized needs of the post-critical trauma-care individual.

Commission recommendations

The state’s system of delivering trauma services, and its enabling legislation, adequately addresses traumatic injury from first response, transport to a trauma center, and reporting to the Ohio Trauma Registry. The system does not address post-critical trauma care adequately, with little or no attention given to reverse transport, follow-up services, and the roles of non-trauma center hospitals and other post-acute care providers in an overall state system of trauma services. The lack of systematic resources for persons with traumatic injuries increases the occurrence of unmet needs. This results in additional medical complications, loss of productivity, recurring injuries, and reduced life satisfaction. Addressing these recognized shortfalls guided the commission in its work.

Through deliberation, a series of recommendations evolved intended to address identified shortcomings. These recommendations are detailed in subsequent chapters of this report. Crucial to identifying topics and developing recommendations was the overarching goal of improving the accessibility, affordability, quality, and cost-effectiveness of post-critical trauma care. Chapters in this report describe the following recommendations:

Patient bill of rights and responsibilities

Providers and health-care facilities delivering post-critical care to trauma patients should adopt and comply with a Patient Bill of Rights and Responsibilities that recognizes the unique needs of those undergoing rehabilitation and recovery, and contributes to an effective and responsive patient care program.

Rehabilitation service locator

A rehabilitation service locator should be created and maintained to allow patients, their families, and acute care providers to identify sources of needed follow-up rehabilitation services and compare salient characteristics of available providers.

Statewide system of resource facilitation

To address the lifetime needs of Ohio citizens with disability due to injury, a system of resource facilitation should be established that provides access to information and services, increases the capacity for community support, and, as needed, coordinates services for individuals and their families.

Meeting educational needs of children who have had traumatic injuries

To ensure the most appropriate educational experience for children who have had traumatic injuries, hospital and school personnel need additional training on issues for educational re-entry; classroom teachers need access to resources about reintegrating these students; and mechanisms are needed to ensure all providers, internal and external to the school system, take a coordinated approach. More research is needed on educating students who have incurred traumatic injuries.

Substance use and traumatic injury

Organizations and agencies with an interest in minimizing the effects of substance use disorders on injury outcomes should be convened to identify opportunities for improving secondary prevention of substance abuse and treatment for persons during and following trauma care.

Ohio trauma follow-up registry

A follow-up registry should be established to provide information about the long-term complications and outcomes for trauma care patients. Data collection methodology should be an extension of the existing Ohio Trauma Registry and should provide information for local, regional and statewide prevention programming and health-care service planning.

On-going responsibility for post-critical trauma care issues

The commission made a final recommendation pertaining to the continued attention that will be required to pursue these recommendations. While many agencies and organizations should be involved in implementation of the above recommendations, there is a need for a single focus of oversight and leadership related to the issues the commission raised, as well as other challenges affecting individuals after their initial care. Specifically, the commission recommends that, in the process of identifying the locus of leadership and responsibilities in Ohio government for issues of injury and trauma, leadership for concerns about the needs and services following critical care should have a single, identifiable location within the resulting structure.

Commission process

Recommendations toward improvement of post-critical trauma care would have to first determine where post-critical care begins. It would require identification of appropriate stakeholders, the needs of the patient and the systems of care, as well as the processes by which accessibility, affordability, cost-effectiveness and quality of care and services can be ensured.

Five areas of study or concentration were set forth for the commission in the legislation:

- Transfer of trauma patients from regional trauma centers to other facilities;
- Physical, psychological, and vocational rehabilitation of trauma patients;
- Reemployment of trauma patients;
- Social support mechanisms for families of trauma patients;
- Mitigation of the effects of pediatric and geriatric trauma.

In its inaugural meeting, the commission determined that, before a comprehensive work plan could be developed, certain questions would need to be addressed and answered to the extent possible. These were initially identified as:

- Determining what quantitative data was available and accessible to the commission;
- Assessing where the current system in Ohio is in the delivery of post-critical trauma care;
- Identifying where the needs for improvement exist;
- Identifying where the current system is succeeding and in turn failing;
- Determining to the extent possible what direction the trauma system needs to take in the future to ensure improvement in the accessibility, affordability, cost-effectiveness, and quality of post-critical trauma care.

Data needs initially identified to address these questions included:

- The number of patients entering rehabilitation and other post-acute care as a result of traumatic injury. The existing state trauma registry was suggested as a source for some of this data;
- Review models from other states that have undertaken to quantify post-critical trauma care needs;
- Accounting of rehabilitation and post-acute care options currently available statewide;
- Data on traumatic injury recovery, rehabilitation, and costs to Medicaid and workers’ compensation.

While considerable effort was made to identify sources of this information, one of the commision’s first conclusions was objective data about the eventual consequences of trauma were not available in Ohio or nationally.

In January 2002, it was decided the most advantageous use of the level of expertise and experience on the commission, plus the means to ensure concentrated efforts would be to divide the commission into three committees:

- Medical rehabilitation – Priorities categorized into four basic issues: geographic availability; insurance and coverage; service matching; and patient tracking. By looking at these issues, this committee hoped to be able to recommend a methodology wherein referring hospitals and other initial treating facilities had a better means of matching patient acuity and service needs with service provision.
- Disability – Directed attention to the issues of re-entry into the workforce or education system; examined resources for social support; and inquiry into the impact of age and family on long-term rehabilitation.

- Data and follow-up registry – Provided objective information on which to base public and private policy decisions about post-critical trauma care. The committee recommended a system that allows research on the nature and scope of consequences of trauma, and provides an informed basis for meeting the needs of those injured.

After meeting in committees for 15 months, the commission systematically reviewed, evaluated and revised specific recommendations brought forth by the three committees. Five areas of recommendations emerged, and in the course of deliberations two additional focus areas were identified: substance abuse and on-going responsibility for post-critical trauma care issues. Committees and the commission as a whole engaged in monthly, iterative discussions of the recommendations, their rationale, and suggestions for implementation. This work concluded at the end of June 2003, when the commission reached consensus on the content of its final report.

From July 2003, through the conclusion of the commission’s work, efforts focused on disseminating the report and recommendations. Special emphasis was given to gaining support for the final report from sponsoring agencies and organizations, as well as the means by which the commission’s findings would be shared with the Governor and the Ohio General Assembly.

Benchmarks

November 2000	Substitute H.B. 138 effective date.
February 2001	Ohio Department of Health (ODH) staff directed to organize and provide administrative support to the Post-critical Trauma Care Commission.
March 2001	State agencies, organizations, and professional associations invited to nominate representatives to the commission.
April 2001	Letters of appointment sent to selected representatives.
July 2001	Ohio Commission on Dispute Resolution and Conflict Management Inaugural meeting held at ODH.
August 2001, to May 2002	Monthly commission meetings.
May 2002	Committees’ preliminary recommendations presented to full commission.
January 2003	First draft of final report presented to full commission.
February to June 2003	Bi-monthly commission meetings to review, evaluate and revise committee recommendations, rationale and suggestions for implementation.
June 2003	Commission approved revised final report for distribution to sponsoring organization and agencies.
September 2003	Letters supporting the final report were received from numerous agencies and organizations.
November 2003	Final report was presented to the Governor and the Ohio General Assembly.

Membership and collaboration

H.B. 138 delineated a variety of participants for the commission and required the director of health appoint representation from organizations and entities identified in the legislation. H.B. 138 established that “[C]ommission members shall have expertise in rehabilitation and retraining of injury victims, broadly represent relevant disciplines, and represent all regions of the state.” Throughout its deliberations and study, the commission relied on the expertise, experience, and affiliations of its membership not only for first-hand contributions to the process, but to provide external contributory sources as well. Therefore, the commission’s final work product, which follows in subsequent parts of this report, reflects a compilation of data and information from multiple sources provided through the good offices of commission representatives and their supporting organizations.

Mandatory members required by the legislation included representatives from the majority and minority parties of both houses of the General Assembly and certain specified state agencies as follows:

- Ohio Bureau of Workers’ Compensation
- Ohio Department of Aging
- Ohio Department of Health
- Ohio Department of Job & Family Services
- Ohio Rehabilitation Services Commission

In fulfilling the charge for non-state agency representation, department of health staff developed a listing of 54 possible sources for commission membership. From this original listing, 28 organizations and associations were invited to nominate a primary and alternate representative to the commission. Agencies and organizations represented by members and endorsing this report are:

- | | |
|--|---|
| Brain Injury Association of Ohio | Ohio Farm Bureau Federation |
| Ohio Association of Health Plans | Ohio Public Health Association |
| Ohio Business Coalition on Health | Ohio Rehabilitation Association |
| Ohio Children’s Hospitals Association | The Salvation Army |
| Ohio Department of Public Safety | Ohio Legal Rights Service |
| Ohio Department of Alcohol and Drug Addiction Services | American Physical Therapy Association |
| Ohio Department of Education | Association of Ohio Philanthropic Homes, Housing and Services for the Aging |
| Ohio Fire Chiefs Association | Ohio State Chiropractic Association |
| Ohio Hospital Association | Ohio Association of Professional Fire Fighters |
| Ohio Nurses Association | Ohio Society of Trauma Nurse Coordinators |
| Ohio Psychological Association | Ohio Osteopathic Association |
| Ohio State Medical Association | State Trauma Committee |
| Ohio Association of Rehabilitation Facilities | Central Ohio Trauma System |

Over the course of the commission’s work the original membership altered somewhat due to personal and agency/organizational commitments. The final membership roster by name is included in appendix C of this report.

Acknowledgements

The chair, vice chair and members of the Post-critical Trauma Care Commission wish to also acknowledge the support received from the following sources over the course of its deliberations:

- Roy Croy, Ohio Department of Health, Bureau of Community Health Care Facilities and Services for his steady hand and sage advice.
- Linda Vojtush, executive secretary, Ohio Department of Health, Bureau of Community Health Care Facilities and Services for her tireless administrative support in scheduling and setting up meetings, and in recording, preparing, and distributing commission meeting minutes in an always reliable and timely manner.
- Virginia Haller, M.D., Ohio Department of Health, for her keen interest in the commission’s work and valuable insights into injury prevention and Ohio’s activities in that field.
- Margaret Lewis, Fred Bartenstein, and Ed Krauss of the Ohio Commission on Dispute Resolution and Conflict Management for their facilitation in the early stages of commission meetings. The advice, assistance, and expertise provided by these professional facilitators contributed immeasurably to start up, organization, and work planning for the commission’s later endeavors.
- Judy Roush, commission member and her parent organization, the Ohio Farm Bureau, for providing excellent accommodations for the commission’s meetings.
- The Ohio Bureau of Workers’ Compensation for their invaluable assistance in preparing this final report.



"Many of the issues of the Commission studied are relevant to workplace traumas and the injured worker population served by the Ohio Bureau of Workers' Compensation."

James Conrad
Administrator/CEO,
Ohio Bureau of
Workers' Compensation

A MODEL PATIENT BILL OF RIGHTS AND RESPONSIBILITIES FOR TRAUMA PATIENTS RECEIVING POST-CRITICAL TRAUMA CARE IN OHIO

Recommendation: Providers and health-care facilities delivering post-critical care to trauma patients should adopt and comply with a patient bill of rights and responsibilities that recognizes the unique needs of those undergoing rehabilitation and recovery, and contributes to an effective and responsive patient care program.

Vision

Philosophies and guiding principles for treating trauma patients, and the treatments themselves, should reflect not only medically and technologically advanced practices, but also will reflect the highest regard for the uniqueness of the patient, the sanctity of the caregiver-patient relationship, and an awareness that the likelihood of successful rehabilitation increases when patients, families, and caregivers demonstrate respect, cooperation, dignity, and responsibility.

Description of the problem

Richard J. Mullins wrote in an article published in 1999, "Many authors have identified the publication of *Accidental Death and Disability: The Neglected Disease of Modern Society* in 1966...as the inaugural event in what was to become a sustained effort sponsored by government to control 'accidental injury' as a health problem...In this publication, strong government leadership was proposed as essential in the effort to solve the 'neglected epidemic' of death and disability from injury. The authors detailed the problem's enormous magnitude: the tragedy of early death among the young, the burden of disability, and costs of billions of dollars. The authors emphasized that the scope of the problem was all the more alarming when contrasted with the public's apathetic attitude toward trauma care." (1)

Recognizing the still significant relevance of that milestone white paper, as well as the evolution of medicine and public health in this arena, this chapter puts forth recommendations meant to inform public policy and public awareness, and most importantly, empower trauma patients as they move through the process of healing and regaining their independence.

The continuum of care required by trauma patients is a broad spectrum that will, in most cases, expose these individuals to medical care and social support systems that are, to varying degrees, coordinated, provided by qualified health professionals, and responsive to each patient's specialized needs. Across this continuum of care, from triage to rehabilitation, trauma patients encounter a host of often challenging and stressful experiences, as well as the need to make decisions for which they usually have no preparation or prior experience. As a result, the importance of the caregiver-patient relationship becomes a touchstone for trauma patients' successful rehabilitation.



In his article, “Gift From Within,” Frank M. Ochberg, M.D., refers to a principle of individuality that states, “Every individual has a unique pathway to recovery after traumatic stress.” (2) Although Dr. Ochberg refers to the emotional impact of traumatic stress (emotional disorder vs. physical injury) resulting from events such as violence, abuse, crime, or other environmental stress, his principle translates in its entirety to individuals coping with the aftermath of traumatic injury. While it is difficult to experience medical diagnosis and treatment in the acute care setting, the needs of trauma patients become even more unique as they attempt to rehabilitate and integrate themselves back into a society more equipped and comfortable in accommodating its most healthy and productive members. Learning to drive, coping with disfigurement, re-entering the work force, dealing with depression, and a host of other challenges that face the trauma patient require special attention and a commitment on the part of professionals and support persons to recognize that

their patient, family member, or friend has unique needs, personal preferences, and a pathway to recovery not exactly like any other. It is within this context that concern for patients’ rights needs to be considered and that caregivers assume responsibility for informing and explaining these rights to patients and their families.

In *American Independence and the Right to Emergency Care*, Robert Baker, Ph.D., observes that, “Asserting a right is a powerful statement in the American political rhetoric. In this country, medicine has recognized patients’ rights for over 150 years. As early as 1886 there was a proposal to ‘draw up...a Bill of Rights which shall secure patients from any injustice from the votaries of science.’” (3)

The American Hospital Association (AHA) first adopted a patient bill of rights in 1973. Subsequently, on Oct. 21, 1992, the AHA Board of Trustees approved a revised version of its original bill of rights. The AHA developed these rights with the expectations that hospitals and health-care institutions would support these rights in the interest of delivering effective patient care. A random review across an array of health-care providers and advocacy organizations reveals many such institutions and providers have developed patient bills of rights that incorporate the principles reflected in the AHA model, which is a practice the AHA promotes and supports. In its introduction, the AHA Patient’s Bill of Rights states that, “The American Hospital Association encourages health care institutions to tailor this bill of rights to their patient community by translating and/or simplifying the language of this bill of rights as may be necessary to ensure that patients and their families understand their rights and responsibilities.” (4)

Proposed strategies

Goal

Caregivers and the facilities within which they treat and minister to trauma patients undergoing rehabilitation and recovery will adopt, formally through written and visible public displays, as well as informally, through their personal norms and approaches to care, a code of rights and responsibilities that contributes to and creates a nurturing, respectful, and outcome-based environment.

Principles

- The Model Patient Bill of Rights and Responsibilities will augment, and not supplant, existing and similar bills of rights already in use in facilities that provide post-critical trauma care;
- The Model Patient Bill of Rights and Responsibilities incorporates rights and responsibilities specific to patients who are experiencing challenges unique to post-critical trauma care and are undergoing rehabilitation and recovery related to their trauma;
- The Model Patient Bill of Rights and Responsibilities recognizes that adults and children have unique sets of challenges and may require standards of care, treatments, and follow-up tailored not only to their specific medical and trauma-related circumstances, but also to their unique age and stage-of-life-based needs;
- The Model Patient Bill of Rights and Responsibilities is only one of many tools contributing to the creation and maintenance of a culture that reflects an ingrained and inherent respect for the uniqueness of the individual and an environment where caregivers and families feel safe interacting collegially to enhance the physical, emotional, and spiritual healing of the trauma patient.

Keeping in mind Dr. Ochberg’s “unique pathway to recovery,” the Post-critical Trauma Care Commission’s Medical Rehabilitation Committee reviewed a number of existing patient bills of rights used by a variety of health-care institutions and facilities. The committee particularly searched for patient bills of rights drafted for post-acute patients with complex and varied needs and more specifically, for those addressing post-critical trauma patient needs. Although the review did not employ formal research methodologies, it did reveal that the use of general patient bills of rights is widespread in the health-care profession, particularly in hospitals. Patient bills of rights specific to the needs of trauma patients were not found readily.

The commission decided developing a Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio would be a valuable contribution to ensuring this vulnerable population receives the highest quality care in settings that respect the rights and roles of patients, families, and caregivers. To that end, the commission recommends that the Model Bill of Rights and Responsibilities contained herein be adopted as a model for use by institutions and facilities that provide post acute and/or rehabilitative treatment or care, as well as those that provide social services that support such care, to trauma patients in Ohio.

The following is the *Post-critical Trauma Care Commission’s Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio*. The end of the chapter includes a list of patient bills of rights that were reviewed as part of the research and drafting process.



Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio

The Post-critical Trauma Care Commission, as authorized by H. B. 138 of the 123rd General Assembly, recommends providers and health-care facilities administering post-critical care to trauma patients in Ohio adopt and comply with a patient bill of rights and responsibilities that recognizes the unique needs of individuals undergoing rehabilitation and recovery, and contributes to an effective and responsive patient-care program. Further, the commission recommends facilities adopt the following model patient bill of rights and responsibilities or one that reflects its precepts and principles.

Patient rights

This facility's post-critical trauma care patients, including adults, children, and parents or guardians of children who are patients, have the following rights:

1. Patients have the right to receive appropriate, individualized care and treatment, and to:

- Up-to-date, comprehensive information about their condition, including appropriate care and treatment options, and to have that information explained in terms they are able to understand;
- Participate as an equal partner of the health team in all decisions concerning their care, including the right to accept, refuse, modify, or discontinue treatment;
- Be advised of the risks of any treatment, procedure, or therapy and the right to be informed of the possible medical consequences of accepting or refusing a course of action;
- Be informed of clinical trials, experimental treatments, or unproven research protocols that may be available for their treatment or rehabilitation, as well as the right to accept or refuse participation in such research;
- Expect the best possible care, including specialty care, from providers trained, credentialed, and experienced in managing their condition. Should a facility or provider not be able to provide appropriate care at any time during the course of treatment, patients have the right to expect timely referrals to providers able to provide such care;
- Receive appropriate care free from unlawful discrimination of any type.

Pediatric patients have the right to:

- Be treated in American College of Surgeons (ACS)-verified pediatric trauma centers. Adult centers that have not undertaken a pediatric review process parallel to the adult verification process are not interchangeable with pediatric trauma centers;
- Be treated in pediatric rehabilitation centers that focus on school re-entry, family-centered care, and community reintegration. Adult rehabilitation facilities with pediatric resources are not interchangeable with Commission for Accreditation of Rehabilitation Facilities (CARF)-accredited pediatric rehabilitation facilities.

2. Patients have the right to receive care that is coordinated and ongoing, as needed, across a broad spectrum of settings, including home, hospital, nursing home, school, workplace, therapeutic, and rehabilitative care settings. These include the right to:

- Expect continuity of care, as well as appropriate follow-up care, that focuses on helping them achieve the highest possible degree of functionality, greater independence, and a rapid return to productivity;
- Expect prompt and effective communication among the health-care professionals attending to their treatment, recovery, and rehabilitative needs, including timely sharing of information related to medical history, individualized plans of care, prognosis, treatment, and follow-up regimens when multidisciplinary provider teams are involved;
- Seek multiple opinions from professionals on their care team in any setting, or from sources of their own choosing, without fear of experiencing negative consequences as the result of seeking additional or alternate information;
- Know the names, credentials, experience, and professional status of their caregivers, as well as which caregiver has primary responsibility for coordinating and managing their care;
- Expect their family members are encouraged to participate as members of the care team so they can provide care continuity as the patient navigates the health-care system.

3. Patients have the right to be treated at all times with respect, dignity, and consideration and to expect health-care professionals to place high priority on safeguarding their privacy. These include the right to:

- Participate in decisions concerning their health care based on their religious beliefs, spiritual values, or cultural identity;
- Expect consideration of their personal privacy and comfort during physical examinations, therapeutic interventions, or rehabilitative interventions;
- Access their medical records and to expect that no other persons, other than those involved with their care or allowed by law, have access to their records without the patient's written permission;
- Expect confidentiality in communications with their caregivers and to have their health-care providers maintain their records and communications maintained confidentially, unless patients waive their confidentiality rights;
- Prepare advance directives to express end-of-life preferences.

4. Patients have the right to receive assistance and support to maintain, and whenever possible, enhance, the quality of their lives. These include the right to:

- Be informed of available resources throughout the course of their treatment (and especially as part of the discharge process), including appropriate support groups; pastoral/spiritual care; psychological counseling; employment counseling; local community social services; national referral sources, including associations and organizations; government sources for information and assistance; protective or advocacy services; translator services; patient education programs; and other services as appropriate and available;
- Expect that their health-care professionals will take the necessary measures to ensure that patients will, to the extent possible, be relieved of pain throughout the course of their treatment and as part of long-term follow-up;
- Be approached and treated at all times as a "whole" person and to expect that all aspects of treatment, follow-up, and support reflect their emotional, physical, spiritual, and psychological needs. Families of pediatric patients have the right to be viewed as extensions of the patient and provided with information and services that enable them to create an environment in which the pediatric patient can thrive.

5. Patients have the right to understand the policies and procedures of a facility or provider, including those concerning patient conduct, payment and billing, and complaint and appeal processes. These include the right to:

- Be advised of and understand any policies or rules that apply to their conduct in their role as a patient, including expectations regarding compliance with instructions from their health-care team, provision of accurate personal medical information to caregivers, notification of appointment cancellations, and other patient responsibilities, as specified by the provider;
- Obtain complete and detailed information concerning the costs of their care. Patients have the right to itemized listings, as well as total charges, for the services they have received. Patients have the right to an explanation of the charges for any and all items they do not understand;
- Understand what, if any, third-party payors have responsibility for any portion of their bills, as well as any co-payments, deductibles, or non-covered services for which the patient may be responsible;
- Obtain information on how to receive assistance in paying their bills, including referrals to programs for which the patient may be eligible;
- Be advised of any complaint, grievance, or appeal processes available to them related to their care or payment for services.

Patient responsibilities

Post-critical trauma care patients of this facility, including adults, children, and the parents or guardians of children who are patients, have the following responsibilities:

- 1. Patients have the responsibility to provide, to the best of their ability, full and complete information concerning matters related to their health, including the responsibility to:**

 - Inform providers and/or caregivers of their past medical history, current diagnoses and/or symptoms, treatment plans developed by other providers, current and past medications, past hospitalizations, and other information related to their care and treatment;
 - Tell their providers of any changes to their medical condition, adverse reactions to treatment or medications, and changes to contact information, including phone numbers and addresses.
- 2. Patients have the responsibility to follow through with agreed upon plans of treatment, including scheduled appointments and self-care, including the responsibility to:**

 - Follow the instructions and read or have read and explained to them educational materials, special instructions, or self-care plans provided by the health-care team to ensure the best possible treatment outcomes;
 - Inform their providers, and ask questions if they are uncertain or not clear, regarding any aspect of their health care, including planned treatment and/or follow-up regimens, medication dosages and schedules, or instructions from physicians, nurses, or other caregivers;
 - Attend follow-up medical appointments, inform provider offices in a timely manner if there is a need to cancel an appointment, and reschedule appointments promptly;
 - Understand that, if they refuse treatment or do not follow the agreed upon treatment plan, they assume responsibility for outcomes resulting from their choices;
 - Inform their caregivers or health-care team of non-medical concerns related to their diagnosis and treatment, including those of an emotional, psychological, spiritual, or family-related nature, so appropriate referrals can be made to address concerns promptly.
- 3. Patients have the responsibility to meet the financial obligations of their health-care treatment, including the responsibility to:**

 - Understand and/or ask questions concerning the costs of their care and to ask specific and detailed questions regarding their provider bills and any third party coverage;
 - Pay their providers promptly and to provide information to the provider or insurer/third party as required or requested to facilitate coordination and payment of benefits;
 - Advise providers and insurers/third parties of changes to employment, addresses, phone numbers, and other information used to identify or contact patients.
- 4. Patients have the responsibility to demonstrate respect and dignity to other patients and health-care staff in the environment where care is provided, including the responsibility to:**

 - Be considerate of others in the health-care setting, including being polite and respectful, ensuring appropriate behavior by their guests, assisting to control unnecessary noise, distractions, and prohibited activities, such as smoking, and honoring the rights of others in the health care setting;
 - Be respectful of the facility's property and the property of other patients.
- 5. Patients have the responsibility to follow the rules, regulations, and policies of their health-care setting, as well as for knowing their rights in the setting, including the responsibility to:**

 - Follow facility rules concerning patient conduct and to ask questions regarding policies that they do not understand. Additionally, patients have the responsibility to limit the number of their visitors, per the facility's policy, and, to the best of their ability, ensure their visitors adhere to facility rules and regulations;
 - Know and understand their rights concerning care and conduct in the facility and to follow the facility's administrative process for addressing concerns about their rights.

Implementation

Implementation of a strategy to adopt, endorse, and promote a Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio should take the following steps:

- 1. The Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio* should be endorsed and promoted through legislative action (e.g., joint House and Senate resolution).
2. The Ohio Association of Rehabilitation Facilities (OARF), the Ohio Hospital Association, the Ohio Department of Health, the Ohio Department of Public Safety, Emergency Medical Services, the Ohio Department of Job & Family Services, the Ohio Department of Aging, the Ohio Bureau of Workers' Compensation, the Ohio Chapter Committee on Trauma of the American College of Surgeons, and others as appropriate, should collaborate to promote and implement the following initiatives:

 - Encourage facilities that provide post-critical trauma care to review their existing patient bills of rights with an eye toward including rights that specifically reflect trauma care principles as expressed in the commission's report. The commission recommends its bill of rights be promoted as a model rather than a mandate, with a preference that existing structures be used to ensure patient-focused environments that foster quality outcomes. Further, the commission recommends the stakeholders identified above communicate to regulatory bodies, such as the Commission for Accreditation of Rehabilitation Facilities (CARF), that inclusion of trauma-related rights in a facility's patient bill of rights become part of the accreditation review process.
 - Develop and lead an awareness campaign that publicizes and promotes the *Model Patient Bill of Rights and Responsibilities* to educate facilities and their caregivers on the expectations, standards, and benefits associated with establishing an environment that encourages openness, teamwork, and mutual respect.
 - Develop and implement a best practices program to publicly recognize and reward facilities and caregivers who demonstrate exemplary effort in providing post-critical trauma care to trauma patients in Ohio, with particular emphasis on innovative initiatives that reflect productive and successful caregiver-family partnerships.

Legislative support

Representatives of the Post-critical Trauma Care Commission, including the chief executives of the state agencies named in H.B. 138, will impress upon the Ohio General Assembly members the importance of formalizing a *Model Patient Bill of Rights and Responsibilities for Trauma Patients Receiving Post-critical Trauma Care in Ohio*. The commission will stress its proposed model be promoted and supported through a joint resolution of the House and Senate or some other legislative vehicle that underscores the importance of the principles contained within the model. Should the leadership of the General Assembly be so inclined, they may also sponsor legislation that would require any facility providing care specific to this population include as part of their operating procedures the proposed model bill of rights and responsibilities or a similar credo that incorporates the same principles. Although the commission does not at this time recommend this specific model be mandated for use by facilities, an eventual developmental step may be introducing legislation that would require facilities providing care to this population to

adopt and incorporate into their operating procedures and existing bills of rights language that clearly delineates and specifically protects the rights of post-critical trauma care patients. The commission does not anticipate that this would require a significant amount of funding. However, establishing a specific source of funds for this purpose in the Ohio Department of Health would elevate its profile and signal to the public and their elected representatives the importance attached to it.

Accrediting body support

The commission recommends discussions ensue with representatives of the major accrediting bodies for facilities that serve trauma patients receiving post-critical trauma care regarding patient rights-related accreditation requirements. Information sharing with CARF, the Ohio chapter of the American College of Surgeons, the Ohio Hospital Association, the Ohio Health Care Association, and others as appropriate, could focus on incorporating these principles in the oversight and accrediting activities and standards maintained and enforced by these organizations. Additionally, specific strategies for regular review and feedback for facility practices related to patient and family involvement could be an ongoing topic of discussion. The commission believes open and visible discussion of these issues, as well as their elevation to a place of importance at least equal to those of a clinical or operational nature, would contribute to the potential for improved patient outcomes, as well as an enhanced quality of life for patients and providers.

Awareness campaign

Patients receive post-critical trauma care in a variety of settings throughout Ohio. Once a patient has received initial treatment at a designated trauma center, there are numerous options for the next phases of care. Patients may receive acute rehabilitation services through an inpatient facility (hospital, nursing or long-term care facility, stand-alone rehabilitation facility, etc.) or may be referred to an outpatient rehabilitation setting (vocational rehabilitation, sports medicine, etc.). It is the commission’s contention the concepts and principles of the Model Patient Bill of Rights and Responsibilities are equally applicable to any facility that provides care for this vulnerable population. Therefore, the commission recommends the previously identified stakeholders collaborate to undertake a public awareness campaign targeted toward the promotion of the model bill of rights and best practices related to the demonstration of patient and family-centered principles. Promotional activities could include direct mailings to providers that would include the commission’s vision and goals, as well as a copy of the model bill of rights; references to established Web sites, including the resource locator, the long-term care consumer guide, and others; and examples of best practices of facilities in Ohio that emphasize collaborative, team-oriented, and respectful treatment of individuals coping with the ongoing challenges of trauma rehabilitation.

Best practices

The commission recommends the previously identified stakeholders, in collaboration with interested organizations, agencies, and individuals, establish a formal mechanism to recognize and publicize best practices demonstrated by post-critical trauma care providers throughout Ohio. Incentives and possibilities for reward are as broad as the imagination. Public acknowledgment and praise for creative use of the model bill of rights, for example, is just one jumping-off point for a variety of strategies and initiatives that could be advertised and promoted throughout the industry and to the public. The commission believes bringing to the forefront of the public agenda positive and ongoing attention concerning challenges and opportunities facing trauma patients will contribute to meaningful forces of change and empowerment.

Footnotes

1. **Mullins, Richard J., M.D.**, *The Journal of Trauma: Injury, Infection, and Critical Care*, 1999, 47: S8-S14.
2. **Ochberg, Frank M., M.D.**, Department of Psychiatry, Michigan State University, East Lansing, MI, *Posttraumatic Therapy*, “Gift From Within,” An International Organization for Survivors of Trauma & Victimization, www.giftfromwithin.org.
3. **Baker, Robert, Ph.D.**, Department of Philosophy, Union College and Center for Bioethics, University of Pennsylvania, *American Independence and the Right to Emergency Care*, MSJAMA Online, March 3, 1999, Volume 281, pp. 859-860.
4. **AHA Board of Trustees**, *A Patient’s Bill of Rights*, American Hospital Association, Oct. 21, 1992.

Patient bills of rights reviewed

A Patient’s Bill of Rights, AHA Board of Trustees, **American Hospital Association**, Oct. 21, 1992.

A Recovery Bill of Rights for Trauma Survivors, **Maguire, Thomas V., Ph.D.**, July, 1997, home page for Joanna Poppink, MFT, licensed psychotherapist, specializing in eating disorders.

Centura Health Patient Bill of Rights, **Littleton Adventist Hospital**, Littleton, CO.

Child’s Bill of Rights, **Children’s Hospital, Inc.**, Columbus, OH, AD-15 General Consent Form, August 1997.

Code of Ethics, **International Chiropractors Association of California**, Board of Directors, as amended Sept. 21, 1996.

Injured Worker Pledge of Service, **Ohio Bureau of Workers’ Compensation**, Columbus, OH.

Patient’s Bill of Rights, **American Academy of Pain Management**, Sonora, CA, July 16, 2001.

Patient’s Rights and Responsibilities, Jackson Health System, **Jackson Memorial Hospital**, Jackson, FL, copyright 2001-2002.

Resident Bill of Rights Summary and Residents’ Responsibilities/Rules, **St. Augustine Health Campus**, Cleveland, OH.

The Johns Hopkins Breast Center’s Breast Cancer Patient’s Bill of Rights, **Johns Hopkins Hospital Breast Center**, Baltimore, MD.



"...the recommendation to develop a service locator fits well with our No Wrong Door project..."

Joan W. Lawrence
Director, Ohio Department of Aging

REHABILITATION SERVICE LOCATOR

Recommendation: A rehabilitation service locator should be created and maintained to allow patients, their families, and acute-care providers to identify sources of needed follow-up rehabilitation services and compare salient characteristics of available providers.

Vision

The intent of the locator service is to assist trauma patients and their families to identify and select prescribed discharge services that meet their needs.

Description of the problem

Trauma patients, family members, and health-care professionals lack comprehensive information about health-care services (medical and therapeutic) available in Ohio to treat trauma patients after discharge from the critical/acute care hospital setting. Trauma patients' medical and therapy needs post discharge can be varied and complex depending on the severity of the injury. Often hospital discharge planning falls short of appropriately matching the trauma patient's needs with the most appropriate and best quality health-care provider. Health-care services frequently change, which poses a challenge to health-care professionals to know all the service options available (based on quality and location). There is no comprehensive listing of resources for professionals or consumers regarding service availability. A rehabilitation service locator provides a comprehensive service listing. The locator allows the user to conduct a self-directed search of the most appropriate service based on their post-acute needs. Services identified in the locator are intended to assist patients throughout the continuum from pediatrics through adulthood to geriatrics.

The service locator concept was developed to address the Post-critical Trauma Care Commission's mission. The service locator will help families and professionals identify services in a specific geographic location and match this to their service needs. Each facility listed in the service locator will identify the funding they accept. There is also the possibility to link to sites/contacts similar to MedAssist Inc., which is a free service for patients to qualify for various funding sources. Companies such as this will assist patients in obtaining Medicaid, Bureau of Children with Medical Handicaps (BCMh), charitable services or other types of services. They have a mission to assist uninsured patients through the often difficult and confusing process of applying for public assistance to satisfy their obligation to the medical provider. The locator database will gather various data points that address quality, such as accreditation, outcomes, and patient satisfaction. If each patient is matched appropriately with the right facility, we would anticipate the cost effectiveness and quality aspects of the mission are met.

The overriding principle of the service locator is to provide information regarding quality health-care service availability and enhancing consumer choice. The service locator will enhance and, in some cases, facilitate the transfer decision-making process from acute care to the next appropriate level of care. The locator can be Web-based and have a user-friendly look-up function or search capability. The user could input specific information about the patient together with the patient's needs and, through the

search function, could find compatible service providers that meet the patient’s specifications. Although the specific services categories maintained on the locator may change as the system matures, it is recommended the following services be included initially: location, demographics, years of operation, types of services offered, types of professionals available, funding accepted, patient characteristics, accreditations, admission/discharge criteria, outcomes, linkages to consumer guides (e.g., a guide to finding the right rehabilitation facility).

The purpose of the rehabilitation service locator is to provide a comprehensive tool of service availability. To bridge the gap between the trauma patient, family and caregivers with health-care professionals it is proposed that a Web-based rehabilitation service locator be created. Trauma patients and their families, as well as health-care providers, can use this locator service (e.g., discharge planners, social workers, physicians, case managers and insurers). Similar in principle to the Ohio Long-Term Care Consumer Guide at www.ltcoho.org, which assists consumers and professionals in identifying long-term nursing services, the rehabilitation service locator would be designed to meet the trauma patient’s specific needs.

Benefits of the rehabilitation service locator are:

- Trauma patients and their families will be able to access up-to-date information regarding the availability of post-acute health-care services that might otherwise be unknown;
- Health-care providers (discharge planners, social workers, physicians, case managers and insurers) will be able to access up-to-date information regarding the availability of post-critical/acute health-care services that might otherwise be unknown;
- The Web-based locator can be populated and updated easily as facility information changes.
- The Web-based locator can be accessed easily from the home or office;
- Standardization of facility services and detail will provide comparison opportunity;
- Trauma patients will be more likely to receive quality post-critical/acute services in their communities;
- Smaller facilities will be able to market their services appropriately to a larger audience;
- Funding for development and maintenance will be absorbed by contributing facilities;
- Facilities will be more likely to update their individual information;
- The opportunity for consumer and insurer funding comparisons will be improved.

Proposed strategies

Goal

The goal of the Rehabilitation Service Locator is to promote patient and caregiver choice for post-acute discharge services.

Principles

1. The Rehabilitation Service Locator Web site should be developed to house comprehensive information about Ohio’s inpatient and outpatient rehabilitation services.
2. The Rehabilitation Service Locator Web site should be designed to provide users with information regarding facilities and the services they offer (e.g., location, demographics, services offered, professionals available, funding accepted, patient characteristics, accreditation, admission criteria and outcomes).

3. The locator’s target population should be Ohio trauma patients and their families; however it should be available for use by other consumers and health-care professionals in their search for inpatient and outpatient rehabilitation services.
4. Locator information should be updated routinely to maintain its accuracy, and links should be provided to related Web sites (e.g., the Brain Injury Association of Ohio).

Implementation

1. Create Rehabilitation Service Locator Web site: It would be ideal to piggyback with the long-term care Web site locator; however, may need to consider the trauma system’s Web site location, if the cost of conformity to the existing long-term care locator is too significant.
 - a. Develop specific data points for the service locator.
 - b. Develop plan for submission: The locator information is supplied by facilities and providers voluntarily, using standardized definitions and data formats, and funded by a nominal fee paid by submitting facilities.
 - c. Initial mailing of a letter introducing the service locator to various inpatient and outpatient rehabilitation providers in Ohio. Enclosed will be the data collection form with the needed information.
 - d. Developing the plan for ongoing maintenance — possibly through annual subscription fees paid by health-care providers to be listed on the Web site.
 - e. Once created, a major initiative will involve marketing the locator to the potential users. A full-scale awareness campaign will be needed to reach health-care providers, agencies that serve this population, the trauma patients and their families.
2. Create a satisfaction measure: A final step of implementation is to create a measure of the locator’s effectiveness that can be used to justify its existence and secure ongoing funding but mostly to tweak its functionality for the user. A defined set of criteria should be developed that includes utilization (e.g., number of hits) and user satisfaction. Contract with an outside service/company to evaluate customer satisfaction results uniformly. The goal is to display results that can be compared evenly across facilities, similar to the insurance companies and LTC Web site.
3. Create a multidisciplinary group: Although the Rehabilitation Service Locator recommendations list a multitude of service types for inclusion on the locator, it is felt that a multidisciplinary group is needed to further analyze and develop standard definitions for service types using published national references (e.g., the *Brain Injury Association of America Provider Directory*). It will be important that facilities included in the locator abide by the standard definitions when describing their services so the user can make valid comparisons and decisions.





"The report does offer a sound roadmap for Ohio to follow as it constructs a comprehensive system of post-critical care for Ohioans who suffered traumatic injuries."

John M. Connelly
Executive director, State of Ohio
Rehabilitation Services Commission

A STATEWIDE SYSTEM OF RESOURCE FACILITATION

Recommendation: To address the lifetime needs of Ohio citizens with disability due to injury, a resource facilitation system should be established to provide access to information and services, increase the capacity for community support and, as needed, coordinate services for individuals and their families. The resource facilitation system should model the one the Brain Injury Association of Ohio is developing, but be expanded to include all causes of disability due to injury and extended to all regions of the state.

Vision

Ohio citizens with long-term needs due to traumatic injury, as well as professionals who work with them, should have easy access to the best available knowledge and resources about injury and its effects. A statewide system of resource facilitation (1) should be in place to provide a comprehensive yet economic approach to promoting informed choices. Knowledge of the resource facilitation system and its use should be widespread, allowing timely use of its services.

Description of the problem

Children and adults with long-term needs due to trauma require assistance from knowledgeable and trained individuals to help them identify, obtain and maintain the services and supports they require to maximize recovery and reintegration into home and community life. Assistance is particularly critical for those individuals who do not fit within eligibility criteria established for the major human service agencies. In fact, most of the state agencies that comprise today's human service system were established before large numbers of individuals began surviving significant and debilitating traumatic injuries.

Though the make-up of the disability population has changed over the last quarter of a century — with the proportion of individuals with long-term needs due to trauma on the rise — the service system has not responded to these population shifts. A conclusion from the 1995 report by the National Conference of State Legislators titled, What Legislators Need to Know About Traumatic Brain Injury, (2) applies to others with long-term needs due to traumatic injury:

These people have diverse needs that make it difficult for them to fit easily into existing service systems. State delivery systems tend to be based on diagnosis (developmental disabilities, mental illness, special health-care needs) or on financial need, such as Medicaid. These services are not always available or appropriate for people with brain injuries. Federal funding streams have shaped state services, making it difficult to restructure or expand existing services . . ." (2)

Unquestionably the fragmented, bureaucratic nature of the current human service system presents a significant obstacle to accessing needed assistance and supports for individuals with long-term needs due to trauma. For those with cognitive deficits following trauma, the very nature of their disability

compounds their difficulty in working through the bureaucratic maze to acquire assistance that may be available to them. Additionally, their need for information, resource coordination and problem-solving assistance may persist for years following their injury. For example, of those using the Brain Injury Association of Ohio's Helpline and Community Support Network programs during 2002, 16 percent were three months or less post injury, 20 percent were between four and 12 months post injury, 21 percent were between 13 and 36 months post injury, 27 percent were between 37 months and 10 years post injury and 16 percent were more than 11 years post injury. (6)

Without assistance, individuals with long-term needs associated with trauma experience significant barriers and delays in finding and accessing services available to them through the current service system. Failure to obtain needed services and supports in a timely and coordinated fashion, in turn, puts them at greater risks for common secondary complications, such as depression, substance abuse, and long-term unemployment, as well as other negative outcomes.

In the 1989 Interagency Head Injury Task Force Report (3) issued by the U.S. Department of Health and Human Services, "Encouraging the use of 'care manager' systems that operate throughout all stages of care, from acute care through community reentry" was listed as an implementation strategy to achieve a national agenda with six key recommendations. In 1990, Ohio enacted legislation (Amended Substitute H.B. 594) (4) to create the Head Injury Program and its Advisory Council in the Ohio Department of Health. (The program has since been transferred to the Ohio Rehabilitation Services Commission and is known as the Brain Injury Program and Advisory Committee.) Three of the program's eight legislated purposes pertain to facilitating access to information and services:

- Identify existing services in this state to assist survivors of head injury and their families;
- Promote service coordination for survivors of head injury and their families;
- Explore options for delivering case management services to residents of this state who are survivors of head injury.

The on-going need for assistance accessing resources was validated through the National Institutes of Health's Rehabilitation of Persons with Traumatic Brain Injury Consensus Statement (5) synthesized from testimony provided at an Oct. 26 through 28, 1998, Consensus Development Conference. It states, "Community-based, non-medical services should be components of the extended care and rehabilitation available to persons with traumatic brain injury. These include but are not necessarily limited to "...case manager programs to support practical life skill redevelopment and to help navigate through the public assistance and medical-rehabilitative care systems..." (5)

The need to assist individuals with spinal cord injuries is also apparent from statements and recommendations stemming from several meetings sponsored by the Centers for Disease Control and Prevention. The first, convened in November 1999, was titled, "Future Directions for Community-Based Spinal Cord Injury Program Research and Development." Held in Atlanta, approximately 20 spinal cord injury researchers and public health officials reviewed community-based methods for preventing secondary conditions of spinal cord injury. At a March 2001 follow-up meeting to further develop the national research agenda, interagency representatives *"discussed the progression of health needs following spinal cord injury and identified gaps in current service delivery for persons with spinal cord injury, developed an inventory of activities being conducted across federal agencies and explored a coordinated response to better serve this population."* (6) (Italics added.)



A system of resource facilitation

A resource facilitation system should be a comprehensive, coordinated program with three basic functions: 1) provide timely and up-to-date information to individuals, families, providers, and the public; 2) assist individuals who have been injured in obtaining available services and supports to maximize their health, independence, and integration into family, work, and community; and 3) build the local community's capacity to address their needs. Three program components offer graduated levels of assistance matching the degree of help required at a given point in time:

- A toll-free, statewide information and resource (I&R) telephone service;
- Regional offices addressing local needs and resources in all 88 Ohio counties;
- Individual service coordination, as needed, for more complex needs.

The I&R telephone service is designed to be the primary point of entry into the system, and represents the least intensive level of assistance in the program continuum. Those with greater resource facilitation needs are linked to regional offices, or if their needs are intensive and on-going, to programs offering the assistance of individualized service coordination. As the intensity of individuals' needs for resource facilitation services increase or decrease, they move up or down the program continuum to obtain the appropriate level of assistance. Individuals may drop out of the system entirely if their resource facilitation needs are met, and on-going assistance is no longer required, with the assurance they can return for help at a later time, should it become necessary. Core administrative, information management and communication services underpin these three programmatic components, promoting the development of an integrated, efficient and effective system.

The Brain Injury Association of Ohio (BIA-Ohio) has developed and operates two of the three program components of a resource facilitation system. BIA-Ohio operates the toll-free Helpline, and six of 15 proposed Community Support Network offices. BIA-Ohio also provides Infrastructure Support Functions. (See the schematic at the end of this chapter).

BIA-Ohio’s system has been developed incrementally over a period of almost 15 years as advocates have been able to acquire funding. Financial support has come primarily from grants awarded by the Brain Injury Advisory Committee at the Ohio Rehabilitation Services Commission, drawing upon state appropriations and federal match through the U.S. departments of Education, and Health and Human Services. BIA-Ohio has acquired supplemental support to help sustain and/or further develop the system through private foundation awards, as well as contributions from individuals and corporations. Donated office space and miscellaneous support services offered by the agencies that house the Community Support Network programs also contribute to their sustainability and promote cross-agency communication and collaboration. However, funding fluctuations associated with time-limited grant awards have made further development and stabilization of the system difficult.

The third programmatic component of resource facilitation — individual resource coordination — offers the most intensive assistance, but is also the least developed in Ohio. Only a few programs provide specialized individual service coordination for persons with brain injury. Though there is a demand for this type of specialized assistance, funding to sustain programs is lacking and, where it can be cobbled together, is unstable for any significant duration. Compounding the problem is the fact that, though some individuals with long-term needs due to trauma are eligible for case-management services provided through other systems, the personnel within those systems typically are unprepared to recognize or cope with their special needs. While training and certain accommodations could remedy this situation, no systematic approach has been developed to do so.

Proposed strategy

Goal

Extend the resource facilitation system developed for individuals with brain injury so information, services and supports are available to all Ohio citizens who experience disability as a result of traumatic injury.

Principles

The envisioned resource facilitation system should:

- Be integrated and comprehensive, not duplicative;
- Respect individual choice and promote self-direction;
- Encourage consumer and family involvement;
- Value home and community-based supports so individuals may take their places in the most integrated settings;
- Promote inclusiveness and cultural sensitivity in terms of outreach, program design and implementation.

Implementation

This proposal for development of a resource facilitation system for persons with a traumatic injury responds to the director of health’s charge and the Post-critical Trauma Care Commission’s purposes as identified in H.B. 138 by:

- Promoting accessibility to existing services and supports related to individuals’ physical, psychological, vocational rehabilitation, re-employment and social support needs;
- Capitalizing on an established, well-developed and nationally recognized conceptual framework for the system’s design and quality assurance mechanisms;
- Saving costs by building on a partially developed system that has been phased in over a 15-year period;
- Promoting efficiency and program cohesiveness through cross-system communication, collaboration and training;
- Encouraging self-direction and cost-efficiency through a three-tiered system that promotes choice and matches individuals’ level of need to the appropriate level of assistance.

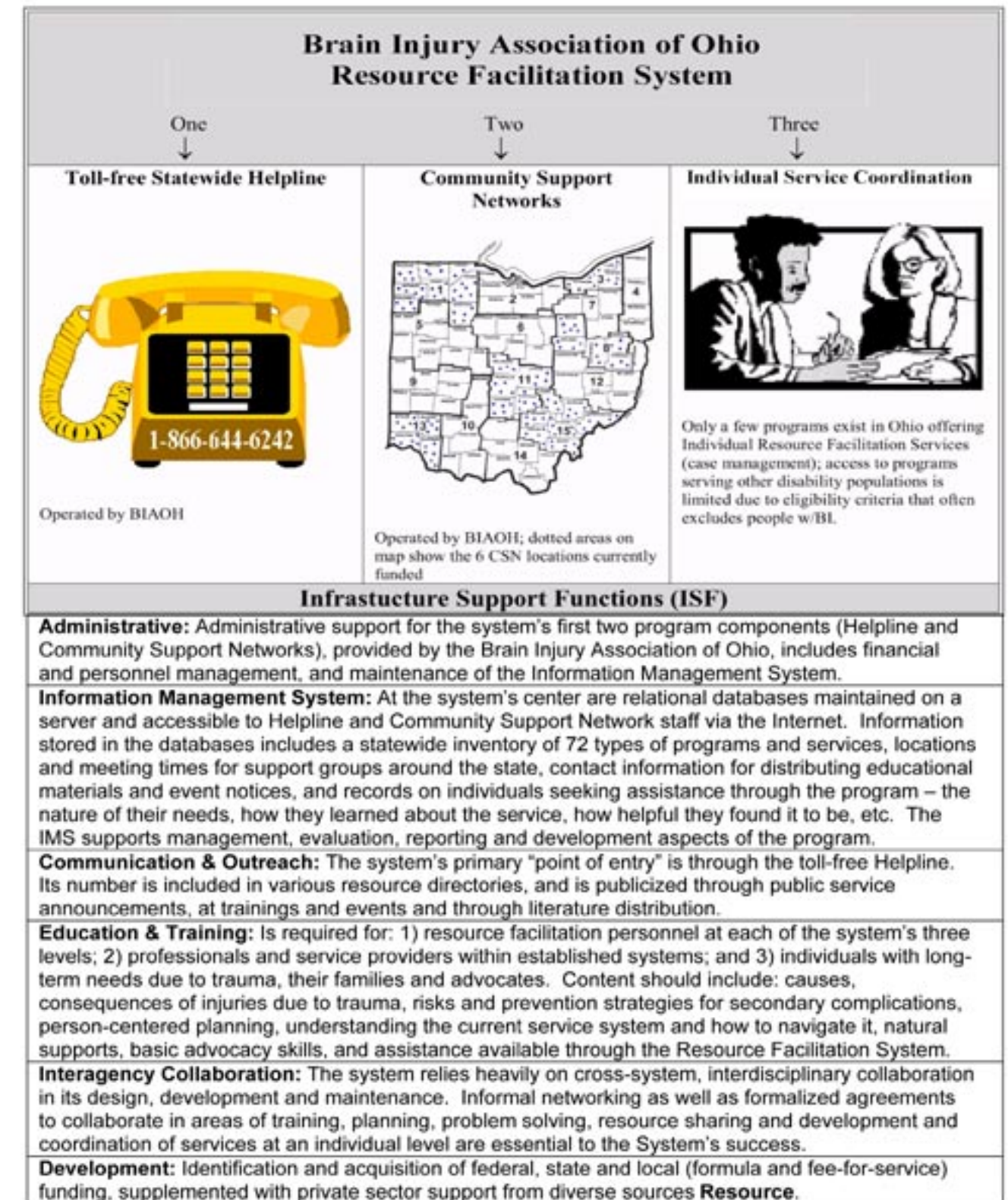
The following steps are suggested for implementation of a resource facilitation system for Ohio citizens who incurred traumatic injury.

- 1) Convene a stakeholder’s workgroup to expand the BIA-Ohio system’s design to accommodate the needs of all populations with long-term needs due to injury, and to promote cross-agency buy-in and consumer involvement.
- 2) Draw on expertise and leadership from the Ohio departments of Health, Aging, Jobs and Family Services, and Public Safety, along with the Centers for Disease Control and Prevention, the Health Resources and Services Administration, and The Ohio State University’s Traumatic Brain Injury Model System, (7) to guide the workgroup’s efforts and synchronize them with national trends and initiatives.
- 3) Establish incremental achievement benchmarks, along with corresponding outcome, quality assurance measures, and reporting protocols, to ensure forward progression leading to the system’s full implementation.
- 4) Develop memorandums of agreement outlining state-agency roles and actions to contribute to the system’s efficiency and effectiveness. Issues addressed in the memorandums may include, but not necessarily be limited to, activating the current system to better serve individuals with long-term needs due to trauma through personnel training, program modifications, outreach, joint initiatives, and resource identification and development.
- 5) Build on and fortify those components and infrastructure of the proposed resource facilitation system thus far developed, so they may serve as a starting point for the system’s full implementation.

- 6) Monitor and take necessary action to integrate the long-term needs of individuals with disability due to trauma into contemporaneous system change initiatives. Such opportunities may include: the New Freedom Initiative/Ohio Access and related systems change grants, Ticket to Work and Work Incentives Improvement Act of 1999, and Ohio's newly adopted rules for implementation of Individuals with Disabilities Education Act.
- 7) Develop awareness campaigns, targeting the general public and personnel within service providing agencies to promote knowledge and use of the resource facilitation system. Campaigns should address the growing number of individuals who experience disability due to traumatic injury and provide contact information to access the resource facilitation system.
- 8) Ensure individuals who staff Ohio's resource facilitation system are knowledgeable about challenges associated with disabilities due to trauma and assistance offered through the complex service delivery system.
- 9) Adhere to values promoting development of a culturally sensitive resource facilitation system that is holistic, person and family centered, and encourages choice, self direction, and availability of community-based supports.

References

- 1 **Connors, Susan H.** (2001) *Resource Facilitation Summit: A Consensus of Principles and Best Practices to Build Program Development and Operation in Brain Injury*. Alexandria, VA: Brain Injury Association of America.
- 2 **National Conference of State Legislatures.** (1995) *What Legislatures Need to Know About Traumatic Brain Injury*. Denver.
- 3 **National Institutes of Health, National Institute of Neurological Disorders and Stroke.** (1989). *Interagency Head Injury Task Force Report*. Bethesda, MD.
- 4 **Amended Substitute H.B. 594** creating the Office on Head Injury and Advisory Council at the Ohio Department of Health, signed into law in 1990.
- 5 **National Institutes of Health, National Institutes of Child Health and Development.** (1999). *Report of the NIH Consensus Development Conference on the Rehabilitation of Persons With Traumatic Brain Injury*. Bethesda, MD.
- 6 **National Center for Injury Prevention and Control.** *Injury Fact Book 2001-2002*. Atlanta, GA: Centers for Disease Control and Prevention; 2001.
- 7 **Ohio Regional Traumatic Brain Injury Model System** (Ohio Valley Center (OVC) for Brain Injury Prevention and Rehabilitation), one of 17 research and demonstration grants funded through the U.S. Department of Education, National Institute on Disability and Rehabilitation Research (NIDRR) to establish the Traumatic Brain Injury Model Systems of Care. The OVC Model Systems grant is administered through the Department of Physical Medicine at The Ohio State University; its principal investigator is John Corrigan, Ph.D. Model systems grants primarily focus on: 1) developing and demonstrating a model system of care for persons with traumatic brain injury, stressing continuity and comprehensiveness of care; and 2) maintaining a standardized national database for innovative analyses of traumatic brain injury treatment and outcomes.





"...Ohio must exercise leadership in addressing over time the continuing challenges facing post-critical trauma care patients. This is especially true for children, since they face obstacles in achieving educational success and in recovering from devastating injuries so early in life."

Andrew Carter
President,
Ohio Children's Hospitals Association

MEETING THE EDUCATIONAL NEEDS OF CHILDREN WHO HAVE HAD TRAUMATIC INJURIES

Recommendation: To ensure the most appropriate educational experience for children who have had traumatic injuries, hospital and school personnel need additional training on issues for educational re-entry. Classroom teachers need access to resources about reintegrating these students; and mechanisms are needed to ensure providers, internal and external to the school system, take a coordinated approach in providing care. More research is needed on educating students who have incurred traumatic injuries.

Vision

Educational services should be affordable and accessible, and should ensure high educational expectations and achievement for children, including those who have experienced traumatic injuries.

Description of the problem

Educating children with traumatic injury can be a complex task for the educational system when the child is discharged from the hospital or rehabilitation setting. The child brings a medical label of traumatic injury with them to the school system, and the local educational agency (LEA) is responsible for providing appropriate reentry and educational services for the child.

At this point, confusion and/or frustration may occur for the patient, the family, and the educational agency on how to provide appropriate educational services since post-critical trauma or traumatic injury is not a disability category listed under the *Individuals with Disabilities Education Act* (IDEA). Traumatic injury, as defined by H.B. 138, can include such injuries as nerve or spinal cord injury, burns, vascular injury, limb amputation, internal organ injury, bone fractures, or brain injury.

Ensuring a seamless system for children with traumatic injury transitioning from the hospital to home, school, work, and community living is one area of concern. Transition and educational intervention requires a multidimensional approach and the use of a variety of strategies and resource materials. Although educators are providing services to meet the needs of children with traumatic injury, programs have not been developed adequately to meet the educational needs of these children. The solution is to provide training and support for teachers, therapists, and staff in the schools.

Another area of concern is the lack of knowledge and understanding of what is available in the LEAs under IDEA to meet the needs of the child with traumatic injury. IDEA provides the avenue for the educational agencies to evaluate the children to determine the educational and related service needs. In addition, IDEA requires documentation of services to meet the child's needs with a free appropriate public



education (FAPE) in the least restrictive environment (LRE). Under IDEA, there is not a disability category of traumatic injury. However, LEAs can provide services to children with traumatic injury(ies) identified as:

- Other health impaired;
- Orthopedically impaired;
- Multiple disabled;
- Traumatic brain injury;
- Emotional disturbance;
- Cognitive disabled.

The solution for this concern is not only training but ensuring a variety of methods for disseminating information pertaining to FAPE.

Another area of concern is the lack of controlled empirical studies regarding educational reintegration. There are discrepancies between hospital numbers of children treated with post-critical trauma and the lower incidence and prevalence of children receiving FAPE, as identified under IDEA in the educational system.

In addition, few empirical studies have been conducted to validate specific special education intervention to ensure children with traumatic injury are successful in school. The solution would be to conduct the research with controlled studies over a period of time.

The fourth area of concern is to ensure children with traumatic injury who are receiving services from a number of different agencies (i.e., medical, educational, mental health, mental retardation, drug, alcohol, and social) do not slip through the cracks of the system. Many times, it is not clear who will accept management responsibility for the child. The solution will require a system change on the part of a variety of agencies.

Definition of terms

Cognitive disability (mental retardation) - [3301-51-01(F)(3)(b)] Means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child’s educational performance. (i) Significantly subaverage general intellectual functioning refers to an intelligence quotient of 70 or below as determined through a measure of cognitive functioning administered by a school psychologist or a qualified psychologist using a test designed for individual administration. Based on a standard error of measurement and clinical judgment, a child may be determined to have significant subaverage general intellectual functioning with an intelligence quotient not to exceed 75. (ii) Deficits in adaptive behavior means deficits in two or more applicable skill areas occurring within the context of the child’s environments

and typical of the child’s chronological age peers. (iii) A child who was identified by an Ohio school district as having a developmental handicap as of the effective date of this rule shall be considered a child with a disability if the child continues to meet the definition for developmental handicap set forth under *Rules for the Education of Handicapped Children*, effective 1982, and shall be eligible to receive special education and related services in accordance with *Operating Standards for Ohio’s Schools Serving Children with Disabilities*, effective July 1, 2002.

Emotional disturbance - [3301-51-03(F)(3)(e)] Means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance: (i) An inability to learn that cannot be explained by intellectual, sensory, or health factors; (ii) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (iii) Inappropriate types of behavior or feelings under normal circumstances; (iv) A general pervasive mood of unhappiness or depression; (v) A tendency to develop physical symptoms or fears associated with personal or school problems. The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined they have an emotional disturbance.

Individuals with Disabilities Education Act (IDEA) - This is the federal law that supports special education and related service programming for children and youth with disabilities. Formerly know as the Education for the Handicapped Act (EHA), IDEA has its roots in Public Law 94-142 (the Education of All Handicapped Children Act), which originally was enacted in 1975 to establish grants to states for educating children with disabilities.

Amendments structure IDEA into four parts: part A addresses general provisions; part B covers the Assistance for Education of All Children with Disabilities; part C covers Infants and Toddlers with Disabilities; and part D addresses National Activities to Improve the Education of Children with Disabilities.

IDEA requires FAPE, which includes special education and related services, be available to children and youth with disabilities in mandated age ranges.

Orthopedic impairment - [3301-51-01(f)(3)(h)] Means a severe orthopedic impairment that adversely affects a child’s educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures).

Other health impairment - [3301-51-01(F)(3)(i)] Means having limited strength, vitality or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness to the educational environment. This condition is due to chronic or acute health problems, such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, and sickle cell anemia, and adversely affects a child’s educational performance.

Paraprofessional services - [3301-51-01(CC)] According to *Operating Standards for Ohio's Schools Serving Children with Disabilities*, paraprofessional services include services provided by school, county board of mental retardation and developmental disabilities, and other educational agency employees who are trained adequately to assist in the provision of special education and related services to children with disabilities. Paraprofessionals work under the supervision of teachers, intervention specialists, and/or related service providers. Other titles used to identify these service providers include teacher assistants, educational aides, and job coaches.

Traumatic brain injury - [3301-51-01(F)(3)(I)] According to *Operating Standards for Ohio's Schools Serving Children with Disabilities*, traumatic brain injury means an acquired injury to the brain caused by an external physical force or by other medical conditions, including but not limited to stroke, anoxia, infectious disease, aneurysm, brain tumors and neurological insults resulting from medical or surgical treatments. The injury results in total or partial functional disability or psychosocial impairment or both, which adversely affects a child's educational performance. The term applies to open or closed head injuries, as well as to other medical conditions that result in acquired brain injuries. Injuries result in impairments in one or more areas such as cognition, language, memory, attention, reasoning, abstract thinking, judgment, problem-solving, sensory, perceptual and motor abilities, psychosocial behavior, physical functions, information process and speech. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma.

Proposed strategies and implementation

Strategy 1: Training and support is needed for teachers, therapists, and staff in the LEAs

Hospital and school personnel should receive training to plan for school reintegration and transitions. Presently, there are not enough personnel who have an understanding of the unique behaviors and educational challenges of these children or who know what teaching strategies can be applied to assist learning.

Implementation:

- Mandate professional development
 - Pre-service: When working with universities, include information about post-critical trauma education (special education and regular education) courses and in allied health careers.
 - In-service: Require educational agency staff to receive quality training in the special needs of this population.
- Provide technical assistance programs for ongoing instructional assistance.
- Develop teacher-based competencies at the national and state levels.
- Ensure teachers have access to personnel with a specialization in post-critical trauma; investigate through cost-benefit analysis the potential benefit of such teacher support.
- Investigate the effectiveness of having trained teams available to consult in a particular area versus traditional teacher trainings.
- Ensure paraprofessionals are included in school-based training. Investigate the effectiveness of para-educator training on child outcomes.

- Parents should be informed of present and future consequences for learning and life-long living of such an injury.
- If a medical-care facility is involved, a correct diagnosis of a post-critical trauma must be noted. This information should be provided to educational agencies prior to discharging the child. One suggestion would be for hospitals to note this diagnosis in their discharge instructions.
- Agencies providing services must have a coordinated professional development effort.

Strategy 2: An organized and easily accessible system of disseminating information must be developed.

A variety of books, manuals, educational brochures, and magazine and journal articles contain information about reintegrating children with post-critical trauma into the community or students with post-critical trauma into schools, and what teaching strategies work. While these materials exist, they do not seem to be in the hands of educators who can best use them.

Implementation:

- Web sites that will assist individuals in accessing a variety of information and materials must be organized.
- Place credit-bearing courses from universities on the Internet for a broader access to training and information.
- Contact existing sources for materials/resources before placing additional research or development funds into creating training materials that presently exist and can be adapted.

Strategy 3: Conduct scientifically based research

While there are many anecdotal and well-devised application articles regarding educating this population, there are very few well-controlled empirical studies over time.

Implementation:

There are many areas of pediatric research that are pressing equally for funding. Regarding educational reintegration, two areas were determined to be critical for research:



- Incidence and prevalence: Discrepancies between hospital numbers of youth treated with post-critical trauma and special education numbers need to be clarified. Recommendations include:
 - Fund a comprehensive longitudinal study in which children with all degrees of traumatic injury are followed for many years using valid formal and informal assessment procedures to determine progress for educational need and qualitative methods to document post-injury educational experiences and quality of life.
 - Identify early predictors of long-term educational need through studies of outcome, especially in the case of children with mild to moderate injuries.
 - Include a question about head injuries and brain diseases in special education and kindergarten screenings with positive responses triggering attention to issues common in this population. In addition, follow-up research on how early identification impacts the students educational success.
- Teacher techniques: While a number of recommendations exist for strategies employed to educate children with post-critical trauma, few empirical investigations have been undertaken to validate specific special educational interventions or management practices. Research recommendations include:
 - Investigate effectiveness of educational interventions that draw from the existing body of relevant educational research.
 - Emphasize in teacher trainings and educational materials development the existing research-based teaching methodologies while highlighting the flexibility and experimental orientation often required when applying existing strategies to meet these children’s needs.
 - Educational research must meet the scientific research requirements of the no child left behind philosophy.

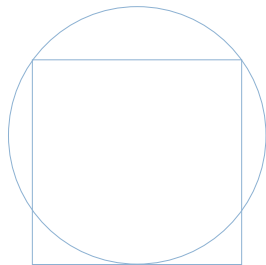
Strategy 4: To effectively meet the needs of children with traumatic injury, a systems change in health-care facilities and educational agencies need to occur



Transitions for children or students may require a number of agencies’ involvement (medical, educational, mental health, mental retardation, drug, alcohol, and social). Many slip through the cracks of these systems, and often it is not clear who will accept management responsibility for the case.

Implementation:

- Fund projects that will reward collaborative efforts for children or students with post-critical trauma or traumatic injury.
- Convene task force meetings of individuals who represent agencies who can make a change in policy and procedures.
- Educate policy makers about the special needs of this population and encourage them to require collaboration in agencies when providing funding for ongoing operation and special projects.



References

The following materials were referenced to determine areas of concern, strategies, and suggested action plans:

Ficker-Terrill, C. and Marino, M. (February 2001). Health Resources and Services Administration (HRSA) and BIA hold a meeting of the special workgroup of children and adolescents with traumatic brain injury. *TBI Challenge*. Washington, D.C.: Brain Injury Association.

Lincoln, Y.S. and Guba, E.G. (1985). *Naturalistic Inquiry*, Newberry Park: Sage.

Marino, M. (February 2001). Special task force convened by the Brain Injury Association to address issues affecting children and adolescents after brain injury. *TBI Challenge*, Washington, D.C.: Brain Injury Association.

Savage, Ronald C. and Wolcott, Gary (1994). *Educational Dimensions of Acquired Brain Injury*, Pro Ed.

Ylvisaker, M., Todis, B., Glang, A., Urbanczyk, B., Franklin C., DePompei, R., Feeney, T., Maxwell, N., Pearson, S. and Tyler, J. (2001). Educating children with TBI: Themes and recommendations. *Journal of Head Trauma Rehabilitation* 16(1) 76-91.





“Please be assured that the Ohio Psychological Association strongly supports the recommendations of the Commission.”

Michael O. Ranney, MPA
Executive director,
Ohio Psychological Association

SUBSTANCE ABUSE AND TRAUMATIC INJURY

Recommendation: Organizations and agencies with an interest in minimizing the effects of substance use disorders on injury outcomes should convene to identify opportunities for improving secondary prevention of substance abuse and treatment for persons during and following trauma care.

Vision

Ohioans who have substance use disorders and incur a traumatic injury should be provided with accurate and timely information about how to reduce their dependence on alcohol and other drugs . Information on ways that have been proven effective for both reducing substance use and the risk of subsequent injury should be provided. For patients requiring formal substance abuse treatment to accomplish these ends, there should be ready access to service providers who are able to work with people with disability due to injury.

Description of the problem

Alcohol use frequently is a factor in all types of injury. Substance use has long been recognized as a major, independent risk factor in unintentional injuries, as well as intentional injuries such as assaults, homicides, and suicides. In 40 percent to 50 percent of fatal motor vehicle crashes and 25 percent to 35 percent of non-fatal crashes, at least one participant is legally intoxicated. Alcohol has been found to play a role in more than half of homicides, more than half of burns, almost half of hypothermia and frost bite cases, and 40 percent of falls. Intoxication is present in between one-quarter and one-third of individuals incurring traumatic brain or spinal cord injuries. Although the role of drugs other than alcohol in traumatic injuries has not been investigated as thoroughly, studies have shown cocaine, amphetamines, and marijuana, especially in combination with alcohol, play a significant role in traumatic injuries of all kinds.

Whether or not an individual is intoxicated at the time of injury, a significant proportion of individuals who incur injuries have histories of chronic substance use disorders. Waller (1988) conservatively estimated 20 percent to 25 percent of all patients hospitalized for injury are alcoholics or have a drinking problem. Studies of patients receiving rehabilitation for either traumatic spinal cord or brain injury have found more than half of adolescents and adults have diagnosable histories of substance use disorders (Heinemann, et al, 1988; Corrigan, 1995). Rivera, et al (1993a) found evidence of chronic alcoholism in up to three-fourths of adult trauma patients.

There are multiple ways in which alcohol and other drug use increases the risk for injury. Intoxication:

- Decreases the level of alertness;
- Impairs motor function, diminishing coordination and balance, and increasing reaction time;
- Impairs judgment, resulting in poor decision making;
- Diminishes perception and cognitive abilities;



- Increases risk taking behavior and especially including feelings of invulnerability (especially among adolescents and young adults);
- Reduces inhibitions and intensifies feelings of anger and depression;
- Is associated with increased violent behavior;

Additionally, chronic use may render a person more medically fragile, resulting in more severe injuries. Obtaining illicit drugs may place an individual in an unsafe environment. Beyond substance use being a risk factor for injury, injury is a risk factor for substance abuse. Contributing factors include:

- Self-medication for pain;
- Seeking relief of frustration resulting from changes in lifestyle due to disability;
- Feelings of entitlement due to lost abilities;
- Filling time to reduce boredom resulting from changed social roles and reduced daily structure;
- Seeking relief from loneliness or isolation frequently caused by disability.

Persons who experience one traumatic injury are at greatly increased risk for re-injury. For example, after one traumatic brain injury, a person is three times more likely to have a subsequent injury than someone in the general population. After a second injury, the relative risk for a third increases to eight times the norm (Annegers et al, 1980). Untreated alcohol and other drug use disorders play a significant role in re-injury. Rivera and colleagues (1993b) found the re-admission rate for more than 2,500 adult patients treated at a level I trauma center was 2.5 times more likely for patients who were intoxicated at their initial admission. Patients who showed physiological signs of chronic alcohol abuse were 3.5 times more likely to be re-admitted.

While alcohol and other drug use are associated highly with injury, it also has been found that an injury may provide an opportunity for intervention to change contributing behaviors. There is extensive evidence that traumatic injury creates a teachable moment that is a unique opportunity in the course of the addiction process (Gentilello et al, 1988; Reyna et al, 1985; Soderstrom and Cowley, 1987). When a patient makes a connection that the injury is a direct result of alcohol and other drug use, they become more open to accepting education or treatment, which can in turn reduce the alcohol or other drug consumption and improve the course of subsequent recovery. The impact of even brief interventions that take advantage of this opportunity can be quite dramatic (Gentilello et al, 1999). Thus, systematic screening and education have been recommended for acute treatment settings working with injured patients (Hungerford and Pollock, 2002).

Despite the potential benefits of screening and education, these activities are not carried out routinely in trauma centers. Limited resources during hospitalization, the singular focus on treating the immediate injury, and the perceived futility of making referrals for follow-up treatment all provided barriers to addressing substance abuse routinely. While there may be a greater opportunity during the course of rehabilitation to identify histories of substance use disorders, dramatically shorter lengths of stay and greater medical acuity of rehabilitation patients has reduced the attention given to issues viewed as psychosocial in nature.

Proposed strategies

Goal

Develop a structure in which the multiple agencies and organizations that serve persons with substance use disorders and traumatic injuries can meet, educate each other, identify specific opportunities and barriers, and develop a plan to address systematically the needs of this population. Given the scope of the problem, as well as the multiple issues and stakeholders involved, the structure developed should have sufficient resources to sustain a longer-term, systematic effort.

Principles

While there are many potential approaches to bringing together the stakeholders needed to achieve this goal, the chosen method should incorporate the following:

- Provide an opportunity for all involved to benefit from existing information about the scope of the problem of injury and substance use disorders, evidence-based methods for acute intervention, and the special needs and problems of accessing treatment for persons with disabilities arising from injury;
- Take advantage of the unique expertise and resources in each of the service-delivery systems working with these individuals;
- Find solutions that promote collaboration among stakeholders, including formal agreements for communication, consultation, and cooperative ventures;
- Allow adequate time and resources for evaluating impact and planning subsequent iterations to benefit from successes and failures.

Implementation

The Post-critical Care Trauma Commission believes the effects of alcohol and other drug use on injury outcomes, both human and economic, have been underestimated greatly. Substance abuse — current, previous, or resultant — complicates and often confounds trauma care and rehabilitation. Yet, it is equally evident to the commission that adequately addressing substance abuse will require an infusion of knowledge and funding resources not currently within the grasp of trauma care programs, rehabilitation providers, or the publicly funded substance abuse treatment system.

Therefore, the commission recommends further study of the barriers and opportunities for developing resources to address the following questions:

- **What is required to allow screening and intervention in acute medical settings to be implemented routinely?** Emergency departments, trauma programs, and rehabilitation units should be assisted in their capability for taking advantage of the “teachable moment” that can occur as the result of an injury.
- **What resources need to be made available to substance abuse treatment providers to improve the availability of services for individuals who have incurred disability as a result of injury?** The existing substance abuse treatment system should become an accessible and effective source of treatment for persons with disability due to injury.
- **How can projects be supported to identify and promote effective methods of integrated treatment for injured individuals who have co-occurring substance use disorders?** There appear to be significant gains, both human and economic, that could be achieved with greater attention to clinical programs to serve this population.

The commission also recommends consideration of potential stakeholders include, at a minimum, the following agencies and organizations: the state departments of Alcohol and Drug Addiction Services, Health, Public Safety; the Ohio Bureau of Workers’ Compensation; the Ohio Rehabilitation Services Commission; the American College of Surgeons Trauma Committee – Ohio Chapter; the Ohio Society of Trauma Nurse Coordinators; the Ohio Hospital Association; the Ohio Association of Emergency Medical Physicians; the Ohio Association of Rehabilitation Facilities; the Association of Ohio Childrens Hospitals; the Ohio Public Health Association; the Brain Injury Association of Ohio; the Ohio Association of County Behavioral Healthcare Authorities; and the Ohio Council of Behavioral Healthcare Providers.

References

Annegers, J. F., Grabow, J. D., Kurland, L. T., and Laws, E. R., Jr. (1980). The incidence, causes, and secular trends of head trauma in Olmstead County, Minnesota, 1935-1974. *Neurology* 30: 912-919.

Corrigan, J. D. (1995). Substance abuse as a mediating factor in outcome from traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*, 76, 302-309.

Gentilello, L. M., Duggan, P., Drummond, D., and Tonnesen, A., et al. (1988). Major injury as a unique opportunity to initiate treatment in the alcoholic. *American Journal of Surgery* 156: 558-561.

Gentilello, L. M., Rivara, F. P., Donovan, D. M., Jurkovich, G. J., Daranciang, E., and Dunn, C. W., et al. (1999). Alcohol interventions in a trauma center as a means of reducing the risk of injury recurrence. *Annals of Surgery* 230: 473-483.

Heinemann, A. W., Donohoe, R., Keen, M., and Scholl, S. (1988). Alcohol use by persons with recent spinal cord injuries. *Archives of Physical Medicine and Rehabilitation* 69: 619-624.

Hungerford, D. W. and Pollock, D. A. (eds) (2002). *Alcohol Problems among Emergency Department Patients: Proceedings of a Research Conference on Identification and Intervention*. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention; Atlanta, GA.

Reyna, T. M., Hollis, H. W., and Hulsebus, R. C. (1985). Alcohol-related trauma: the surgeon’s responsibility. *Annals of Surgery* 201: 194-197.

Rivara, F. P., Jurkovich, G. J., Gurney, J. G., and Seguin, D., et al. (1993a). The magnitude of acute and chronic alcohol abuse in trauma patients. *Archives of Surgery* 128: 907-913.

Rivara, F. P., Koespsell, T. D., Jurkovich, G. J., and Gurney, J. G., et al. (1993b). The effects of alcohol abuse on readmission for trauma. *Journal of the American Medical Association* 207(16): 1962-1964.

Soderstrom, C. A. and Cowley, R. A. (1987). A national alcohol and trauma center survey: Missed opportunities, failures of responsibility. *Archives of Surgery* 122: 1067-1071.

Waller, J. A. (1988). The physician’s role in preventing alcohol-related injuries. *Journal of the American Medical Association* 260: 2561-2562.



“The data presented by the commission point out a number of areas in which this aspect of the trauma system is in need of additional attention.”

Gary F. Joseph, *Interim director,
Ohio Public Safety*

THE OHIO TRAUMA FOLLOW-UP REGISTRY

Recommendation: A follow-up registry should be established to provide information about the long-term complications and outcomes for trauma-care patients. Data collection methodology should be an extension of the existing Ohio Trauma Registry and should provide information for local, regional and statewide prevention programming and health-care service planning.

Vision

Future examinations of issues and problems following critical trauma care should have the benefit of valid and reliable data from Ohio.

Description of the problem

In H.B. 138, the General Assembly created the Post-critical Trauma Care Commission and charged it “...to determine how to improve the accessibility, affordability, quality, and cost-effectiveness of post-critical adult and pediatric trauma care.” While there is considerable clinical experience and personal testimony to indicate needs persist and more systematic services are necessary, the commission determined there is little or no objective data to address questions such as:

- How many injury survivors experience long-term limitations in their day-to-day functioning?
- What kinds of injuries are more likely to result in long-term consequences?
- Do children have unique consequences of traumatic injuries? Do older adults?
- Are there services available to assist these individuals, and are they using them?
- How much do services cost, and are they effective?

Emergency medical services legislation enacted in 1992 established the authority for the Ohio Department of Public Safety to create the Ohio Trauma Registry. The registry, which became operational in 1999, is a database that contains information about all persons who have suffered an injury and are admitted to a hospital for at least 48 hours. The trauma registry provides information about the number of people in Ohio requiring trauma services, the cause and treatment of their injuries, and status at time of leaving the hospital. However, the registry does not provide information about longer-term consequences of injuries. Medical complications that persist after going home, problems that develop after hospital discharge, effects on independence in one’s home or community, difficulties in educational or vocational roles, or the impact on the individual’s family, all may be significant consequences of injury. These effects of trauma may also carry significant human and economic costs that should be considered when prioritizing prevention activities and planning service delivery systems.

BWC’s analysis of injuries that occurred in 1996 and resulted in workers’ compensation claims is included in Appendix D. The analysis allowed description of the types of services and costs, over the subsequent six years. Most remarkable was that 14 percents of the costs, and 21 percent of the services billed occurred after one year following the injury. These data support the presumption that important health-care issues occur over an extended period following injury.



Policy makers, service providers and the general public want reliable and valid data on which to base decisions regarding the effects of medical conditions, clinical interventions, and funding priorities. Lack of data about post-hospital consequences of traumatic injuries creates a significant gap in Ohio’s ability to address this major public health problem.

The target population of the proposed Ohio Trauma Follow-up Registry is defined in O.R.C. 4765 for trauma systems. The operational definition would parallel that used for the Ohio Trauma Registry. Patients in the trauma registry would be surveyed by phone at six-months post-injury, with further follow-ups at one and five years on sub-groups who have greater risk for disability. Survey respondents would be asked for information on persistent medical problems, health-care utilization since discharge, changes

in living situation, independence in daily activities, ability to engage in work or school, impact of injury on social and financial supports, and psychological functioning. Sampling would be constructed to allow conclusions about the state population and would include sufficient numbers of persons to allow detection of unique issues faced by any age group, gender, socioeconomic strata, type of insurance program, rural or urban community, and type of injury.

Data collection for the follow-up registry also should be an extension of the existing trauma registry. However, it is recommended respondent surveys be centralized and conducted under the auspices of the Trauma Committee convened by the Ohio Department of Public Safety to promote economies of scale and effectiveness of data collection methods. Legislative authority needed to establish and fund the registry should be congruent with Health Insurance Portability and Accountability Act (HIPAA) regulations, thus allowing Ohio trauma centers to provide contact information without patient consent. Beyond this contact information and data currently provided to the trauma registry, no other information or involvement would be required from participating hospitals.

The follow-up registry also would provide an opportunity to give additional information on resources for trauma patients who experience persistent problems due to their injury. All persons for whom contact information is available could be mailed informational brochures that would include statewide information and resource access points. Mailings could also be used to inform individuals about the follow-up registry and its purpose.

While the current Ohio Trauma Registry provides important information about the incidence of traumatic injuries, well-designed and selective follow-up of trauma patients will provide a complete picture of the impact of injury in Ohio. The Post-critical Trauma Care Commission is recommending creating the Ohio Trauma Follow-up Registry to provide much needed information on the consequences of traumatic injuries.

Proposed strategies

Goal

A trauma follow-up registry will provide objective information on which to base public and private policy decisions about the post-critical care and persistent needs of persons at risk of losing life or limb, or experiencing permanent disability or disfigurement. It will identify the nature and scope of the consequences of trauma, inform public policy that addresses the needs of persons who experience these injuries, provide information about access to services and supports, and guide clinical care research. The follow-up registry will allow reliable estimates of the human and economic costs of injuries — vital pieces of information for assessing the scope of this public health problem.

Principles

- The registry should serve all age, gender and socioeconomic groups, geographic regions, and types of injury.
- A public health model should be used to design and implement the registry.
- There should be public access to the data, while protecting the confidentiality of patient information.
- The registry should be flexible enough to adapt to changing needs while remaining consistent enough to be informative about low incidence conditions and outcomes.

Implementation

The Ohio Trauma Follow-up Registry is intended to provide reliable and valid information about the persistent needs of trauma patients. Prior to seeking on-going legislative support and authority for a comprehensive, statewide registry, a time-limited pilot of the methodology for data collection, database management and data analysis is considered essential to develop viable budget projections. Prior to conducting the pilot, support for pre-pilot research should be sought from the state EMS boards’ EMS/trauma grant program. The pilot phase will require new resources to allow for implementing and testing the recommended methodology. Costs for ongoing operation cannot be determined without piloting, and will require new resources as well.

There are three steps to implementing the Ohio Trauma Follow-up Registry:

- Conduct pre-pilot research projects;
- Gain legislative authority and funding to conduct a pilot project;
- Gain legislative authority and support for ongoing implementation.

Pre-pilot research

Specific research projects should be conducted to identify the best approaches to sampling, data collection, and providing linkage information. The existing mechanism for the state EMS boards’ EMS/trauma grant program should be sought for these projects. Projects addressing the following issues should be prioritized:

- Test methods of exchanging data with trauma centers, and using the information to contact patients;
- Test effectiveness of providing information and resource linkage to a toll-free telephone number and/or Web site;

- Analyze the trauma database to determine the sampling procedures for the levels of stratification proposed;
- Determine what issues should be addressed in the survey and the items that should be used.

The commission hopes grants addressing these issues can be funded beginning with the 2003 grant cycle. It may also be useful to allow submission of field-initiated ideas related to the conduct of a follow-up registry.

Pilot project

A large scale, pilot project is needed to determine the resources required for ongoing implementation of the follow-up registry. Based on the pre-pilot research results, a prospectus is recommended for describing the proposed methods and procedures of the follow-up registry, as well as products required to initiate a pilot. Funding will be needed from federal, state, and/or private resources for what will be a multi-year, but time-limited, project. The result of the pilot should be a thorough evaluation of the registry’s effectiveness and projection of costs for its ongoing implementation. Legislative authority as described in No. 4 and No. 8 below will be required to conduct the pilot.

The following conclusions, reached by the Post-critical Trauma Care Commission, should guide the pilot phase:

1. The Ohio Trauma Follow-up Registry should be designed and conducted to provide reliable and valid information about the consequences of traumatic injury, the needs of persons who experience these injuries, and the effective use of clinical-care resources.
2. The registry also should provide information to individuals and their families about services and supports available to assist them.
3. Target population for the registry should be defined in O.R.C. 4765 for trauma systems. The operational definition should parallel that used for the Ohio Trauma Registry.
4. Legislative authority should parallel the trauma registry, with oversight by the Trauma Registry Advisory Subcommittee. A subcommittee structure may be required for start-up or ongoing review. The current structure allows public members to participate, which allows inclusion of representatives of constituencies not currently involved in the Trauma Registry Advisory Subcommittee. An administrative structure parallel to the trauma registry should be authorized, giving implementation responsibility to the Ohio Department of Public Safety.
5. Data collection should be centralized and responsibility given to the Department of Public Safety. While responsibility will be co-located with that for the trauma registry, data collection and data-base management could be conducted directly or via contract.
6. Sampling of respondents for the follow-up registry should be constructed to allow generalization to the entire Ohio population and should include sufficient numbers of persons to allow detection of unique issues faced by any age group, gender, socioeconomic strata, type of insurance program, rural or urban community, and type of injury.

7. Telephone surveys should be conducted six months after the date of injury, with further follow-ups one and five years post-injury on trauma patients with greater risk for medical complications and disability.

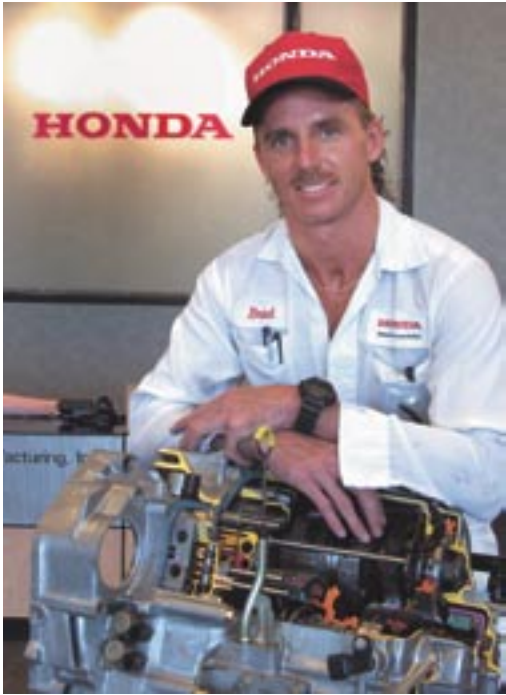
8. Legislative authority should state the public health purpose of the registry so as to facilitate its congruence with the Health Insurance Portability and Accountability Act. Because patient contact information will need to be collected from trauma services, comprehensiveness will be enhanced greatly if hospitals are allowed to release personal identifying information without consent. Ascent for participation would be attained at the time of follow-up contact. Legislation should explicitly protect the confidentiality of Social Security Numbers, if it is decided that this information is required.

Legislative authority for ongoing operation

Eventual implementation of the actual operative registry will require statutory changes to the Ohio Revised Code. The following issues may need to be addressed:

- Purpose for collecting the data;
- Governance structure and its powers;
- Rulemaking authority;
- Authority to specify the data elements to be collected by rule;
- Confidentiality of data;
- Authority to collect Social Security Numbers;
- Funding;
- Authority to contract for the performance of functions and hire outside consultants;
- Mandate to ensure compliance and cooperation from hospitals or other organizations;
- Realistic time frame to have the pilot project and the registry in place and operating;
- Requirements for reporting to the General Assembly, EMS Board, or other entities;
- Immunity from liability for any potentially high-risk uses of the data (e.g., risk adjusting or outcome comparisons).

To promote using the data resulting from the follow-up registry, funds should be available for research projects on an ongoing basis. Expanding existing trauma commission research funds should be considered for this purpose.



Injury fact sheet

June 25, 2002
Contact: CDC Media Relations
770-488-4902

Acute Care, Disability, and Rehabilitation

Public Health Issue

- Each year, Americans make between 30 and 40 million emergency department visits for injuries. While the majority of injured patients are treated and released, many are admitted to inpatient trauma units and later receive rehabilitative services.
- Trauma systems deliver coordinated care, from acute care through rehabilitation, but they are not fully operational or do not exist in many parts of the nation. Where trauma systems are lacking, as many as 30% to 40% of deaths among trauma patients are due to preventable problems in clinical care, including missed diagnoses and treatment delays. After trauma systems are introduced, follow-up studies have shown as much as a 50% reduction in preventable trauma deaths.
- Each year, an estimated 80,000 Americans sustain a traumatic brain injury (TBI) that results in long-term disability. An estimated 5.3 million Americans live with TBI-related disabilities, including cognitive problems that affect their ability to perform daily activities.
- Nearly 200,000 people in the United States are living with a disability related to a spinal cord injury (SCI). Every year, another 11,000 are hospitalized for SCI.

CDC’s Role and Expertise

- CDC is the only organization in the federal government responsible for addressing all phases of injury research — from defining the problem to testing the effectiveness and public acceptance of an intervention — for the major causes of injury among all age groups. Funding state and local injury programs allows CDC to rapidly share findings from research with groups that can put the information to immediate use.
- CDC’s multidisciplinary research fosters innovative approaches to clinical preventive services. For example, recognizing that alcohol is often a factor in injury, CDC convened federal agencies and experts in alcohol research, emergency medicine, and trauma care to set a research agenda to improve such services as screening for alcohol problems in emergency departments.
- CDC research and programs frequently become the underpinning for reducing the impact of traumatic brain and spinal cord injuries, or for preventing the development of secondary conditions and other adverse outcomes. CDC findings provide crucial information to help communities prevent these kinds of injuries and disabilities.

The Future of Injury Research — What’s Next?

With extensive input from its academic research centers, national nonprofit organizations, and other federal agencies with a stake in injury prevention, CDC identified the top research priorities for acute care, disability, and rehabilitation — those research issues that CDC must address to fulfill its public health responsibilities. These priorities, published in the *CDC Injury Research Agenda*, will receive CDC’s greatest attention and resources.

Public Health Threat	Injury Center’s Research Priority
<i>Injury prevention services for at-risk patients treated in emergency departments and trauma centers are lacking.</i>	Develop and evaluate protocols that provide interventions for at-risk patients in acute care settings. Study ways to implement multiple services simultaneously.
<i>Despite evidence that trauma care systems save lives, many Americans are not served by a trauma system.</i>	Measure the benefits and costs of trauma care. Assess outcomes such as medical complications, functional status, and quality of life.
<i>People with traumatic brain or spinal cord injury face a range of secondary conditions, from medical conditions such as pressure ulcers, to behavioral changes such as depression and substance abuse.</i>	Increase understanding of risk factors for secondary conditions, especially among persons without access to state-of-the-art information and care. Develop more effective methods to treat and manage these conditions.
<i>Many people with injury-related disabilities do not get the services they need.</i>	Identify methods and strategies to link people with traumatic brain or spinal cord injury with needed services.
<i>Data from electronic, point-of-care clinical information systems are not routinely used for injury surveillance.</i>	Develop and evaluate data standards and methods of linking disparate systems to capture and report data about injuries and other acute health problems.
<i>A limited understanding of the costs and consequences of disabling injuries hinders resource allocation and policy decisions.</i>	Develop and apply methods to calculate population-based estimates of the incidence, costs, and long-term consequences of spinal cord injury and nonhospitalized, “mild” traumatic brain injury.
<i>Many populations affected by traumatic brain injury have not been well studied to date.</i>	Conduct TBI research among children, youth, working adults, institutionalized individuals, victims of intimate partner violence, and people within school systems and the criminal and justice systems.
<i>Studies to date suggest that limb injuries result in substantial disability and affect the ability to return to work.</i>	Conduct population-based studies to accurately describe the public health burden of limb injuries and suggest appropriate interventions to prevent these injuries and resulting disabilities.

Injuries are the leading cause of death for Americans under 45 and the leading cause of potential life lost before age 65. In 1999, nearly 150,000 Americans died from injuries, and one in ten was injured badly enough to seek treatment in an emergency department. The CDC Injury Research Agenda, developed by CDC’s Injury Center and its many partners, will help drive the national initiative to lower the rate of both unintentional and violence-related injuries, which will result in reduced human suffering and loss of life.

Section 6 of amended substitute H.B. 138 as enacted by the 123rd general assembly

The Director of Health shall organize and coordinate a temporary commission to determine how to improve the accessibility, affordability, quality, and cost-effectiveness of post-critical adult and pediatric trauma care. The commission’s study shall include, without limitation, consideration of appropriate transfer of adult and pediatric trauma victims from regional trauma centers to other health care facilities; physical, psychological, and vocational rehabilitation of adult and pediatric trauma victims; re-employment of trauma victims; social support mechanisms for families of adult and pediatric trauma victims; and mitigation of the effects of pediatric and geriatric trauma.

The Rehabilitation Services Commission, Department of Aging, Bureau of Workers’ Compensation, and Bureau of Employment Services shall participate in and assist with the commission’s study.

Within 120 days after the effective date of this act, the director shall appoint to the commission appropriate public health authorities; entities that represent injury victims; certified safety professionals; employers; employment training and placement services; agricultural organizations; highway safety and motorists’ organizations; health insurers; providers of social services to injury victims; nursing and rehabilitation institutions; victims of violent crime; hospitals; and professionals active in physical, psychological, and vocational therapy. Commission members shall have expertise in rehabilitation and retraining of injury victims, broadly represent relevant disciplines, and represent all regions of the state.

Within 120 days after the effective date of this act, the Speaker of the House of Representatives shall appoint to the commission one member of the majority party and one member of the minority party in the House of Representatives and the President of the Senate shall appoint to the commission one member of the majority party and one member of the minority party in the Senate.

In conducting its study and developing its recommendations, the commission can consult with and cooperate with the Trauma Committee of the State Board of Emergency Medical Services. The commission shall conclude its study and disband not later than three years after the effective date of this section, whereupon the director shall transmit the commission’s findings and recommendations to the Governor, General Assembly, chief executive of each state agency specified in this section, and other appropriate persons.

MEMBERSHIP OF THE POST-CRITICAL TRAUMA CARE COMMISSION

Member Name	Represented Agency/Organization
Sen. Steve Austria	Ohio Senate, Republican Caucus
Robert Bates	Ohio State Fire Chiefs Association
Sally Betz	Ohio Nurses Association
Jerrold Blackmore	Association of Ohio Philanthropic Homes, Housing & Services for the Aging
John Corrigan, Ph.D. (Chair)	Ohio Psychological Association
John Edwards	Ohio Bureau of Workers’ Compensation
Peter Feldkamp, D.C.	Ohio State Chiropractic Association
Mike Glenn	Ohio Department of Public Safety
Christopher Goff	Ohio Business Coalition on Health
June K. Gutterman, Ed.D.	Ohio Rehabilitation Services Commission
Sen. Robert Hagan	Ohio Senate, Democratic Caucus
Jill Huntley	Ohio Department of Job & Family Services
Cindy Iske (Co-chair)	Ohio Hospital Association
Tina Kielmeyer	Ohio Bureau of Workers’ Compensation
Beverley Laubert	Ohio Department of Aging
Michael Link	Ohio Department of Alcohol & Drug Addiction Services
Sandra Miller, M.D.	Ohio State Medical Association
Suzanne Minnich	Brain Injury Association of Ohio
Jana Perry	Ohio Department of Education
Paul Platt	Ohio Association of Rehabilitation Facilities
Karen Nisbet Principe	Ohio Children’s Hospitals Association
Judy Roush	Ohio Farm Bureau Federation
Elaine Schiwy	National Association of Social Workers
Arthur Schlesinger	Ohio Legal Rights Service
Michael Smeltzer	Ohio Public Health Association
Suman Srinivasan	Ohio Rehabilitation Association
Larry Sowers	Ohio State Building Trades
Ron Suprenant, M.D.	Ohio Association of Health Plans
Michael Williams	American Physical Therapy Association
Sheila Young, L.S.W.	The Salvation Army

A longitudinal investigation of medical cost and treatment volume for traumatic injuries: 1996-2002

Ohio Bureau of Workers’ Compensation (BWC) research projects unit for the Ohio Post-critical Trauma Care Commission

Summary

This investigation of the long-term needs of people who suffer traumatic injuries demonstrates the medical needs of these individuals persist long after the acute phase of their treatment ends. Thirty-six percent of the medical payments and 45 percent of the services for traumatic injuries occurred from two months to five years following the injury. In the first month following a traumatic injury, most of the necessary services are provided by physicians and hospitals. As time passes, services are more often provided by non-physician professionals and are likely to involve rehabilitation activities. The proposed Ohio Trauma Follow-up Registry would enable Ohio’s health-care providers to plan for the long-term needs of these individuals and provide the necessary services at the appropriate time.

Introduction

H.B. 138, enacted by the 123rd Ohio General Assembly created the Post-critical Trauma Care Commission. The commission was established to “...determine how to improve the accessibility, affordability, quality, and cost-effectiveness of post-critical adult and pediatric care.” The commission has been meeting since July 2001 to draft recommendations for the Governor, General Assembly and the sponsoring state agencies.

One proposed recommendation is that “a follow-up registry be established to provide data on the longer-term outcomes for trauma-care patients.” A follow-up registry would provide “objective information on which to base public and private policy decisions about the post-critical care and persistent needs of persons at risk of losing life or limb, or experiencing permanent disability or disfigurement. It would (a) identify the nature and scope of the consequences of trauma, (b) inform public policy addressing the needs of persons who experience these injuries, (c) provide information about access to services and supports, and (d) allow clinical research.”

The proposed follow-up registry is viewed as an extension of the Ohio Trauma Registry. The Ohio Department of Public Safety administers the Ohio Trauma Registry , which became operational in 1999, with oversight by the Trauma Registry Advisory Committee. It is a database of information on all people who suffer an injury and are admitted to a hospital for at least 48 hours. The database includes information about the number of people who require trauma services, the cause of the injuries, the treatment provided and the status at discharge from the hospital. One limitation of the Ohio Trauma Registry is that it does not provide information on the long-term consequences of injuries.

The claim records of the BWC provide a unique opportunity to conduct longitudinal investigations of injuries prior to establishing a follow-up registry. BWC claims data include injuries sustained by the worker, the type and timing of the treatment provided, and the treatment cost. By statute, the injured worker is eligible to receive medical treatment for consequences of an industrial injury for as long as necessary, allowing study of the injuries and their long-term effects.

The Ohio Trauma Registry collects information on injuries coded according to the International Classification of Diseases Revision 9 (ICD-9). The code groups are displayed in table 1.

Table 1. ICD-9 code groups included in the Ohio Trauma Registry.

Code group	Group description
800-805	Skull fracture
802-803	Facial fracture
805-807	Spinal fracture
807-808	Chest fracture (rib or sternum)
808-809	Pelvis fracture
810-812	Shoulder girdle fracture
812-820	Upper extremity fracture
820-830	Lower extremity fracture
830-840	Dislocation (includes jaw)
850-851	Concussion
851-852	Brain contusion
852-855	Intracranial hemorrhage
860-861	Hemo/pneumothorax
861.2-861.3	Lung injury
863-864	Gastrointestinal hollow organ injury
864-865	Liver injury
865-866	Spleen injury
870-874	Scalp or facial laceration
875-880	Torso laceration
880-887	Upper extremity laceration or minor amputation
887-888	Upper extremity amputation
890-896	Lower extremity laceration or minor amputation
900-905	Vascular injury
941-949	Burns
950-958	Nerve or spinal cord injury

It should be noted that BWC’s claims data differ from the Ohio Trauma Registry data in two important ways. First, BWC records include only persons who are injured in the course of their employment. Thus, the claims records don’t include data on pediatric or childhood injuries, very little data on teenagers and no data on injuries that befall persons who are not working or are retired. Second, the available records do not permit identification of injuries that require a 48-hour stay in a hospital, one of the Ohio Trauma Registry’s criteria. In light of these differences, BWC data can be expected to include a narrower demographic range of injured persons and a broader range of severity, i.e., from relatively minor to quite significant injuries within each code group. It is assumed that if it were possible to exclude the injuries that do not require admission to a hospital for at least 48 hours, the findings of this study would be amplified.

Methodology

All claims involving the 25 ICD-9 code groups listed above with dates of injury between Jan. 1, 1996, and Dec. 31, 1996, were retrieved from the BWC Data Warehouse. Treatment types and costs were identified by retrieving the first service date and the ICD-9 code for which the provider submitted the bill, bill category (hospital, non-physician, nursing service, other, physician, rehabilitation, vendor, and drug), line item units of service (UOS) provided, reimbursed amount (the amount paid to the provider). The first service date was used to create five treatment intervals that correspond to the anticipated follow-up intervals:

- Interval 1 included treatments provided within 30 days of the date of injury;
- Interval 2 included treatments provided two to six months following the date of injury;

- Interval 3 included treatments provided from six months to one year following the date of injury;
 - Interval 4 included treatments provided from one to five years following the date of injury;
 - Interval 5 included treatments provided more than five years following the date of injury.
- The reimbursed amount and units of service were summed for each ICD-9 group, each bill category and each treatment interval.

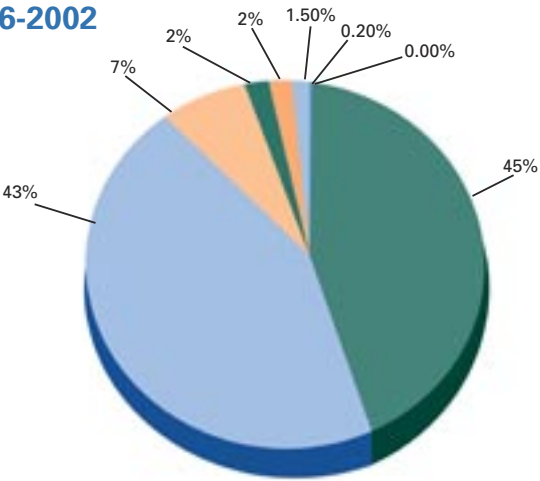
Results

The 25 ICD-9 groups included 106,590 claims. However, since any one injured worker might suffer injuries in more than one ICD-9 grouping, an additional analysis was performed to identify unique individuals. The study sample included 91,738 injured workers. Seventy-five percent were male and 25 percent were female. The mean age of the sample was 41 years and, mean age at injury was 35 years.

The totals and percentages of payments and units of service and percentages for each bill category are displayed in table 2. The table shows that \$74,275,624.38 was paid for medical services from the date of injury to 2002. Forty-five percent of these expenses were for physician services and 43 percent for hospital services. The total units of service for the same period was 2,546,672, with 31 percent (784,352) provided by physicians and 44 percent (1,116,526) in hospitals. The percentage of total medical payments for each bill category is shown in chart 1.

Table 2. Amount paid and units of service billed by bill category.				
Bill category	Amount paid	Amount paid %	Units of service billed	Units of service billed %
Grand total	\$ 74,275,624.38		2,546,672	
Physician	\$ 33,098,017.46	45%	784,352	31%
Hospital	\$ 31,906,549.08	43%	1,116,526	44%
Non-physician	\$ 4,938,977.03	7%	219,892	9%
Nursing service	\$ 1,668,703.53	2%	42,236	2%
Rehabilitation	\$ 1,349,017.97	2%	197,087	8%
Vendor	\$ 1,128,407.72	2%	111,042	4%
Drug	\$ 184,821.59	0%	59,274	2%
Other	\$ 1,130.00	0%	16,263	1%

Medical Payments for Traumatic Injuries
by Bill Category: 1996-2002



The proportions of medical payments during each treatment interval are displayed in chart 2. Sixty-four percent of the payments, totaling \$47,802,315.65, were for treatment services provided during the month following the date of injury. Fifty-five percent of the units of service, totaling 1,411,935, were provided during the same period. Fifteen percent of the payments (\$11,289,466.33) and 17 percent of the units of service (437,215) were provided from one to six months following the injury. From six months to one year following the date of injury, 6 percent of payments (\$4,769,215.50) and 7 percent of units of service (\$168,573) were provided. The first year following the date of injury accounted for 85 percent of the total medical costs and for 79 percent of the units of service provided to injured workers. Table 3 presents the distribution of medical costs and units of service for each treatment interval.

Table 3. Amount paid and units of service billed by treatment interval.				
Treatment Interval	Amount paid	Amount paid %	Units of service billed	Units of service billed %
Grand total	\$ 74,275,624.38		2,546,672	
1 (DOI + 30 days)	\$ 47,802,315.65	64%	1,411,935	55%
2 (DOI + 1-6 months)	\$ 11,289,466.33	15%	437,215	17%
3 (DOI + 6 months-1 year)	\$ 4,769,215.50	6%	168,573	7%
4 (DOI + 1-5 years)	\$ 9,401,275.57	13%	465,135	18%
5 (DOI + 5 years or more)	\$ 1,013,351.33	1%	63,814	3%

Tables 4 and 5 show the percentages of payments and units of service by bill category and treatment interval. It is not surprising the hospital service volume and payments to hospitals decrease over time following the injury. Physician payments and service volume also decrease over time, but at a lesser rate. Payments in the non-physician category (e.g., physical, occupational and other therapists) increase one to six months following the date of injury and continue for the duration of the period studied. It is also evident that services in the rehabilitation category become much more important later in the history of the injury. Payments in this category constitute only 2 percent of total payments and 8 percent of total units of service, but the volume of services is highest in the one to five years and five years or more treatment intervals.

Table 4. Percentage amount paid by bill category and treatment interval.						
Bill category	1 (DOI + 1 month)	2 (DOI + 1-6 months)	3 (DOI + 6 months to 1 year)	4 (DOI + 1-5 years)	5 (DOI + 5 years or more)	totals
All categories	64%	15%	6%	13%	1%	100%
Hospital	54%	30%	24%	16%	18%	43%
Physician	44%	46%	46%	44%	42%	45%
Non-physician	1%	19%	19%	13%	12%	7%
Nursing service	0%	2%	4%	11%	5%	2%
Rehabilitation	0%	1%	4%	10%	12%	2%
Vendor	0%	2%	3%	5%	10%	2%
Drug	0%	0%	0%	1%	1%	0%
Other	0%	0%	0%	0%	0%	0%

Table 5. Percentage of units of service provided by bill category and treatment interval.						
Bill category	1 (DOI + 30 days)	2 (DOI + 31–183 days)	3 (DOI + 184–365 days)	4 (DOI + 1-5 years)	5 (DOI + 5 years or more)	Totals
All categories	55%	17%	7%	18%	3%	100%
Hospital	60%	33%	26%	15%	11%	44%
Physician	35%	28%	28%	25%	13%	31%
Non-physician	2%	26%	22%	10%	6%	9%
Nursing service	0%	1%	15%	30%	41%	8%
Rehabilitation	1%	4%	4%	13%	13%	4%
Vendor	1%	4%	3%	3%	1%	2%
Drug	1%	3%	2%	4%	15%	2%
Other	1%	1%	1%	0%	0%	1%

Discussion

This brief investigation of the long-term needs of persons who suffer traumatic injuries demonstrates the medical needs of these individuals persist long after the acute phase of their treatment ends. Claims records of injured workers, retrieved from BWC’s Data Warehouse, show that 64 percent of payments and 55 percent of units of service provided for traumatic injuries occur in the first month following an injury. The months that follow, up to five years after the injury, account for 36 percent of the payments and 45 percent of the services provided to these individuals. Clearly, individuals who suffer traumatic injuries may continue to require treatment for up to five years following the injury.

The investigation also demonstrates how these needs change over time. It is hardly surprising that, in the first month following a traumatic injury, physicians and hospitals provide most of the necessary services. Physicians continue to provide a significant proportion of services for the duration of the study period. However, as time passes, services are more often provided by non-physician professionals and are likely to involve rehabilitation activities.

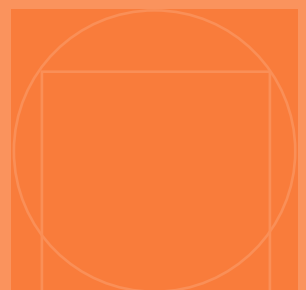
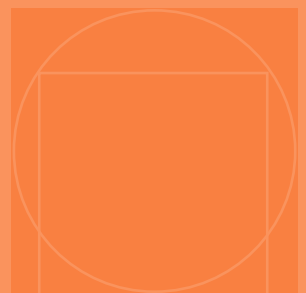
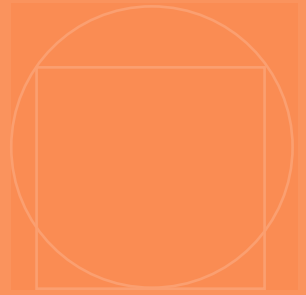
While the population served by BWC does not precisely correspond to the population the Ohio Trauma Registry monitors, this study suggests individuals who sustain an injury involving “risk of losing life or limb, or experiencing permanent disability or disfigurement” have continuing needs for treatment and care long after acute treatment ends. At the present time, the State of Ohio has no means of systematically identifying and responding to these needs. The proposed Ohio Trauma Follow-up Registry would provide timely and statistically sound data on the needs of trauma patients at several points in the recovery process. It would enable Ohio’s health-care providers to plan for these individuals’ long-term needs and provide the necessary services at the appropriate time.

Appendix E

Letters of support for the Post-critical Trauma Care Commission’s recommendations

The following organizations presented letters of support for the research and recommendations provided by the Post-critical Trauma Care Commission. Members of the commission wish to acknowledge and thank these organizations for their support.

- American Physical Therapy Association, Ohio Component, Jonathan Cooperman, P.T., J.D., M.S., president
- Association of Ohio Philanthropic Homes, Housing and Services for the Aging, John Alfano, president/CEO
- Brain Injury Association of Ohio, Philip E. Cole, president
- Central Ohio Trauma System, Jonathan I. Groner, M.D., F.A.C.S., president
- Ohio Association of Professional Fire Fighters, Kevin Watts, president
- Ohio Association of Rehabilitation Facilities, Julie A. Keil, M.P.A., executive director
- Ohio Bureau of Workers’ Compensation, James Conrad, administrator/CEO
- Ohio Children’s Hospital Association, Andrew Carter, president
- Ohio Department of Aging, Joan W. Lawrence, director
- Ohio Department of Alcohol and Drug Addiction Services, Gary Q. Tester, director
- Ohio Department of Education, Susan Tave Zelman, superintendent of public instruction
- Ohio Department of Public Safety, Gary F. Joseph, interim director
- Ohio Farm Bureau, John C. Fisher, executive vice president
- Ohio Fire Chiefs’ Association Inc., Chief Stan Crosley, president
- Ohio Hospital Association, Bridget Gargan, vice president, State Policy & Advocacy
- Ohio Job & Family Services, Tom Hayes, director
- Ohio Legal Rights Service, Carolyn S. Knight, executive director
- Ohio Nurses Association, Gingy Harshey-Mead, M.S.N., R.N., C.N.A.A., chief executive officer
- Ohio Osteopathic Association, Paul A. Martin, D.O., president
- Ohio Psychological Association, Michael O. Ranney, M.P.A., executive director
- Ohio Public Health Association Inc., Ruth Shrock, president
- Ohio Rehabilitation Association, Robin Markey, president
- Ohio Rehabilitation Services Commission, John M. Connelly, executive director
- Ohio Society of Trauma Nurse Coordinators, Vickie Graymire, R.N., M.S., C.E.N., president
- Ohio State Medical Association, William C. Sternfeld, M.D., president
- Ohio State Chiropractic Association, Peter D. Feldkamp, D.C., president
- The Salvation Army, Major Paul Cain, area coordinator
- State of Ohio Rehabilitation Services Commission, John M. Connelly, executive director



Regional Trauma System: Synopsis per Region

Central Ohio Trauma System (COTS)

History:

In 1998, the Central Ohio Trauma System (COTS) was officially established as a 501(c)(3) non-profit status and an affiliate organization of the Columbus Medical Association (CMA). This voluntary organization serves as the forum for addressing issues affecting the delivery of trauma / emergency healthcare services and injury prevention in central Ohio. Initially established within Franklin County, COTS quickly expanded to include contiguous counties' hospitals, Emergency Medical Services (EMS) providers, public health agencies and other stakeholders in the regional healthcare system.

Membership:

- 27 hospitals and over 30 EMS agencies in 20 central Ohio counties

Organization:

- Paid staff: 7.8 FTE
- The COTS Boards of Trustees is comprised of health care experts from each member hospital and EMS providers serving Franklin County and other central Ohio counties; physicians from the Columbus Medical Association (CMA); Franklin County Board of Health; Franklin County coroner; and the Medical Director for Columbus Fire
- The COTS Executive Committee consists of 10 elected members

Education:

Regional continuing education courses (ATLS, ENPC and TNCC) are provided through COTS for physicians, nurses and other medical professionals (> 2100 / annually).

Educational conferences sponsored by COTS include:

- COTS' Third Annual Trauma Research Symposium (2012)
- Trade Secrets: Meeting the Challenges of Trauma Data Management (2011)
- COTS Regional Trauma Research Symposium (2011)
- COTS Regional Trauma Research Symposium (2010)

Infrastructure:

Much of the COTS infrastructure exists through the committees. COTS maintains multiple committees and subcommittees which include the Executive, Clinical Trauma, Diversion, , Pre-Hospital, Registry, Regional Hospital Emergency Preparedness, Stroke, Bariatric, Sepsis, Pharmacy and Sudden Cardiac Arrest Committees. Each committee has a distinct focus with Board-delineated roles and responsibilities aimed at enhancing trauma and/or emergency healthcare services for central Ohioans. Ad hoc committees are established when necessary. Stakeholders serve as COTS committee members and chairpersons on a voluntary basis. Responsibilities of each committee listed below.

Clinical Trauma Committee:

- Oversees the COTS regional trauma care performance improvement (RTC-PI) to assess regional trauma care trends based on data from the COTS Regional Trauma Registry
- Delineates issues that may contribute to trauma morbidity and mortality
- Provides reports and or data to COTS' stakeholder institutions
- Conducts regional trauma care performance improvement initiatives

- Recommends clinical trauma protocols based on data analysis from COTS' Registry
- Coordinates professional continuing medical and nursing education related to trauma care
- Establishes regional baseline standards for Level I and Level II trauma alert criteria
- Assists regional hospitals in complying with the establishment of written protocols and transfer agreements as mandated by Ohio law
- Undertakes other clinically-related activities relevant to trauma care as directed by the COTS Board of Trustees

Metric Review Executive Committee (MREC):

- Provide a detailed review of scorecard metrics that fail to meet established thresholds; to recognize best practices; to understand issues related to structure, performance and outcome; determine loop closure when issues are resolved or the metric outlier is improved.
- Identify issues requiring follow-up and a need for a documented action plan for hospitals participating in the Performance Improvement Program.
- Provide assistance/education to trauma centers and acute care hospitals within the region.
- Provide Best Practice Guidelines.
- Identify standard of care outliers and offer recommendations.
- Serve as a forum for Trauma Medical Directors to discuss medical management issues

Registry Committee:

- Monitors trauma care from a regional perspective as consistent with mandates of Ohio legislation related to trauma victims; assesses regional trauma care trends
- Conducts regional trauma care performance improvement initiatives
- Recommends clinical trauma protocols based on data analysis from COTS' Registry
- Coordinates professional continuing medical and nursing education related to trauma care
- Establishes regional baseline standards for Level I and Level II trauma alert criteria
- Assists regional hospitals in complying with the establishment of written protocols and transfer agreements as mandated by Ohio law
- Undertakes other clinically-related activities relevant to trauma care as directed by the COTS Board of Trustees

Prehospital Committee:

- Monitors trauma care from a regional perspective as consistent with mandates of Ohio legislation related to trauma victims; assesses regional trauma care trends
- Conducts regional trauma care performance improvement initiatives
- Recommends clinical trauma protocols based on data analysis from COTS' Registry
- Coordinates professional continuing medical and nursing education related to trauma care
- Establishes regional baseline standards for Level I and Level II trauma alert criteria
- Assists regional hospitals in complying with the establishment of written protocols and transfer agreements as mandated by Ohio law
- Undertakes other clinically-related activities relevant to trauma care as directed by the COTS Board of Trustees

Prehospital Sepsis Subcommittee:

- Provides guidelines to promote consistency in approach for prehospital and receiving emergency department care in central Ohio supporting consistency across hospital systems and EMS agencies on the recognition and management of sepsis

- Provides education for EMS on the early recognition and prehospital management of patients with possible sepsis;
- Establishes criteria for EMS providers to use as a guide to identify potentially septic patients;
- Publishes a sepsis tool for prehospital personnel on the identification and management criteria for potential septic patients;
- Establishes educational objectives for sepsis training tailored for prehospital personnel

Prehospital Pharmacy Subcommittee:

- Establishes guiding principles for EMS to provide a clarity of understanding and consistency in approach regarding the acquisition, provision, storage, maintenance and documentation of medications used in the prehospital setting including day to day and periods medication supply shortages and emergent situations
- Provides recommendations for updates/changes in the Ohio State Board of Pharmacy Rules and/or modifications to the ORC to improve efficiency in the management of medications for prehospital providers

Pre-hospital Bariatric Subcommittee Charter

- To address the safety and dignity of the bariatric patient during transport; and,
- To provide education to emergency medical service (EMS), ambulance staff and hospital personnel on best practices to minimize injuries during transport.

Aeromedical Communication Committee:

- Monitors trauma care from a regional perspective as consistent with mandates of Ohio legislation related to trauma victims; assesses regional trauma care trends
- Conducts regional trauma care performance improvement initiatives
- Recommends clinical trauma protocols based on data analysis from COTS' Registry
- Coordinates professional continuing medical and nursing education related to trauma care
- Establishes regional baseline standards for Level I and Level II trauma alert criteria
- Assists regional hospitals in complying with the establishment of written protocols and transfer agreements as mandated by Ohio law
- Undertakes other clinically-related activities relevant to trauma care as directed by the COTS Board of Trustees

Diversion Committee:

- Monitors trauma care from a regional perspective as consistent with mandates of Ohio legislation related to trauma victims; assesses regional trauma care trends
- Conducts regional trauma care performance improvement initiatives
- Recommends clinical trauma protocols based on data analysis from COTS' Registry
- Coordinates professional continuing medical and nursing education related to trauma care
- Establishes regional baseline standards for Level I and Level II trauma alert criteria
- Assists regional hospitals in complying with the establishment of written protocols and transfer agreements as mandated by Ohio law
- Undertakes other clinically-related activities relevant to trauma care as directed by the COTS Board of Trustees

Regional Hospital Emergency Preparedness Committee:

- Monitors trauma care from a regional perspective as consistent with mandates of Ohio legislation related to trauma victims; assesses regional trauma care trends
- Conducts regional trauma care performance improvement initiatives
- Recommends clinical trauma protocols based on data analysis from COTS' Registry
- Coordinates professional continuing medical and nursing education related to trauma care
- Establishes regional baseline standards for Level I and Level II trauma alert criteria
- Assists regional hospitals in complying with the establishment of written protocols and transfer agreements as mandated by Ohio law
- Undertakes other clinically-related activities relevant to trauma care as directed by the COTS Board of Trustees

Stroke Committee:

- Monitors trauma care from a regional perspective as consistent with mandates of Ohio legislation related to trauma victims; assesses regional trauma care trends
- Conducts regional trauma care performance improvement initiatives
- Recommends clinical trauma protocols based on data analysis from COTS' Registry
- Coordinates professional continuing medical and nursing education related to trauma care
- Establishes regional baseline standards for Level I and Level II trauma alert criteria
- Assists regional hospitals in complying with the establishment of written protocols and transfer agreements as mandated by Ohio law
- Undertakes other clinically-related activities relevant to trauma care as directed by the COTS Board of Trustees

Sudden Cardiac Arrest Committee:

- Monitors trauma care from a regional perspective as consistent with mandates of Ohio legislation related to trauma victims; assesses regional trauma care trends
- Conducts regional trauma care performance improvement initiatives
- Recommends clinical trauma protocols based on data analysis from COTS' Registry
- Coordinates professional continuing medical and nursing education related to trauma care
- Establishes regional baseline standards for Level I and Level II trauma alert criteria
- Assists regional hospitals in complying with the establishment of written protocols and transfer agreements as mandated by Ohio law
- Undertakes other clinically-related activities relevant to trauma care as directed by the COTS Board of Trustees

Funding:

COTS funding base is varied. Twenty-seven hospitals, various EMS agencies, and numerous individuals contribute directly to COTS to support its basic operations. Outcome-specific grants and contracts provide additional funding, as do revenues generated through educational courses coordinated by COTS.

Outcomes:

Regional Guidelines, Protocols and Policies produced by COTS (N> 30):

- Aeromedical Communication Regional Guidelines
- Central Ohio Region Burn Surge Disaster Plan
- EMS Clinical Information for Pre-Hospital PI

- EMS Patient Destination Decisions at Multiple-Casualty & Mass-Casualty Trauma Scenes
- Exposure Guidelines for EMS
- Family Violence Screening Protocols – Hospitals
- Family Violence Screening Protocols – EMS
- Patient Calls to EMS to Transport Patients from One Hospital to Another
- Pre-Hospital Therapeutic Hypothermia
- Pre-Hospital Trauma Triage Guidelines
- Regional Emergency Care Access Plan
- Regional Level I and II Trauma Alert Criteria
- Regional Trauma Care Performance Improvement Plan
- SERT Regional Guidelines

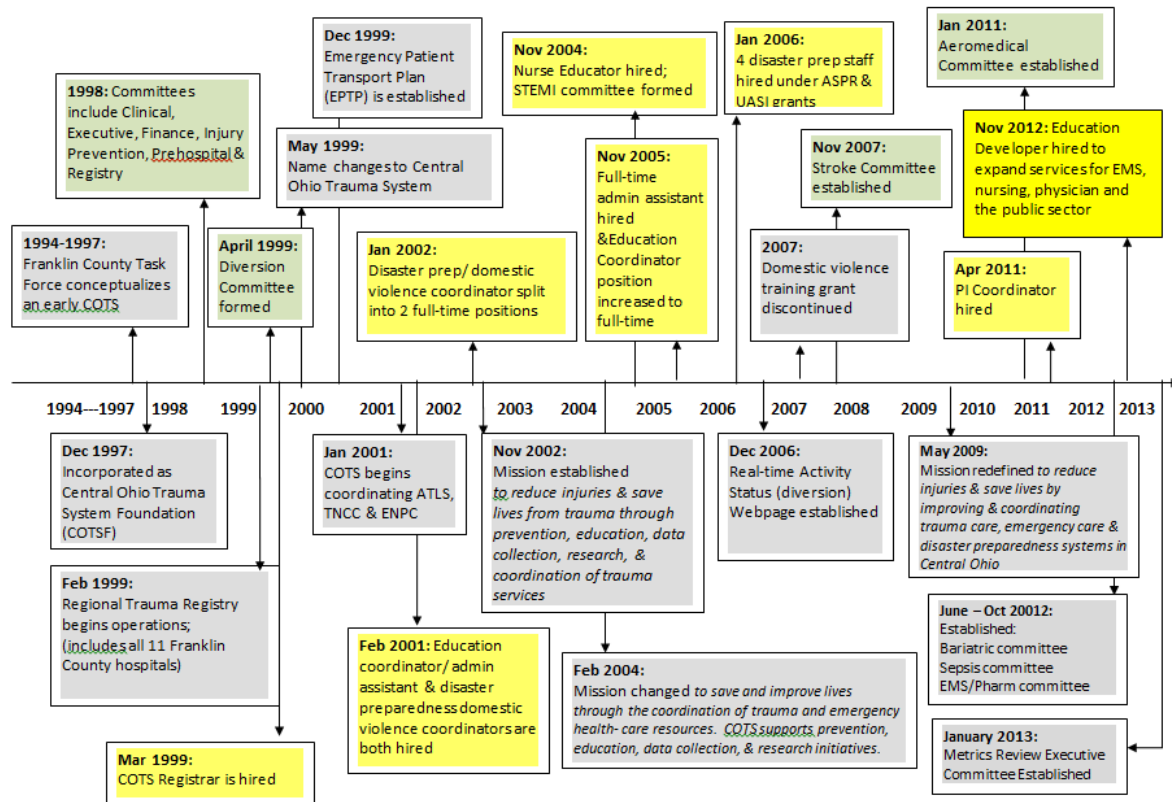
White Papers:

- Distracted Driving in Ohio
- Ethics and Medical Response in a Mass Casualty Event

Publications:





- Biennial Report (very in-depth analysis of the region); most recent 2011-2012
- Community Injury Report; most recent 2011
- Biannual Newsletter

COTS HISTORICAL TIMELINE – RE: Missions, Committees and Growth



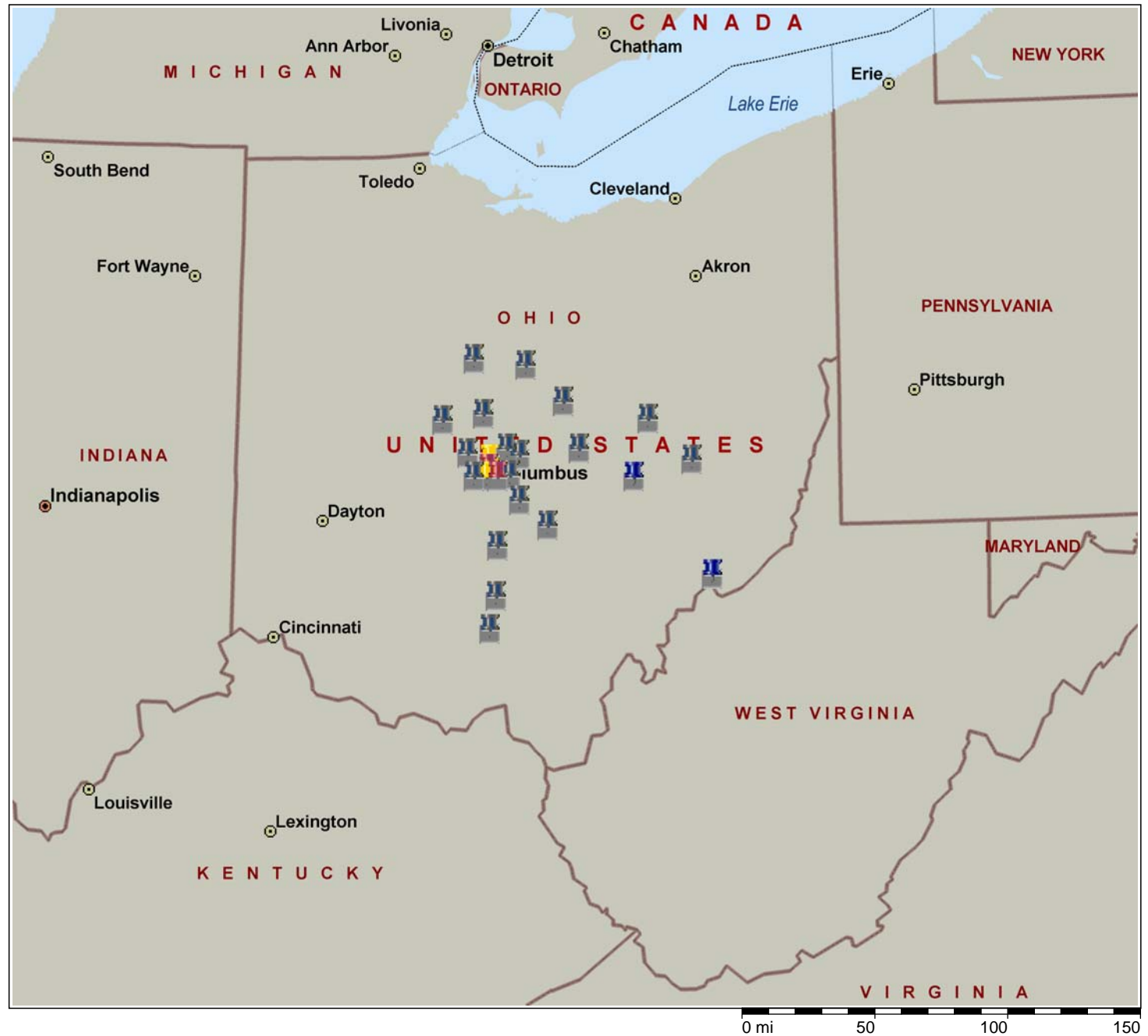
COTS

F4 by ZIP Code

-  Trauma Level 3
 Trauma Level 2
 Trauma Level 1
 Non Verified

Pushpins

Copy of Ohio Hospitals by RTR regi...



Copyright © and (P) 1988–2012 Microsoft Corporation and/or its suppliers. All rights reserved. <http://www.microsoft.com/mappoint/>
 Certain mapping and direction data © 2012 NAVTEQ. All rights reserved. The Data for areas of Canada includes information taken with permission from Canadian authorities, including: © Her Majesty the Queen in Right of Canada, © Queen's Printer for Ontario. NAVTEQ and NAVTEQ ON BOARD are trademarks of NAVTEQ. © 2012 Tele Atlas North America, Inc. All rights reserved. Tele Atlas and Tele Atlas North America are trademarks of Tele Atlas, Inc. © 2012 by Applied Geographic Solutions. All rights reserved. Portions © Copyright 2012 by Woodall Publications Corp. All rights reserved.

Regional Trauma System: Synopsis per Region

Northeastern Ohio Regional Trauma Network (NORTN)

History:

The mission of the Northeastern Ohio Regional Trauma Network (NORTN) is to collaboratively develop and maintain a regional trauma system and improve trauma care for the communities we serve.

The Northeastern Ohio Regional Trauma Network was formed in 1988. NORTN was developed as an opportunity to benefit patient care and consisted of those hospitals who participated in the Northeastern Ohio University College of Medicine consortium. An early accomplishment included utilization of the same trauma registry; however, the primary function was vital networking that laid the groundwork for future development.

In January 2005 with the support of the Akron Regional Hospital Association (ARHA) and hospital administrations NORTN was re-established as a formalized trauma system within the State of Ohio. Key components included development of mission/vision statement, funding sources, a neutral meeting space in which verified trauma centers and acute care hospitals could voluntarily join to collaboratively build our regional trauma system, a unique identifiable logo, and submission of our regional data to the state trauma registry.

In order to support its mission statement to improve trauma care, regional trauma education was identified as an essential goal. The NORTN Education Series, a complimentary 2-hour educational program, continues to be held 4 times a year with rotating hospitals hosting the event.

In 2005 a subcommittee was formed to plan the first annual NORTN Trauma Conference that was held in 2006. Planning for this full day conference included, establishing a neutral location, format, topics, publicity, vendor support, speaker solicitation, CEU/CME accreditation and soliciting abstracts and posters. The variety of topics and a nationally known keynote speaker were deliberately chosen to promote attendance from all disciplines.

Membership:

The Northeastern Ohio Regional Trauma Network (NORTN) is a collaboration of 13 hospitals in Medina, Portage, Stark and Summit counties. NORTN Member Hospitals Include:

- Affinity Medical Center
- Akron Children's Hospital
- Akron General Medical Center
- Aultman Hospital
- Lodi Community Hospital
- Medina General Hospital
- Mercy Medical Center
- Robinson Memorial Hospital
- Summa Akron City Hospital
- Summa Barberton Hospital
- Summa St. Thomas Hospital
- Summa Western Reserve Hospital

Summa Wadsworth-Rittman Hospital
The NORTN bylaws permit other interested persons to attend Summa Rehab will be joining as a non-voting member in 2013.

Organization:

- See attached
- Membership is all voluntary and includes Emergency Department Physicians, Supervisors, Trauma Directors, Registrars or Coordinators from each of the member hospitals.
- The membership is supported by the paid staff of ARHA for clerical support and financial oversight.
- Elected officers include:
 - Chair
 - Immediate past chair
 - Chair elect
 - Secretary/Treasurer
 - Member-at-large
- The Executive Committee is comprised of the elected officers.

Registry:

- Up until December 2012 NORTN contracted with the Hospital Council of Northwest Ohio (HCNO) for the services of a trauma registry consultant who served as a repository and database administrator for NORTN's trauma data. NORTN's share of this consultant was approximately a 0.3 FTE.
- Beginning in January 2013, NORTN contracted with Biostats of Ohio, Inc. to oversee and maintain the regional trauma registry.
- Services provided by the trauma registry consultant include:
 - a. Maintain the NORTN trauma database
 - Maintain Data Dictionary
 - Verify and validate data received from the region's hospitals
 - Provide feedback to hospital Data Manager and Program Managers on the quality of data submitted to the regional registry
 - Serve as liaison between hospitals and Clinical Data Management (CDM)
 - Assist and advise on development and maintenance of policies and procedures for the NORTN Trauma Registry
 - Maintain network, application, and data security
 - b. Attend in person at least 75% of the following scheduled monthly NORTN meetings. For the other 25% of the meetings, must be available via conference calling.
 - c. Attend at least 75% of the State Trauma Registry meetings
 - d. Reporting requirements:
 - On a monthly basis:
 - Prepare written reports to fulfill data requests for performance improvement, benchmarking, and research as defined in the NORTN Rules and Regulations for specifics on data requests.
 - On a quarterly basis:
 - Timely submit regional data to the Ohio Trauma Registry (OTR)

- Perform validation checks including identification of possible missing or incomplete data and random auditing of select database entries to original source documents
- Assess the completeness of the files submitted to the regional registry by each hospital through identification of dual cases in the database for inter-hospital transfers within the region.
- Provide rolling 12-month Regional Reports 30-45 days after the OTR quarterly submission deadline and present the report at the monthly NORTN meeting.
- The following will be submitted during the Fourth Quarter:
 - Provide confidential individual member hospital Annual Reports showing each hospitals' data in the context of regional data

Education:

Sponsored education includes:

- Annual Trauma Conference, full day conference for physicians, nurses, EMS providers featuring a national keynote speaker and other regional speakers.
- NORTN Education Series, a complimentary 2-hour educational program held 4 times a year with rotating hospitals hosting the event

Performance Improvement:

- There is a collaborative effort with Northeast Ohio Medical University (NEOMED) which is in the early stages of development. An MPH student will be developing a strategic plan to identify key areas of research and develop a process for which the NORTN PI and Research sub-committee should proceed. The student will be utilizing data from our regional trauma registry, as well as working with the Trauma Program Manager at Akron City Hospital (Community Preceptor) and a Faculty Preceptor to help make recommendations to the committee. It is our hope that this initial capstone project will develop into further projects for other students, such as developing injury prevention programs, program evaluation and regional research.
- The PI Subcommittee has also done regional data validation and run some preliminary regional data based on the Ohio Trauma System scorecard metrics.

Disaster Preparedness

ARHA facilitates the Northeast Central Ohio Emergency Preparedness (NECO EP) program for its 13-county region. The purpose of the NECO EP program is to enhance emergency preparedness activities in health care by meeting the deliverables as described through a grant from Health and Human Services through the Ohio Department of Health. Over \$1.6 million is administered to the regional hospitals on an annual basis through this program. A NECO representative reports at the NORTN meetings.

Infrastructure:

Committees include:

- Education
- Data Managers
- Research/Regional Performance Improvement
- Trauma Awareness/Injury Prevention

Funding:

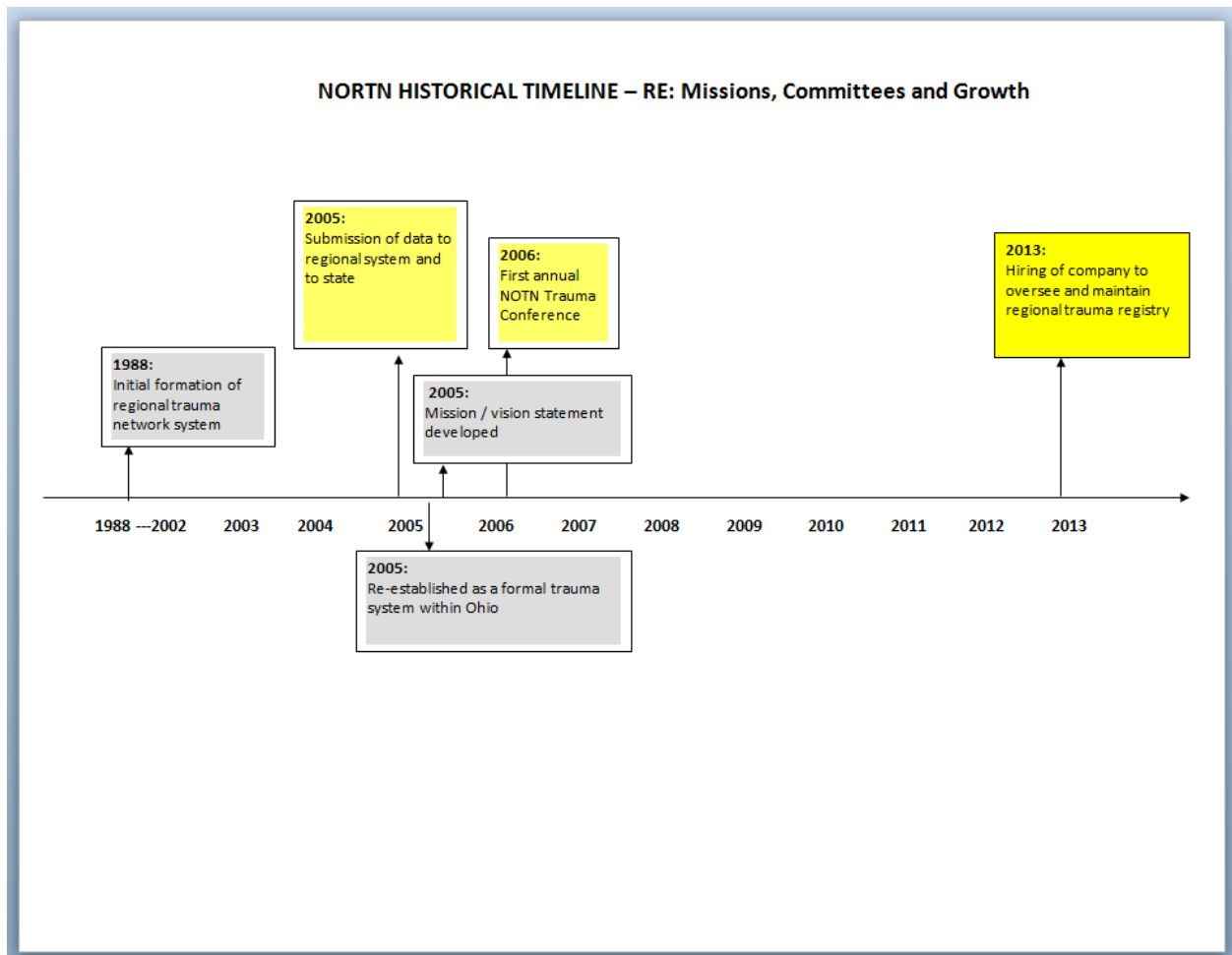
- Each hospital pays an annual membership fee based on their level of trauma center. This money is used to support the regional registry. Current fees are 45% of the annual registry expenses paid by Level 1 Trauma Centers. Level 2 Trauma Centers pay 40%. Level 3 Trauma Centers pay 15%. Non Trauma Centers pay a flat rate of \$ 1,725 .

Outcomes:

- Bylaws, Rules & Regulations, Data Request Form, NORTN Data Dictionary

Publications:

- None



NOTRN

F4 by ZIP Code

-  Trauma Leve...
-  Trauma Leve...
-  Trauma Leve...
-  Non Verified



Regional Trauma System: Synopsis per Region

Northwest Ohio Regional Trauma Registry (NORTR)

History:

The Hospital Council of Northwest Ohio (HCNO) Board of Trustees approved creation of the Northwest Ohio Regional Trauma Registry (NORTR) in 1999. The registry was created to serve as a repository for hospital trauma data, serve as an agent for submission of trauma data to the Ohio Department of Public Safety Trauma Data System, to provide peer review for the regional trauma system, and protect the data from outside discovery. The Registry contains pre-hospital, demographic, clinical, and outcome data on qualifying cases voluntarily submitted by NORTR members. The data provides a unique community-wide resource and is used by the NORTR Board to monitor and evaluate the delivery of trauma care within the region.

Membership:

- 22 hospitals participate

Organization:

- Organizational structure: Program of the Hospital Council of Northwest Ohio a 501(C) (3) nonprofit organization guided by a board approved by the Hospital Council Board of Trustees.
- (FTE – paid vs. volunteer): contracted trauma registrar about .45 FTE plus .25 Administrative Assistant and .03 of vice president of the Hospital Council of Northwest Ohio plus volunteer board.
- Paid staff: .73 FTE (includes contracted trauma registrar)
- Purpose of NORTR: To serve as a repository for hospital trauma data, serve as an agent for submission of trauma data to the Ohio Department of Public Safety Trauma Data System, to provide peer review for the regional trauma system, and protect the data from outside discovery.

NORTR Board Members: Hospital-based representatives must be from NORTR member hospitals. Voting members shall reflect the urban/rural geography and the institutional diversity of the region served and include: two trauma registrars from hospitals participating in NORTR (one from a trauma center, one from a non-trauma center); one coroner; one emergency department nurse manager from a hospital participating in NORTR; one member from a political entity; one trauma nurse manager from a hospital participating in NORTR; two emergency medicine physicians from a hospital participating in NORTR; three trauma surgeons from a hospital participating in NORTR; and, two EMS representatives

Registry:

- Maintenance of the list of current members.
- Receipt and processing of all source data.
- Submission of data to State of Ohio for member institutions in Northwest Ohio for the State Trauma Registry.
- Generation of all studies in response to approved data requests.
- Maintenance of data security.
- Facilitate meetings of NORTR.
- All data requests shall be submitted to Board.

Education:

- Led Data Validation Study 2011-2012 through a grant from ODPS
- Education provided at yearly trauma symposium
- Educational topics at quarterly registrars' meetings
- Technical assistance provided to Registrars' as needed from software vendor or NORTR Registrar

Performance Improvement:

- Reinstating in 2013 after a couple year hiatus due to a volunteer leadership change.

Disaster Preparedness

- Role: NORTR interacts with Northwest Ohio Disaster Preparedness which is also housed at the Hospital Council of Northwest Ohio. At the 2012 NORTR Symposium the Director of NW Ohio Disaster preparedness gave a presentation.

Infrastructure:

- Board meets quarterly and serves as symposium planning committee and medical advisory committee.
- PI Committee is being reinstituted in 2013. Registrar Committee is comprised of all participating registrars.

Funding:

The fiduciary function of the Board is managed by the Hospital Council of Northwest Ohio. Members of the Hospital Council fund the registry activities through their annual dues to the Hospital Council and nonmembers of the Hospital Council of Northwest Ohio that participate in the registry are assessed NORTR dues. NORTR actively seeks grant and contract funding for NORTR projects.

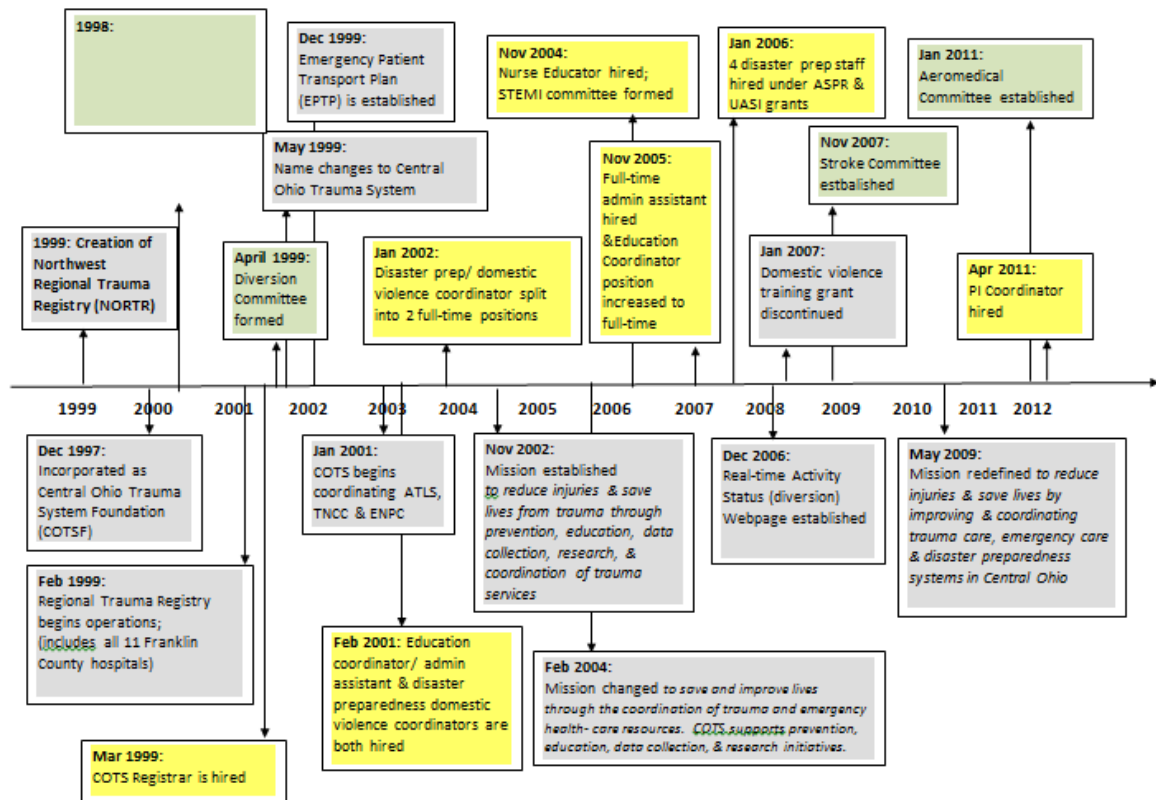
Outcomes:

- Guidelines, protocols and policies produced by regional system are related to the operations of the trauma registry such as data submission deadlines, late data, etc.
- The "regional system" is made up of smaller jurisdictions with the largest one being Lucas County.
- Lucas County implemented EMSsystem to create an emergency department capacity communication system through NORTR in 2001

Publications:

- Trauma Data Validation Project: Northwest Ohio Regional Trauma Registry (NORTR) 2012
- Annual Reports 2000-2011
- State of Ohio Trauma System Plan-Hospital Component 2005
- Ohio Patient Transfer Study 2008

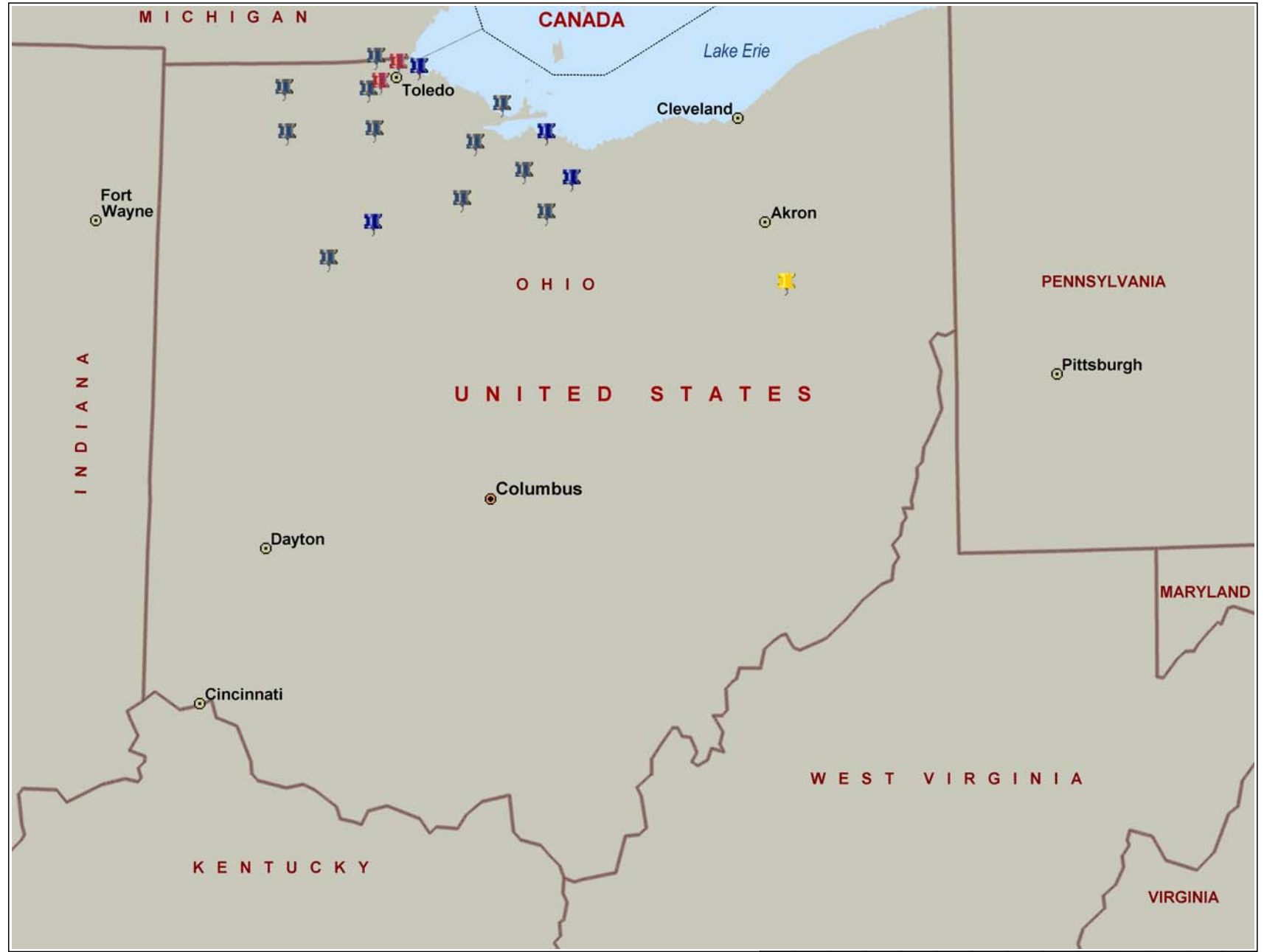
NORTR HISTORICAL TIMELINE – RE: Missions, Committees, Staff



NORTR

TC by ZIP Code

-  Trauma Leve...
-  Trauma Leve...
-  Trauma Leve...
-  Non Verified



Regional Trauma System: Synopsis per Region

Northern Ohio Trauma System (NOTS)

History:

NOTS was created as a joint collaboration between the MetroHealth System and the Cleveland Clinic. This organization officially started in January 2010 with the naming of the MetroHealth Trauma Director as the NOTS Medical Director. By the summer of 2010, three staff was added.

Membership:

- 11 hospitals of a MetroHealth and Cleveland Clinic collaboration

Organization:

- Paid staff: 2.75 FTE
- The NOTS Boards of Trustees is comprised of hospital administrators from Cleveland Clinic and Metrohealth, physicians, health commissioner, and two public trustees (Cleveland EMS and Public Safety and Justice)
- The NOTS Board members consists of 9 members

Infrastructure:

- In the summer of 2010, the following subcommittees were developed:
 - Quality / Performance Improvement
 - Protocol Development
 - EMS Advisory Committee
 - Education
 - Injury Prevention
 - Trauma Program Managers' Advisory Committee
 - Trauma Registry
 - Research

Education:

- Starting in 2011, NOTS has hosted an annual trauma conference
- ATLS is supported under NOTS
- Multiple continuing education hours provided to physicians, nurses and EMS personnel
 - Presentations are developed out of needs recognized in the Quality Committee
- AIS coding course provided for regional registrars

Protocol:

- Blunt spleen protocol shared among 3 trauma hospitals
- Non-trauma Center Inter-facility Transfer Protocol
- EMS Triage Protocol
- Initial Management of the Burn Patient
- Management of the Spine Injured Patient

Registry:

- Regional database with patient identified data
- Merge data from Cleveland EMS

- Merge data from Cuyahoga County Coroner
- Electronic copies of autopsy reports
- “Banding” of all trauma patients
 - Link electronically all patients as they move across the system

Funding:

- NOTS’ operations are funded through the contribution by each of the Initial Participants of 50% of the initial budget, and each annual budget approved by the Board thereafter

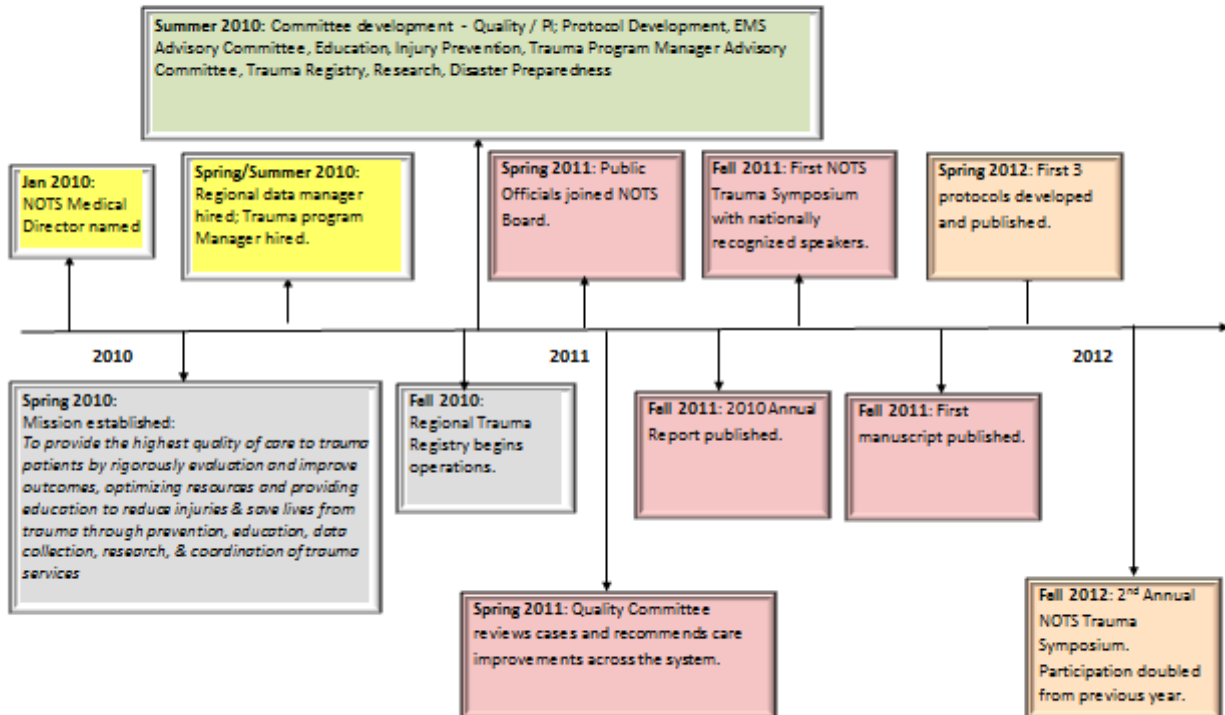
Outcomes:

- Regional spleen protocol for trauma centers
- Mortality
- Double Transfers
- Length of Stay at Referring Facilities
- Air vs. Ground Transport
- Triage Protocol – Non-trauma Center Transfers
- Implemented a Cloud Based Digital Imaging System

Publications:




- 2010 Northern Ohio Trauma System Annual Report
- 2011 Northern Ohio Trauma System Annual Report
- Presentations/Posters/Abstracts
 - Predicating Continued Neurologic Care and Follow-up with Radiographic Evidence of Traumatic Brain Injury
 - Changing Trends in Maxillofacial Fracture; a Repeat Study 20 Years Later
 - In conjunction with the Department of Maxillofacial – MetroHealth Medical Center
 - Merging of Trauma and Rehabilitation Registries, To Further Define Long-Term Outcomes for Traumatic SCI
 - Pre-hospital Transfusion and Serum lactate Levels in the Trauma Patient
 - Can we Predicate Adjacent Ligamentous Injury on MRI after Cervical Spine Fracture?
 - A Revised Pre-Hospital Trauma Triage Protocol: Saving Patients and Resources.

NOTS HISTORICAL TIMELINE – RE: Missions, Committees. Staff



NOTS

F4 by ZIP Code

-  Trauma Leve...
-  Trauma Leve...
-  Non Verified



Regional Trauma System: Synopsis per Region

SORTS (Southwest Ohio Regional Trauma System)

History: SORTS began Oct 1999. The need was to develop a standardized data dictionary for all of SORTS hospitals to follow, as well as a consortium of representatives from each hospital. The hospitals were encouraged to participate with the goal of collaborating on trauma patient care in the region as well as working with EMS.

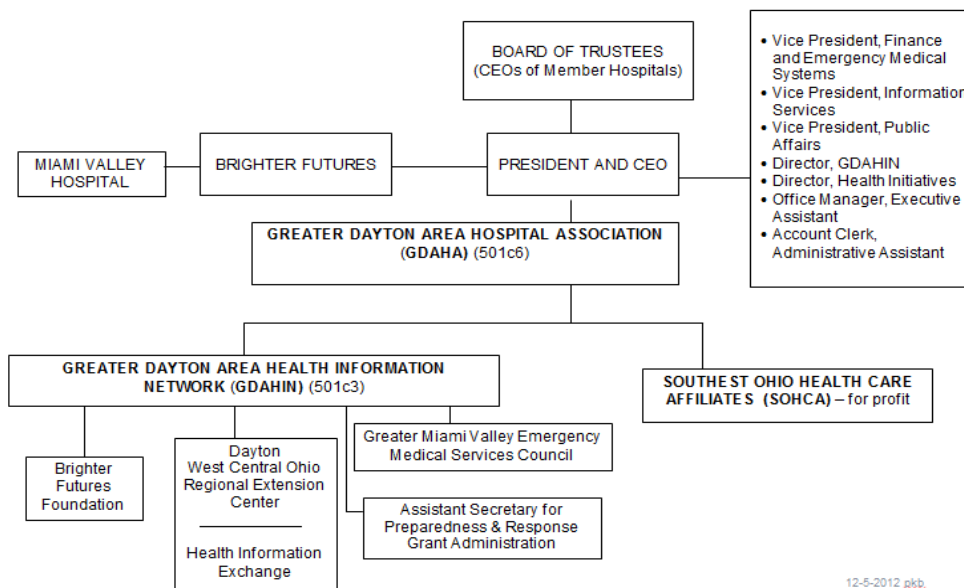
Membership:

- 14 hospitals currently participating

Organization:

- 0.5 FTE
- SORTS is located within the Greater Dayton Area Hospital Association (GDAHA). Chair and co-chair persons hold 2 year terms.
- Committees: Registrar, PI

GDAHA Organizational Structure 2012



Registry:

- Works with SORTS Registrar's committee and is a resource to all SORTS hospitals
- SORTS provides an 0.5 FTE for maintaining the database

Education:

- Past educational offerings have included AIS, ECoding, ICD9 Trauma Coding, and TraumaBase Webinars, as well as provided funding for registrars to attend Trauma Registrar Basic and Advanced Courses, AIS Training and to attend CDM TraumaBase Conferences.

Performance Improvement:

- The PI committee is now part of the Full SORTS committee and recently the PI process has moved from individual case reviews to process PI based on the TQIP process. Personnel include a TMD as the committee chair and a TPM as the co-chair. Participants include the region's TPM, Trauma Registrars, Physicians, EMS, PI and Outreach Coordinators (nurses).

Disaster Preparedness

- There is a regional coordinator of the Disaster Preparedness for SORTS, who works with EMS and all hospitals in the region. SORTS participate in regional disaster drills, 'table top' drills, and miscellaneous seminars on various disaster topics throughout the year.

Infrastructure:

- Integrated members sit on multiple regional and state committees bringing a multidisciplinary approach to trauma. The SORTS Committee involves members from each hospital who work in different roles within their hospital's trauma program, including TMD, TPM, Outreach Coordinators, PI Coordinators, and Trauma Registrars. GDAHA staff and EMS are also well represented. The EMS council also meets and reviews SORTS concerns and brings back findings to the SORTS Committee.

Funding:

- Funded by the SORTS region hospitals on a quarterly assessment.

Outcomes:

- Following guidelines are produced by SORTS:
 - Trauma Triage Guidelines
 - Trauma Data Submission
 - SORTS Data Dictionary

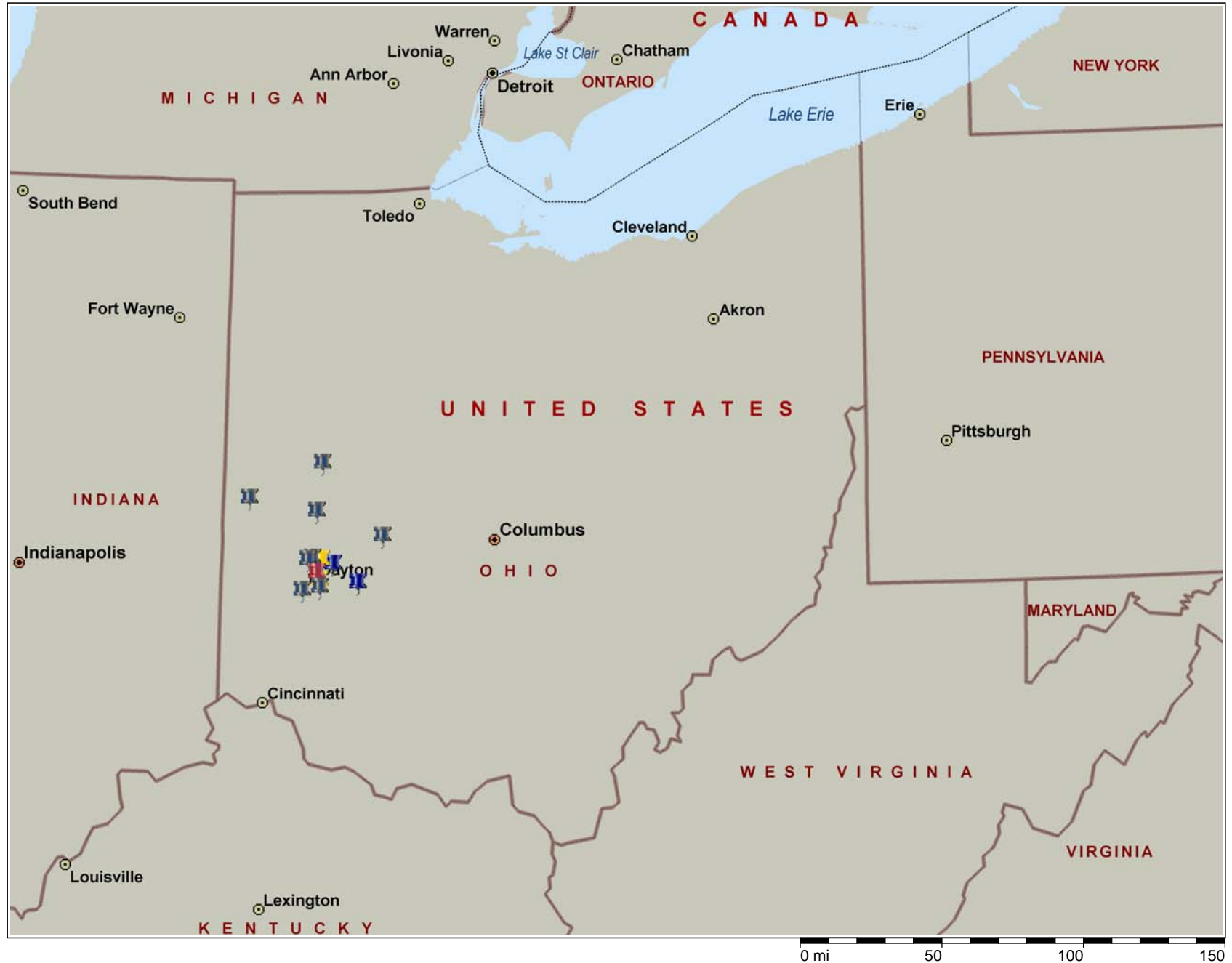
Publications:

- None

SORTS

Trauma by ZIP Code

-  Trauma Level 3
-  Trauma Level 2
-  Trauma Level 1
-  Non Verified



Regional Trauma System: Synopsis per Region

Tri-State Trauma System (TSTC)

History:

First unofficially regional meetings regarding trauma system development in the southwestern region began in 1999. Trauma center representatives met under the auspices of the Academy of Medicine of Cincinnati in order to assist with state trauma legislation development. The TSTC became official, declaring 501(c)(3) status, in 2001. For a variety of reasons, TSTC legally became a subsidiary of the Greater Cincinnati Health Council (GCHC) in 2004. Within this structure, TSTC ceased to exist as previously defined but instead is revised to the Department of Emergency Preparedness and Trauma, with oversight by the GCHC Board.

Membership:

- GCHC represents 14 counties within the 3 state (Ohio, Kentucky, Indiana) Greater Cincinnati region; 8 counties in southwestern Ohio
- Greater Cincinnati Region utilizes the EMS Region 1 on the Homeland Security Regions, which are the same for the Greater Cincinnati region

Organization:

- Paid staff: 2.8 FTE
- Purpose: to enhance trauma care and system performance in the Tri-state through collaboration, data-driven performance improvement and coordinated educational programs.
- Board of GCHC is comprised of representatives from a majority of Ohio hospitals in the southwest 8 counties, plus additional presentation from Northern Kentucky and Southwest Indiana, which has frequent referral patterns to Ohio hospitals.

Education:

Regional continuing education courses (ATLS, TNCC) are provided through TSTC for physicians, nurses and other medical professionals (approximately 80 participants in ATLS course with 35 auditors / annually and over 300 nursing participants in TNCC / annually).

Educational conferences sponsored by COTS include:

- AIS Coding Conference – for region (along with Dayton) (2012)

Infrastructure:

Within the Greater Cincinnati Health Council structure, Trauma Committee is designated as a “special committee”, which means the following: 1) committee reports directly to the GCHC board; each member hospital is eligible to have a representative; and representatives from the community may serve. According to the guiding principles of the Trauma Committee, members include at least one member from the following disciplines: trauma surgeon, ED physician, EMS, ED nursing manager / leader, Trauma Program Manager, Trauma Registrar, Trauma Performance Improvement nurse, and RPAB. However, representatives from all these disciplines do not routinely participate. Objectives of Trauma Committee: 1) Develop regional PI indicators; identify issues through data driven reviews, and committee review of issues.

Trauma Committee meets quarterly with the chair having a 2 year renewable term of leadership. Emphasis of the GCHC Trauma Committee is: registry, education and some regional PI. In 2007, a regional registry was started which included trauma centers and non-trauma centers.

Regional trauma registry began in 2007. Trauma centers utilize TraumaBase while the non-trauma hospitals use Trauma Lite (shorter version). In addition, Dayton region contracts with the Cincinnati region for participation in the southwest regional trauma registry. Quality checks are performed by staff within GCHC with appropriate data forwarded to the state trauma registry.

Funding:

TSTC funding base is through all the GCHC / hospital membership dues.

Outcomes:

Regional Guidelines, Protocols and Policies produced by TSTC:

- None

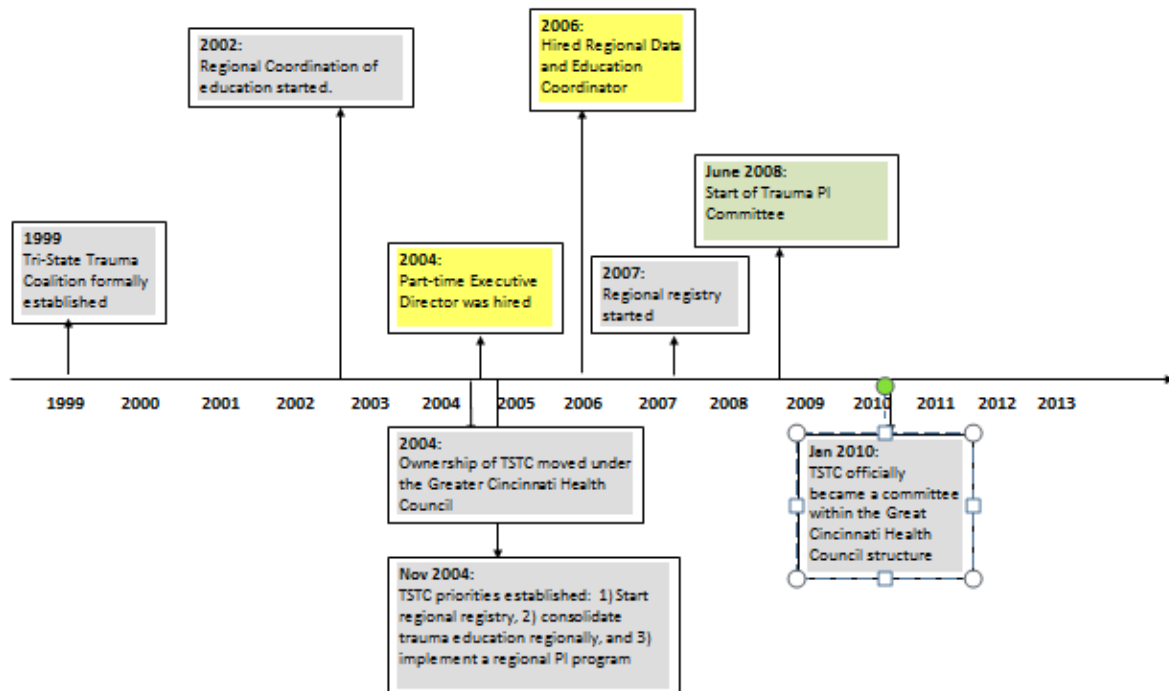
White Papers:

- None

Publications:




- Quarterly articles / collaboration with Hamilton County Public Health (epidemiology section); look at various Hamilton Country injuries / stats for prevention

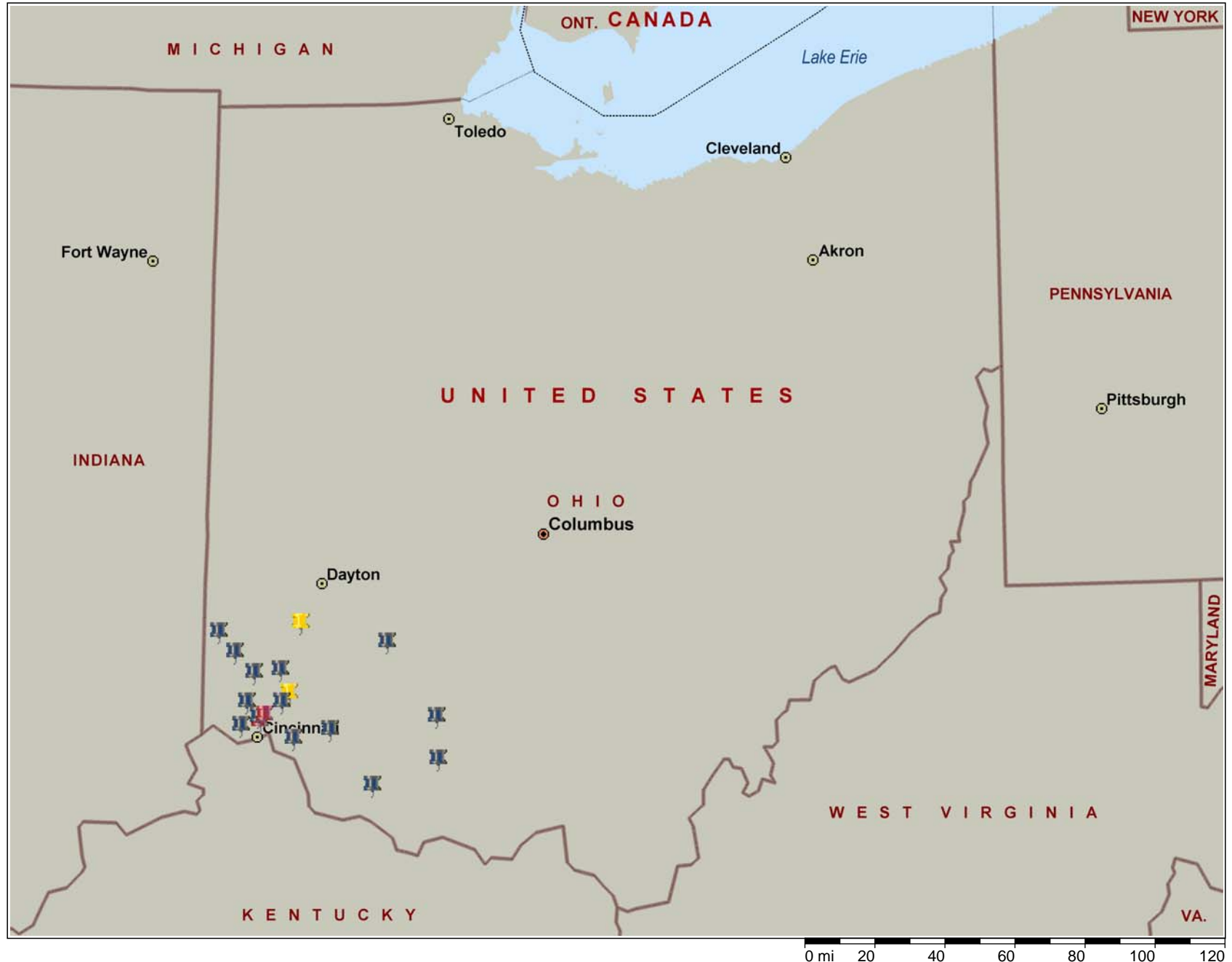
TSTC - HISTORICAL TIMELINE – RE: Missions, Committees and Growth



TSTC

Trauma by ZIP Code

-  Trauma Level 3
-  Trauma Level 1
-  Non Verified





OHIO SUNSHINE LAWS

An Open Government Resource Manual
2012



Mike DeWine
Attorney General



Dave Yost
Auditor of State



Ohio Sunshine Laws 2012

Dear Ohioans,

The offices of the Attorney General and Auditor of State foster the spirit of open government by promoting Ohio's Public Records Law and Open Meetings Law. Together, these laws are known as "Ohio Sunshine Laws" and are among the most comprehensive open government laws in the nation.

Along with this 2012 Ohio Sunshine Laws Manual, our offices provide Ohio Sunshine Laws training for elected officials throughout the state, as mandated by Ohio Revised Code Sections 109.43 and 149.43(E)(1). By providing elected officials and other public employees with information concerning public records and compliance, we help ensure accountability and transparency in the conduct of public business.

The Attorney General's Office and its Public Records Unit stand as one of the state's foremost authorities on public records and open meetings law. The office provides training, guidance, and online resources. Additionally, the Attorney General has created a model public records policy. Local governments and institutions can use this model as a guide for creating their own public records policies. This model policy and other online resources are available at www.OhioAttorneyGeneral.gov/Sunshine.

As the government agency responsible for auditing compliance, the Auditor of State's Open Government Unit also serves as a trusted resource for Ohio Sunshine Laws information and training. The Auditor of State website at www.auditor.state.oh.us features an Open Government page highlighting information concerning the Ohio Open Meetings Act, the Ohio Public Records Act, Records Retention and Ohio Certified Public Records Training.

This manual is intended as a guide, but because much of open government law comes from interpretation of the Ohio Sunshine Laws by the courts, we encourage local governments to seek guidance from their legal counsel when specific questions arise.

Thank you for your part in promoting open government in Ohio.

Very respectfully yours,



Mike DeWine
Attorney General



Dave Yost
Auditor of State



Ohio Sunshine Laws 2012

Readers may find the latest edition of this publication and the most updated open meetings and public records laws by visiting our web sites. To request additional paper copies of this publication, contact:

Ohio Attorney General
Public Records Unit
Re: Sunshine Manual Request
30 E. Broad Street, 16th Floor
Columbus, Ohio 43215
(800) 282-0515 or (614) 466-2872
www.OhioAttorneyGeneral.gov/Sunshine

or

Ohio Auditor of State
Open Government Unit
Legal Division
88 E. Broad Street, 9th Floor
Columbus, Ohio 43215
(800) 282-0370 or (614) 466-4514
www.ohioauditor.gov

We welcome your comments and suggestions.

Acknowledgements

Warm thanks to employees of the Ohio Attorney General and the Ohio Auditor of State whose contributions have made this publication possible over the years, with special recognition to the authors and editors of this edition:

Attorney General's Office Public Records Unit:

Assistant Attorneys General Erin Butcher-Lyden, Jeff Clark, Lauren Lubow, Sarah Pierce, Damian Sikora, and Renata Staff; Administrative Staff: Kristen Montgomery, Cathy Kirby, Brittnie Reed, Pari Swift, and Jonathan Chagat

Auditor of State Legal Division:

Chief Legal Counsel William Owen, Assistant Legal Counsel Brendan Inscho, Joseph Jones and Stephanie M. Miles; Administrative Staff: Denise L. Carr and Teresa N. Goodridge

Ohio Sunshine Laws 2012

200 Years of Sunshine: Reflections on Open Government

Ohio Supreme Court Justice Charles Zimmerman:

“ The rule in Ohio is that public records are the people's records, and that the officials in whose custody they happen to be are merely trustees for the people; therefore anyone may inspect such records at any time, subject only to the limitation that such inspection does not endanger the safety of the record, or unreasonably interfere with the discharge of the duties of the officer having custody of the same. *Patterson v. Ayers*, 171 Ohio St. 369 (1960). ”

Thomas Jefferson:

“ Information is the currency of democracy. ”

Patrick Henry:

“ The liberties of a people never were, nor ever will be, secure, when the transactions of their rulers may be concealed from them . . . To cover with the veil of secrecy the common routine of business, is an abomination in the eyes of every intelligent man. ”

James Madison:

“ A popular government without popular information, or the means of acquiring it, is but a prologue to a farce or a tragedy, or perhaps both. Knowledge will forever govern ignorance, and a people who mean to be their own governors must arm themselves with the power which knowledge gives. ”

John Adams:

“ Liberty cannot be preserved without a general knowledge among the people, who have a right and a desire to know; but besides this, they have a right, an indisputable, divine right to that most dreaded and envied kind of knowledge, I mean of the characters and conduct of their rulers. ”

Ohio Sunshine Laws 2012

Glossary

When learning about the Ohio Sunshine Laws, you may confront some legal terms that are unfamiliar to you. Below are the more common terms used in this handbook.

Charter

A charter is an instrument established by the citizens of a municipality, which is roughly analogous to a state's constitution. A charter outlines certain rights, responsibilities, liberties, or powers that exist in the municipality.

Discovery

Discovery is a pre-trial practice by which parties to a lawsuit disclose to each other documents and other information in an effort to avoid any surprises at trial. The practice serves the dual purpose of permitting parties to be well-prepared for trial and enabling them to evaluate the strengths and weaknesses of their case.

In Camera

In camera means "in chambers." A judge will often review records that are at issue in a public records dispute *in camera* to evaluate whether they are subject to any exceptions or defenses that may prevent disclosure.

Injunction

An injunction is a court order commanding or preventing a person from acting in a certain way. For instance, a person who believes a public body has violated the Open Meetings Act will file a complaint seeking injunctive relief. The court may then issue an order enjoining the public body from further violations of the act and requiring it to correct any damage caused by past violations.

Litigation

The term "litigation" refers to the process of carrying on a lawsuit, *i.e.*, a legal action and all the proceedings associated with it.

Mandamus

The term means literally "we command." In this area of law, it refers to the legal action that a party files when they believe they have been wrongfully denied access to public records. The full name of the action is a petition for a writ of mandamus, if the party filing the action, or "relator," prevails, the court will issue a writ commanding the public office or person responsible for the public records, or "respondent," to release the records in dispute.

Pro se

The term means "for oneself," and is used to refer to people who represent themselves in court, acting as their own legal counsel.

Ohio Sunshine Laws 2012

Table of Contents

Glossary.....	iv
Overview of the Ohio Public Records Act.....	1
I. Chapter One: Public Records Defined.....	2
A. What is a “Public Office”?.....	2
1. Statutory Definition - R.C. 149.011(A).....	2
2. Private Entities Can Be “Public Offices”.....	3
3. Quasi-Agency - A Private Entity, Even if not a “Public Office,” Can Be “A Person Responsible for Public Records”.....	3
4. Public Office is Responsible for Its Own Records.....	4
B. What are “Records”?.....	4
1. Statutory Definition - R.C. 149.011(G).....	4
2. Records and Non-Records.....	4
3. The Effect of “Actual Use”.....	6
4. “Is This Item a Record?” - Some Common Applications.....	6
C. What is a “Public Record”.....	8
1. Statutory Definition - R.C. 149.43(A)(1).....	8
2. What “Kept By” Means.....	8
D. Exceptions.....	9
II. Chapter Two: Requesting Public Records.....	10
A. Rights and Obligations of a Public Records Requester.....	10
1. “Any Person” May Make a Request.....	10
2. Proper Request for Specific, Existing Records.....	10
3. Unless a Specific Law Provides Otherwise, Requests can be for any Purpose, and Need not Identify the Requestor or be Made in Writing.....	11
4. Requester Choices of Media on Which Copies are Made.....	11
5. Requester Choices of Delivery or Transmission of Copies.....	12
6. Other Rights and Obligations of Requesters.....	12
B. Rights and Obligations of a Public Office.....	12
1. Organization and Maintenance of Public Records.....	12
2. Request Must be for Specific, Existing Records.....	13
3. Prompt Inspection, or Copies Within a Reasonable Period of Time.....	13
4. Inspection at No Cost During Regular Business Hours.....	14
5. Copies and Delivery or Transmission, “At Cost”.....	15
6. Clarifying the Request.....	15
7. Duty to Withhold Certain Records.....	17
8. Option to Withhold or Release Certain Records.....	17
9. No Duty to Release Non-Records.....	17
10. Denial of a Request, Redaction, & Public Offices’ Duty of Notice.....	18
11. Burden or Expense of Compliance.....	19
12. Other Rights and Obligations of Public Offices.....	19
C. Statutes That Modify General Rights and Duties.....	20
1. Particular Records.....	20
2. Particular Public Offices.....	20
3. Particular Requesters or Purposes.....	21
4. Modified Records Access by Certain Requesters.....	21
a. Prison inmates.....	21
b. Commercial Requesters.....	22

Ohio Sunshine Laws 2012

c. Journalists	22
5. Modified Access to Certain Public Offices' Records	24
a. Bulk Commercial Requests from Ohio Bureau of Motor Vehicles.....	24
b. Copies of Coroner's Records.....	24
III. Chapter Three: Exceptions to the Required Release of Public Records.....	26
A. Categories of Exceptions	26
1. "Must Not Release"	26
2. "May Release, But May Choose to Withhold"	26
B. Multiple and Mixed Exceptions	27
C. Waiver of an Exception.....	27
D. Applying Exceptions.....	27
E. Exceptions Enumerated in the Public Records Act.....	28
F. Exceptions Affecting Personal Privacy.....	32
1. Constitutional Right to Privacy	32
2. Personal Information Listed Online.....	33
3. Ohio Personal Information Systems Act (PISA)	34
G. Exceptions Created by Other Laws (by Topic).....	36
1. Attorney-Client Privilege, Discovery, and Other Litigation Items	36
a. Attorney-Client Privilege.....	36
b. Criminal Discovery.....	37
c. Civil Discovery.....	37
d. Prosecutor and Government Attorney Files (Trial Preparation and Work Product)	38
e. Settlement Agreements and Other Contracts.....	39
2. Municipal Income Tax Returns	39
3. Trade Secrets.....	39
4. Juvenile Records	40
5. Social Security Numbers.....	41
6. Student Records.....	42
7. Infrastructure & Security Records.....	43
a. Infrastructure Records.....	43
b. Security Records	44
8. Contractual Confidentiality	44
9. Protective Orders & Sealed/Expunged Court Records	44
10. Grand Jury Records	45
11. Copyright Prohibitions to Disclosure.....	45
12. EMS Run Sheets.....	46
13. FOIA Does Not Apply to Ohio Public Offices	46
14. Driver's Privacy Protection	46
IV. Chapter Four: Enforcement and Liabilities	47
A. Public Records Act Statutory Remedies	47
1. Parties.....	47
2. Where to File.....	47
3. When to File.....	47
4. Requirements to Prevail	47
B. Liabilities of the Public Office.....	48
1. Attorney Fees.....	48
2. Amount of Fees.....	49
3. Statutory Damages	49
4. Recovery of Deleted E-mail Records	49
5. Reduction of Attorney Fees and Civil Penalty	50
C. Liabilities Applicable to Either Party.....	50
1. Frivolous Conduct.....	50

Ohio Sunshine Laws 2012

2. Civil Rule 11.....	51
V. Chapter Five: Other Obligations of a Public Office.....	52
A. Records Management.....	52
1. Records Management Programs.....	53
2. Records Retention and Disposition.....	54
3. Liability for Unauthorized Destruction, Damage, or Disposal of Records.....	55
4. Availability of Records Retention Schedules.....	56
B. Records Retention - Practical Pointers.....	56
1. Fundamentals.....	56
2. Managing Records in Five Easy Steps:.....	56
a. Conduct a Records Inventory.....	56
b. Categorize Records by Record Series.....	57
c. Decide How Long to Keep Each Record Series.....	57
d. Dispose of Records on Schedule.....	57
e. Review Schedules Regularly and Revise, Delete, or Create New Ones as the Law and the Office's Operations Change.....	58
C. In Summary: Practical Pointers for Public Offices.....	58
D. Helpful Resources for Local Government Offices.....	58
E. Helpful Resources for State Government Offices.....	59
1. Ohio Department of Administrative Services Records Management Program.....	59
2. The Ohio Historical Society, State Archives.....	59
F. Helpful Resources for All Government Offices.....	59
G. Public Records Policy.....	60
H. Required Public Records Training for Elected Officials.....	60
VI. Chapter Six: Special Topics.....	62
A. CLEIRs: Confidential Law Enforcement Investigatory Records	
Exception.....	62
1. CLEIRs Defined.....	62
2. Determining whether the CLEIRs Exception Applies.....	62
B. Employment Records.....	68
1. Non-Records.....	68
2. Names and Dates of Birth of Public Officials and Employees.....	68
3. Resumes and Application Materials.....	69
4. Background Investigations.....	69
5. Evaluations and Disciplinary Records.....	70
6. Physical Fitness, Psychiatric, and Polygraph Examinations.....	70
7. Medical Records.....	70
8. School Records.....	71
9. Social Security Numbers and Taxpayer Records.....	71
10. Residential and Familial Information of Listed Safety Officers.....	71
11. Bargaining Agreement Provisions.....	72
12. Statutes Specific to a Particular Agency's Employees.....	72
C. Residential and Familial Information of Covered Professions that are not	
Public Records.....	74
D. Court Records.....	76
1. Courts' Supervisory Power Over Their Own Records.....	76
2. Rules of Court Procedure.....	76
3. Sealing Statutes.....	76
4. Non-Records.....	77
5. General Court Records Retention.....	77
E. HIPAA & HITECH.....	79
1. HIPAA Definitions.....	79

Ohio Sunshine Laws 2012

2.	HIPAA Does Not Apply Where Ohio Public Records Act Requires Release	79
3.	PHI in Personnel Files.....	80
4.	PHI in Law Enforcement Investigations	80
5.	PHI in Dispatch Calls.....	80
6.	PHI Disclosure for Health Care Operations.....	81
7.	PHI in Directory Information.....	81
	Overview of the Ohio Open Meetings Act.....	82
I.	Chapter One: “Public Body” and “Meeting” Defined.....	83
A.	“Public Body”	83
1.	Statutory Definition –R.C. 121.22 (B)(1)	83
2.	Identifying Public Bodies	83
3.	Close-up - Applying the Definition of “Public Body”	84
4.	When the Open Meetings Act Applies to Private Bodies	85
B.	Entities to Which the Open Meetings Act Does Not Apply.....	85
1.	Public Bodies that are NEVER Subject to the Open Meetings Act	85
2.	Public Bodies that are SOMETIMES Subject to the Open Meetings Act.....	85
C.	“Meeting”	86
1.	Definition	86
2.	Close-up: Applying the Definition of “Meeting”	89
II.	Chapter Two: Duties of a Public Body.....	91
A.	Openness.....	91
1.	Where Meetings May be Held	91
2.	Method of Voting.....	91
3.	Right to Hear, but Not to be Heard or to Disrupt.....	91
4.	Audio and Video Recording	92
5.	Executive Sessions	92
B.	Notice	92
1.	Types of Meetings and Notice Requirements	92
2.	Rules Requirement	93
3.	Notice by Publication	94
C.	Minutes	94
1.	Content of Minutes	94
2.	Making Minutes Available.....	94
3.	Medium on Which Minutes are Kept.....	94
D.	Modified Duties of Public Bodies Under Special Circumstances.....	95
1.	Declared Emergency.....	95
2.	Municipal Charters	95
III.	Chapter Three: Executive Session.....	96
A.	General Principles	96
B.	Permissible Discussion Topics	97
1.	Certain Personnel Matters.....	97
2.	The Purchase or Sale of Property	98
3.	Pending or Imminent Court Action	98
4.	Collective Bargaining Matters	98
5.	Matters Required to be Kept Confidential.....	98
6.	Security Matters	99
7.	Hospital Trade Secrets.....	99
8.	Veterans Service Commission Applications	99
C.	Proper Procedures for Executive Session.....	99
1.	The Motion	99

Ohio Sunshine Laws 2012

2.	The Roll Call Vote.....	99
IV.	Chapter Four: Enforcement & Remedies.....	101
A.	Enforcement	101
1.	Injunction	101
2.	Mandamus	102
B.	Remedies	102
1.	Invalidity	102
2.	Mandatory Civil Forfeiture.....	103
3.	Court Costs and Attorney Fees	103

Appendices

A.	Statutes.....	A1-47
B.	Statutory Exceptions.....	B1-27
C.	Ohio Attorney General Opinions: Public Records Act.....	C1-17
D.	Ohio Attorney General Opinions: Open Meetings Act.....	D1-6

The Ohio Public Records Act

Overview of the Ohio Public Records Act

Ohio law has long provided for public scrutiny of state and local government records.¹

Ohio's Public Records Act details how to request public records. The Act also excludes some records from disclosure and enforces production when an office denies a proper public records request. The pages that follow will explain the details of this process; below is an overview of the basic principles.

Any person may request to inspect or obtain copies of public records from a public office that keeps those records. A public office must organize and maintain its public records in a manner that meets its duty to respond to public records requests, and must keep a copy of its records retention schedule at a location readily available to the public. When it receives a proper public records request, and unless part or all of a record is exempt from release, a public office must provide inspection of the requested records promptly and at no cost, or provide copies at cost within a reasonable period of time.

Unless a specific law states otherwise, a requester does not have to provide a reason for wanting records, provide his or her name, or make the request in writing. However, the request does have to be clear and specific enough for the public office to reasonably identify what public records the requester seeks. A public office can refuse a request if the office no longer keeps the records (pursuant to their records retention schedule), if the request is for documents that are not records of the office, or if the requester does not revise an ambiguous or overly broad request.

The General Assembly has passed a number of laws that protect certain records by requiring or permitting a public office to withhold them from public release. Where a public office invokes one of these exceptions, the office may only withhold a record or part of a record clearly covered by the exception, and must tell the requester what legal authority it is relying on to withhold the record.

A person who believes that a public office has wrongly denied him or her a public record may file a lawsuit against the public office. In this lawsuit, the office will have the burden of showing the court that any record it withheld was clearly subject to one or more valid exceptions. If it cannot, the court will order the public office to provide the record, and the public office may be subject to a civil penalty and payment of attorney fees.

¹ Ohio's state and local government offices follow Ohio's Public Records Act, found at R.C. 149.43. The federal Freedom of Information Act, 5 U.S.C. § 552, does not apply to state and local offices. See *State ex rel. O'Shea & Assoc. v. Cuyahoga Metro. Housing Auth.*, Ohio Supreme Court Case No. 2010-1536, 2012-Ohio-115, ¶ 38.

The Ohio Public Records Act

Chapter One: Public Records Defined

I. Chapter One: Public Records Defined

The Ohio Public Records Act applies only to “public records,” which the Act defines as “records kept by a public office.”² When making or responding to a public records request, it is important to first establish whether the items sought are really “records,” and if so, whether they are currently being “kept by” an organization that meets the definition of a “public office.” This chapter will review the definitions of each of these key terms and how Ohio courts have applied them.

One of the ways that the Ohio General Assembly removes certain records from the operation of the Ohio Public Records Act is to simply remove them from the definition of “public record.” Chapter Three addresses how exceptions to the Act are created and applied.

A. What is a “Public Office”?

1. Statutory Definition - R.C. 149.011(A)

“Public office” includes any state agency, public institution, political subdivision, or other organized body, office, agency, institution, or entity established by the laws of this state for the exercise of any function of government.³ An organization that meets the statutory definition of a “public body” (see Open Meetings Act, *infra*) does not automatically meet the definition of a “public office.”⁴

This definition includes all state and local government offices, but also many agencies not directly operated by a political subdivision. Examples of entities that have been determined to be “public offices” (prior to the *Oriana House*⁵ decision) include:

- Some public hospitals;⁶
- Community action agencies;⁷
- Private non-profit water corporations supported by public money;⁸
- Private non-profit PASSPORT administrative agencies;⁹
- Private equity funds that receive public money;¹⁰
- Non-profit corporations that receive and solicit gifts for a public university and receive support from taxation;¹¹
- Private non-profit county ombudsman offices;¹² and
- County emergency medical services organizations.¹³

² R.C. 149.43(A)(1)

³ JobsOhio, the nonprofit corporation formed under R.C. 187.01, is not a public office for purposes of the Public Records Act, pursuant to R.C. 187.03(A).

⁴ *State ex rel. Am. Civ. Liberties Union of Ohio v. Cuyahoga Cty. Bd. Comm.*, 128 Ohio St. 256, 2011-Ohio-625, ¶¶ 35-38.

⁵ *State ex rel. Oriana House, Inc. v. Montgomery*, 110 Ohio St.3d 456, 2006-Ohio-4854. Similar entities today should be evaluated based on current law.

⁶ *State ex rel. Dist. 1199 v. Lawrence County Gen. Hosp.*, 83 Ohio St.3d 351, 1998-Ohio-49; *but compare State ex rel. Stys v. Parma Community General Hosp.*, 93 Ohio St.3d 438, 2001-Ohio-1582 (particular hospital deemed not a “public office”); *State ex rel. Farley v. McIntosh*, 134 Ohio App.3d 531 (2nd Dist. 1998)(court appointed psychologist not “public office”).

⁷ *State ex rel. Toledo Blade Co. v. Economic Opportunity Planning Association*, Lucas C.P., 61 Ohio Misc.2d 631 (Feb. 22, 1990).

⁸ *Sabo v. Hollister Water Association*, 4th Dist. No. 93 CA 1582 (Jan. 12, 1994).

⁹ 1995 Ohio Op. Att’y Gen. No. 001.

¹⁰ *State ex rel. Toledo Blade Co. v. Ohio Bureau of Workers Compensation*, 106 Ohio St.3d 113, 2005-Ohio-3549 (limited-liability companies organized to receive state-agency contributions were public offices for purposes of the Public Records Act).

¹¹ *State ex rel. Toledo Blade Co. v. University of Toledo Foundation*, 65 Ohio St.3d 258 (1992).

¹² *State ex rel. Strothers v. Wertheim*, 80 Ohio St.3d 155, 1997-Ohio-349.

¹³ 1999 Ohio Op. Att’y Gen. No. 006.

The Ohio Public Records Act

Chapter One: Public Records Defined

2. Private Entities Can Be “Public Offices”

If there is clear and convincing evidence that a private entity is the “functional equivalent” of a public office, that entity will be subject to the Ohio Public Records Act.¹⁴ Under the functional equivalency test, a court must analyze all pertinent factors, including: (1) whether the entity performs a governmental function, (2) the level of government funding, (3) the extent of government involvement or regulation, and (4) whether the entity was created by the government or to avoid the requirements of the Public Records Act.¹⁵ The functional equivalency test “is best suited to the overriding purpose of the Public Records Act, which is ‘to allow public scrutiny of public offices, not of all entities that receive funds that at one time were controlled by the government.’”¹⁶ In general, the more a private entity is funded, controlled, regulated and/or created by government, and the greater the extent that the entity is performing a governmental function, the more likely a court will determine that it is a “public institution” and therefore a “public office” subject to the Ohio Public Records Act.

3. Quasi-Agency - A Private Entity, Even if not a “Public Office,” Can Be “A Person Responsible for Public Records”

When a public office contracts with a private entity to perform government work, the resulting records may be public records, even if they are solely in the possession of the private entity.¹⁷ Resulting records are public records when three conditions are met: (1) the private entity prepared the records to perform responsibilities normally belonging to the public office, (2) the public office is able to monitor the private entity’s performance, *and* (3) the public office may access the records itself.¹⁸ Under these circumstances, the public office is subject to requests for these public records under its jurisdiction, and the private entity itself may have become a “person”¹⁹ responsible for public records²⁰ for purposes of the Ohio Public Records Act.²¹ For example, a public office’s obligation to turn over application materials and resumes extends to records of private search firms the public office used in the hiring process.²² Even where the public office does not have control over or access

¹⁴ *State ex rel. Oriana House, Inc. v. Montgomery*, 110 Ohio St.3d 456, 2006-Ohio-4854, paragraph one of the syllabus; *State ex rel. Am. Civ. Liberties Union of Ohio v. Cuyahoga Cty. Bd. Comm.*, 128 Ohio St. 256, 2011-Ohio-625, ¶ 267 (no clear and convincing evidence that private groups comprising unpaid, unguided county leaders and citizens, not created by governmental agency, submitting recommendations as coalitions of private citizens were functionally equivalent to public office).

¹⁵ *State ex rel. Oriana House, Inc. v. Montgomery*, 110 Ohio St.3d 456, 2006-Ohio-4854, paragraphs one and two of syllabus; *see also State ex rel. Repository v. Nova Behavioral Health, Inc.*, 112 Ohio St.3d 338, 2006-Ohio-6713.

¹⁶ *State ex rel. Repository v. Nova Behavioral Health, Inc.*, 112 Ohio St.3d 338, 2006-Ohio-6713, ¶24; *State ex rel. Oriana House, Inc. v. Montgomery*, 110 Ohio St.3d 456, 2006-Ohio-4854, ¶36 (“It ought to be difficult for someone to compel a private entity to adhere to the dictates of the Public Records Act, which was designed by the General Assembly to allow public scrutiny of public offices, not of all entities that receive funds that at one time were controlled by the government.”); *State ex rel. Bell v. Brooks*, 130 Ohio St. 3d 87, 2011-Ohio-4897, ¶¶ 15-29 (joint self-insurance pool for counties and county governments found not the functional equivalent of a public office); *see also State ex rel. Dayton Tea Party v. Ohio Mun. League*, 129 Ohio St.3d 1471, 2011-Ohio-4751 (granting a motion to dismiss in a mandamus case, published without opinion, where the Court rejected the argument that the Ohio Municipal League and Township Association were not the functional equivalents of public offices); *State ex rel. Dist. Eight Regional Org. Comm.*, 192 Ohio App. 3d, 2011-Ohio-312 (1st Dist.) (home weatherization program administered by private non-profit community-action agency found not to be functional equivalent of public office).

¹⁷ *State ex rel. Cincinnati Enquirer v. Krings*, 93 Ohio St.3d 654, 660, 2001-Ohio-1895; *State ex rel. Gannett Satellite Info. Network v. Shirey*, 76 Ohio St.3d 1224 (1996).

¹⁸ *State ex rel. Carr v. City of Akron*, 112 Ohio St.3d 351, 2006-Ohio-6714, ¶36 (finding that firefighter promotional examinations kept by testing contractor were still public record); *State ex rel. Cincinnati Enquirer v. Krings*, 93 Ohio St.3d 654, 657, 2001-Ohio-1895; *State ex rel. Mazzaro v. Ferguson*, 49 Ohio St.3d 37 (1990) (outcome overturned by subsequent amendment of R.C. 4701.19(B)); *but see State ex rel. Am. Civ. Liberties Union of Ohio v. Cuyahoga Cty. Bd. Comm.*, 128 Ohio St. 256, 2011-Ohio-625, ¶¶.52-54 (quasi-agency theory did not apply where private citizen group submitted recommendations but owed not duty to government office to do so).

¹⁹ “Person” includes an individual, corporation, business trust, estate, trust, partnership, and association. R.C. 1.59(C).

²⁰ *State ex rel. Toledo Blade Co. v. Ohio Bureau of Workers’ Comp.*, 106 Ohio St.3d 113, 2005-Ohio-3549, ¶20; R.C. 149.43(C) permits a mandamus action against either “a public office or the person responsible for the public record” to compel compliance with the Public Records Act. This provision manifests an intent to afford access to public records, even when a private entity is responsible for the records; *State ex rel. Cincinnati Enquirer v. Krings*, 93 Ohio St.3d 654, 658, 2001-Ohio-1895; *State ex rel. Dist. Eight Regional Org. Comm.*, 192 Ohio App. 3d, 2011-Ohio-312 (1st Dist.) (home weatherization program administered by private non-profit community-action agency found not to be person responsible for public records).

²¹ *E.g.*, R.C. 149.43(B)(1)-(9),(C)(1),(C)(2).

²² *State ex rel. Gannett Satellite Info. Network v. Shirey*, 78 Ohio St.3d 400, 1997-Ohio-206; for additional discussion, see Chapter Six: B. Application to Employment Records.

The Ohio Public Records Act

Chapter One: Public Records Defined

to such records, the records may still be public.²³ A public office cannot avoid its responsibility for public records by transferring custody of records or the record-making function to a private entity.²⁴ However, a public office may not be responsible for records of a private entity that performs related functions that are not activities of the public office.²⁵ A person who works in a governmental subdivision and discusses a request is not thereby a “person responsible” for records outside of their own public office within the governmental subdivision.²⁶

4. Public Office is Responsible for Its Own Records

Only a public office or person who is actually responsible for the record sought is responsible for providing inspection or copies.²⁷ When statutes impose a duty on a particular official to oversee records, that official is the “person responsible” within the meaning of the Public Records Act.²⁸ A requester may wish to avoid forwarding delays by initially asking a public office to whom in the office they should make the public records request, but the courts will construe the Public Records Act liberally in favor of broad access when, for example, the request is served on any member of a committee from which the requester seeks records.²⁹ The same document may be kept as a record by more than one public office.³⁰ One appellate court has held that one public office may provide responsive documents on behalf of several related public offices that receive the same request and are keeping identical documents as records.³¹

B. What are “Records”?

1. Statutory Definition - R.C. 149.011(G)

The term “records” includes any document, device, or item, regardless of physical form or characteristic, including an electronic record as defined in R.C. 1306.01, created or received by or coming under the jurisdiction of any public office of the state or its political subdivisions, which serves to document the organization, functions, policies, decisions, procedures, operations, or other activities of the office.

2. Records and Non-Records

If a document or other item does not meet all three parts of the definition of a “record,” then it is a non-record and is not subject to the Ohio Public Records Act or Ohio’s records retention requirements. The next paragraphs explain how items in a public office might meet or fail to meet the three parts of the definition of a record in R.C. 149.011(G).³²

²³ *State ex rel. Gannett Satellite Info. Network v. Shirey*, 78 Ohio St.3d 400, 402-03, 1997-Ohio-206 (despite a lack of proof of public office’s ability to access search firm’s records or monitor performance, requested resumes were still public records).

²⁴ *State ex rel. Cincinnati Enquirer v. Krings*, 93 Ohio St.3d 654, 659, 2001-Ohio-1895; *State ex rel. Gannett Satellite Info. Network v. Shirey*, 78 Ohio St.3d 400, 403, 1997-Ohio-206.

²⁵ *State ex rel. Rittner v. Foley*, No. L-08-1328, 2009-Ohio-520 (6th Dist.) (public school system not responsible for records kept by private alumni association).

²⁶ *State ex rel. Keating v. Skeldon*, No. L-08-1414, 2009-Ohio-2052 (6th Dist.) (assistant prosecutor and county public affairs liaison not “persons responsible” for records of county dog warden).

²⁷ *State ex rel. Chatfield v. Flaatt*, No. 11-CA-6 2011-Ohio-4659, ¶ 8 (5th Dist.); *Cvijetinovic v. Cuyahoga Cty. Auditor*, No. 96055, 2011-Ohio-1754 (8th Dist.).

²⁸ *State ex rel. Mothers Against Drunk Drivers v. Gosser*, 20 Ohio St.3d 30 (1985), paragraph two of the syllabus.

²⁹ *State ex rel. Am. Civ. Liberties Union of Ohio v. Cuyahoga Cty. Bd. Comm.*, 128 Ohio St. 256, 2011-Ohio-625, ¶¶ 33-34.

³⁰ *State v. Sanchez*, 79 Ohio App. 3d 133, 136 (6th Dist. 1992).

³¹ *State ex rel. Cushion v. Massillon*, No. 2010CA00199, 2011-Ohio-4749 (5th Dist.), *appeal not allowed* 2012-Ohio-136, ¶¶ 81-86.

³² See *State ex rel. Data Trace Info. Svcs. v. Cuyahoga Cty. Fiscal Offcr.*, Ohio Supreme Court Case No. 2010-2029, 2012-Ohio-753, ¶¶ 28-41 for a detailed applications of the definition of “records” to the electronic records of one public office.

The Ohio Public Records Act

Chapter One: Public Records Defined

“Any document, device, or item, regardless of physical form or characteristic, including an electronic record as defined in section 1306.01 of the Revised Code . . .”

This first element of the definition of a record focuses on the existence of a recording medium; in other words, something that contains information in fixed form. The physical form of an item does not matter so long as it can record information. A paper or electronic document, e-mail,³³ video,³⁴ map, blueprint, photograph, voice mail message, or any other reproducible storage medium could be a record. This element is fairly broad. With the exception of one’s thoughts and unrecorded oral communication, most public office information is stored on a fixed medium of some sort. A request for unrecorded or not-currently-recorded information (a request for advice, interpretation, referral, or research)³⁵ made to a public office, rather than a request for a specific existing document, device, or item containing such information, would fail this part of the definition of a “record.”³⁶ A public office has discretion to determine the form in which it will keep its records.³⁷

“. . . created, received by, or coming under the jurisdiction of a public office . . .”

It is usually clear when items are created or received by a public office. However, even if an item is not in the public office’s physical possession, it may still be considered a “record” of that office.³⁸ If records are held or created by another entity that is performing a public function for a public office, those records may be “under the public office’s jurisdiction.”³⁹

“. . . which serves to document the organization, functions, policies, decisions, procedures, operations, or other activities of the office.”

In addition to obvious non-records such as junk mail and electronic “spam,” some items found in the possession of a public office do not meet the definition of a record because they do not “document the activities of a public office.”⁴⁰ It is the message or content, not the medium on which it exists, that makes a document a record of a public office.⁴¹ The Ohio Supreme Court has noted that “disclosure [of non-records] would not help to monitor the conduct of state government.”⁴² Some items that have been found not to “document the activities,” etc. of public offices include public employee home

³³ *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶21 (e-mail messages constitute electronic records under R.C.1306.01(G)).

³⁴ *State ex rel. Harmon v. Bender*, 25 Ohio St.3d 15, 17 (1986).

³⁵ *State ex rel. Kerner v. State Teachers Retirement Bd.*, 82 Ohio St.3d 273, 1998-Ohio-242 (relator requested names and documents of a class of persons who were enrolled in the State Teachers Retirement System but the court determined that that information did not exist in record form); *State ex rel. Lanham v. Ohio Adult Parole Auth.*, 80 Ohio St.3d 425, 427, 1997-Ohio-104 (inmates requested “qualifications of APA members”).

³⁶ *State ex rel. White v. Goldsberry*, 85 Ohio St.3d 153, 154, 1999-Ohio-447 (a public office has “no duty under R.C. 149.43 to create new records by searching for and compiling information from existing records.” Requested records of peremptory strikes during relator’s trial did not exist, and the court had no obligation to create responsive records); *Capers v. White*, 8th Dist. No. 80713 (Apr. 17, 2002) (requests for information are not enforceable in a public records mandamus).

³⁷ *State ex rel. Recodat Co. v. Buchanan*, 46 Ohio St.3d 163, 164 (1989).

³⁸ *State ex rel. Cincinnati Enquirer v. Krings*, 93 Ohio St.3d 654, 660, 2001-Ohio-1895 (requested stadium cost-overrun records were within jurisdiction of county board and were public records regardless of whether they were in the possession of the county, or the construction companies).

³⁹ *State ex rel. Cincinnati Enquirer v. Krings*, 93 Ohio St.3d 654, 2001-Ohio-1895; *State ex rel. Mazzaro v. Ferguson*, 49 Ohio St.3d 37, 39 (1990) (“we hold that the records [of an independent certified public accountant] are within the auditor’s jurisdiction and that he is subject to a writ of mandamus ordering him to make them available for inspection.”).

⁴⁰ *State ex rel. Dispatch Printing Co. v. Johnson*, 106 Ohio St.3d 160, 2005-Ohio-4384, ¶25 (citations omitted); *State ex rel. Fant v. Enright*, 66 Ohio St.3d 186, 188 (1993) (“To the extent that any item . . . is not a ‘record,’ i.e., does not serve to document the organization, etc., of the public office, it is not a public record and need not be disclosed.”).

⁴¹ *State ex rel. Margolius v. Cleveland*, 62 Ohio St.3d 456, 461 (1992).

⁴² *State ex rel. Dispatch v. Johnson*, 106 Ohio St.3d 160, 2005-Ohio-4384, ¶27 (citing *State ex rel. McCleary v. Roberts*, 88 Ohio St.3d 365, 369, 2000-Ohio-345 (names, addresses, and other personal information kept by city recreation and parks department regarding children who used city’s recreational facilities are not public records)).

The Ohio Public Records Act

Chapter One: Public Records Defined

addresses kept by the employer solely for administrative (i.e. management) convenience,⁴³ retired municipal government employee home addresses kept by the municipal retirement system,⁴⁴ personal calendars and appointment books,⁴⁵ juror contact information and other juror questionnaire responses,⁴⁶ personal information about children who use public recreational facilities,⁴⁷ and non-record items and information contained in employee personnel files.⁴⁸ Similarly, proprietary software needed to access stored records on magnetic tapes or other similar format, which meets the first two parts of the definition, is a means to provide access, not a record, as it does not itself document the activities, etc. of a public office.⁴⁹ Personal correspondence that does not document any activity of the office is non-record. Finally, the Attorney General has opined that a piece of physical evidence in the hands of a prosecuting attorney (e.g., a cigarette butt) is not a record of that office.⁵⁰

3. The Effect of “Actual Use”

An item received by a public office is not a record simply because the public office *could* use the item to carry out its duties and responsibilities.⁵¹ However, if the public office *actually* uses the item, it may thereby document the office’s activities and become a record.⁵² For example, where a school board invited job applicants to send applications to a post office box, any applications received in that post office box did not become records of the office until the board retrieved and reviewed, or otherwise used and relied on them.⁵³ Personal, otherwise non-record correspondence that is actually used to document a decision to discipline a public employee qualifies as a “record.”⁵⁴

4. “Is This Item a Record?” - Some Common Applications

E-mail

A public office must analyze an e-mail message like any other item to determine if it meets the definition of a record. As electronic documents, all e-mails are items containing information stored on a fixed medium (the first part of the definition). If an e-mail is received by, created by, or comes under the jurisdiction of a public office (the second part of the definition), then its status as a record depends on the content of the message. If an e-mail created by, received by, or coming under the jurisdiction of a public office serves to document the organization, functions, etc. of the public office, then it meets the three parts of the definition of a record.⁵⁵ If an e-mail does not serve to document the activities of the office, then it does not meet the definition of a record.⁵⁶

⁴³ *Dispatch v. Johnson*, 106 Ohio St.3d 160, 2005-Ohio-4384 (home addresses of employees generally do not document activities of the office, but may in certain circumstances).

⁴⁴ *State ex rel. DeGroot v. Tilsley*, Ohio Supreme Court No. 2010-1285, 2011-Ohio-231.

⁴⁵ *International Union, United Auto., Aerospace & Agric. Implement Workers v. Voinovich*, 100 Ohio App.3d 372, 378 (10th Dist. 1995).

⁴⁶ *Akron Beacon Journal Printing Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117.

⁴⁷ *State ex rel. McCleary v. Roberts*, 88 Ohio St.3d 365, 369, 2000-Ohio-345.

⁴⁸ *Fant v. Enright*, 66 Ohio St.3d 186 (1993).

⁴⁹ *State ex rel. Recodot Co. v. Buchanan*, 46 Ohio St.3d 163, 165 (1989).

⁵⁰ 2007 Ohio Op. Att’y Gen. No. 034.

⁵¹ See, *State ex rel. Beacon Journal Publ’g Co. v. Whitmore*, 83 Ohio St.3d 61, 1998-Ohio-180.

⁵² *State ex rel. WBNS-TV, Inc. v. Dues*, 101 Ohio St.3d 406, 2004-Ohio-1497, ¶127 (judge used redacted information to decide whether to approve settlement); *State ex rel. Beacon Journal Publ’g Co. v. Whitmore*, 83 Ohio St.3d 61, 1998-Ohio-180 (judge read unsolicited letters but did not rely on them in sentencing defendant, therefore, letters did not serve to document any activity of the public office); *State ex rel. Sensel v. Leone*, 85 Ohio St.3d 152, 1999-Ohio-446 (unsolicited letters alleging inappropriate behavior of coach not “records”); *State ex rel. Carr v. Caltrider*, Franklin C.P. No. 00CVH07-6001, (May 17, 2001).

⁵³ *State ex rel. Cincinnati Enquirer v. Ronan*, 127 Ohio St.3d 236, 2010-Ohio-5680.

⁵⁴ *State ex rel. Bowman v. Jackson City School Dist.*, No. 10CA3, 2011-Ohio-2228 (4th Dist.).

⁵⁵ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm’rs*, 120 Ohio St.3d 372, 2008-Ohio-6253 (public office e-mail can constitute public records under R.C. 149.011(G) and 149.43 if it documents the organization, policies, decisions, procedures, operations, or other activities of the public office).

⁵⁶ *State ex rel. Wilson-Simmons v. Lake County Sheriff’s Dept.*, 82 Ohio St.3d 37 (1998) (When an e-mail message does not serve to document the organization, functions, policies, procedures, or other activities of the public office, it is not a “record,” even if it was created by public employees on a public office’s e-mail system).

The Ohio Public Records Act

Chapter One: Public Records Defined

Although the Ohio Supreme Court has not ruled directly on whether communications of public employees to or from private e-mail accounts that otherwise meet the definition of a record are subject to the Ohio Public Records Act,⁵⁷ the issue is analogous to mailing a record from one's home, versus mailing it from the office – the location from which the item is sent does not change its status as a record. Records transmitted via e-mail, like all other records, must be maintained in accordance with the office's relevant records retention schedules, based on content.⁵⁸

Notes

Not every piece of paper on which a public official or employee writes something meets the definition of a record.⁵⁹ Personal notes generally do not constitute records.⁶⁰ Employee notes have been found not to be public records if they are:

- kept as personal papers, not official records;
- kept for the employee's own convenience (for example, to help recall events); **and**
- other employees did not use or have access to the notes.⁶¹

Such personal notes do not meet the third part of the definition of a record because they do not document the organization, functions, etc. of the public office. The Ohio Supreme Court has held in several cases that, in the context of a public court hearing or administrative proceeding, personal notes that meet the above criteria need not be retained as records because no information will be lost to the public.⁶² However, if any one of these factors does not apply (for instance if the notes are circulated as a draft), then the notes are likely to be considered a record.

Drafts

If a draft document kept by a public office meets the defining criteria of a record, it is subject to both the Public Records Act and records retention law.⁶³ For example, the Ohio Supreme Court found that a written draft of an oral collective bargaining agreement submitted to city council for its approval documented the city's version of the oral agreement and therefore met the definition of a record.⁶⁴ A public office may address the length of time it must keep drafts through its records retention schedules.⁶⁵ The cases finding drafts to be records involve the sharing of the document with others,

⁵⁷ *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶23 (relator conceded that that e-mail messages created or received by her in her capacity as state representative that document her work-related activities constitute records subject to disclosure under R.C. 149.43 regardless of whether it was her public or her private e-mail account that received or sent the e-mail messages).

⁵⁸ *State, ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶21, fn. 1 ("Our decision in no way restricts a public office from disposing of items, including transient and other documents (e.g., e-mail messages) that are no longer of administrative value and are not otherwise required to be kept, in accordance with the office's properly adopted policy for records retention and disposal. See, R.C. 149.351. Nor does our decision suggest that the Public Records Act prohibits a public office from determining the period of time after which its e-mail messages can be routinely deleted as part of the duly adopted records-retention policy.").

⁵⁹ *International Union, United Auto., Aerospace & Agric. Implement Workers v. Voinovich*, 100 Ohio App.3d 372, 376 (10th Dist. 1995) (governor's logs, journals, calendars, and appointment books not "records").

⁶⁰ *State ex rel. Cranford v. Cleveland*, 103 Ohio St.3d 196, 2004-Ohio-4884, ¶22 (notes taken during public employee's pre-disciplinary conference not "records").

⁶¹ *State ex rel. Cranford v. Cleveland*, 103 Ohio St.3d 196, 2004-Ohio-4884, ¶¶9-23; *State ex rel. Steffen v. Kraft*, 67 Ohio St.3d 439, 440, 1993-Ohio-32; *Barnes v. Cols., Ohio Civil Serv. Comm.*, No. 10AP-637, 2011-Ohio-2808 (10th Dist.), *discretionary appeal not allowed*, 2011-Ohio-5605 (police promotional exam assessors' notes).

⁶² Personal notes, if not physically "kept by" the public office, would also not fit that defining requirement of a "public record." For additional discussion see, Chapter One: E. Public Record.

⁶³ *Kish v. City of Akron*, 109 Ohio St.3d 162, 2006-Ohio-1244, ¶20 ("document need not be in final form to meet the statutory definition of 'record'"); *State ex rel. Cincinnati Enquirer v. Dupuis*, 98 Ohio St.3d 126, 2002-Ohio-7041, ¶20 ("even if a record is not in final form, it may still constitute a 'record' for purposes of R.C. 149.43 if it documents the organization, policies, functions, decisions, procedures, operations, or other activities of a public office."); see also, *State ex rel. Wadd v. City of Cleveland*, 81 Ohio St.3d 50, 53, 1998-Ohio-444 (granting access to preliminary, unnumbered accident reports not yet processed into final form); *State ex rel. Cincinnati Post v. Schweikert*, 38 Ohio St.3d 170 (1988) (granting access to preliminary work product that had not reached its final stage or official destination).

⁶⁴ *State ex rel. Calvary v. City of Upper Arlington*, 89 Ohio St.3d 229, 2000-Ohio-142.

⁶⁵ For additional discussion, see Chapter Six: E. Records Retention - Practical Pointers.

The Ohio Public Records Act

Chapter One: Public Records Defined

implying that an unfinished draft document held solely by the individual creating it may constitute only personal notes that do not yet document the activities of the office.⁶⁶

Computerized Database Contents

A database is an organized collection of related data. The Public Records Act does not require a public office to search a database for information and compile or summarize it to create new records.⁶⁷ However, if the public office already uses a computer program that can perform the search and produce the compilation or summary described by the requester, the Ohio Supreme Court has determined that that output already “exists” as a record for the purposes of the Ohio Public Records Act.⁶⁸ In contrast, where the public office would have to reprogram its computer system to produce the requested output, the Court has determined that the public office does not have that output as an existing record of the office.⁶⁹

C. What is a “Public Record”

1. Statutory Definition - R.C. 149.43(A)(1): “Public record” means records kept by any public office⁷⁰

This short definition joins the previously detailed definitions of “records” and “public office,” with the words “kept by.”

2. What “Kept By” Means

A record is only a public record if it is “kept by”⁷¹ a public office.⁷² Records that do not yet exist – future minutes of a meeting that has not yet taken place – are not records, much less public records, until actually in existence and “kept” by the public office. A public office has no duty to furnish records that are not in its possession or control.⁷³ Similarly, if the office kept a record in the past, but has properly disposed of the record and no longer keeps it, then it is no longer a record of that office.⁷⁴ For example, where a school board first received and then returned superintendent candidates’ application materials to the applicants, those materials were no longer “public records” responsive to a newspaper’s request.⁷⁵ But “so long as a public record is kept by a government agency, it can never lose its status as a public record.”⁷⁶

⁶⁶ *State ex rel. Dist. 1199, Health Care & Social Serv. Union, SEIU v. Gulyassy*, 107 Ohio App.3d 729, 733 (10th Dist. 1995).

⁶⁷ *State ex rel. White v. Goldsberry*, 85 Ohio St. 3d 153, 154, 1999-Ohio-447 (citing *State ex rel. Kerner v. State Teachers Retirement Bd.*, 82 Ohio St.3d 273, 1998-Ohio-242. See also, *Margolius v. City of Cleveland*, 62 Ohio St.3d 456, 461 (1992).

⁶⁸ *State ex rel. Scanlon v. Deters*, 45 Ohio St.3d 376, 379 (1989) (overruled on different grounds).

⁶⁹ *State ex rel. Kerner v. State Teachers Retirement Bd.*, 82 Ohio St.3d 273, 275, 1998-Ohio-242 (relator requested names and addresses of a described class of members in the STRS - the court found the agency would have had to reprogram its computers to create the requested records).

⁷⁰ The definition goes on to expressly include specific entities, by title, as ‘public offices’, and specific records as ‘public records’, as follows: “. . . including, but not limited to, state, county, city, village, township, and school district units, and records pertaining to the delivery of educational services by an alternative school in this state kept by the nonprofit or for-profit entity operating the alternative school pursuant to section 3313.533 of the Revised Code.” R.C. 149.43(A)(1).

⁷¹ Prior to July, 1985, the statute read, “records required to be kept by any public office,” which was a very different requirement, and which no longer applies to the Ohio definition of “public record.” *State ex rel. Cincinnati Post v. Schweikert*, 38 Ohio St.3d 170, 173 (1988).

⁷² *State ex rel. Hubbard v. Fuerst*, No. 94799, 2010-Ohio-2489 (8th Dist.) (A writ of mandamus will not issue to compel a custodian of public records to furnish records which are not in his possession or control.).

⁷³ *State ex rel. Striker v. Smith*, 129 Ohio St.3d 168, 2011-Ohio-2878, ¶ 28.

⁷⁴ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm’rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶21.

⁷⁵ See, *State ex rel. Cincinnati Enquirer v. Cincinnati Bd. of Educ.*, 99 Ohio St.3d 6, 2003-Ohio-2260, ¶12 (materials related to superintendent search were not “public records” where neither board nor search agency kept such materials); see also, *State ex rel. Johnson v. Oberlin City School Dist. Bd. of Educ.*, No. 08CA009517, 2009-Ohio-3526 (9th Dist.) (individual evaluations, used by board president to prepare a composite evaluation but not kept thereafter, were not “public records”); *Barnes v. Cols., Ohio Civil Serv. Comm.*, No. 10AP-637, 2011-Ohio-2808 (10th Dist.), *discretionary appeal not allowed*, 2011-Ohio-5605 (police promotional exam assessors’ notes).

⁷⁶ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm’rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶20 (quoting *State ex rel. Dispatch Printing Co. v. Columbus*, 90 Ohio St.3d 39, 41, 2000-Ohio-8).

The Ohio Public Records Act

Chapter One: Public Records Defined

D. Exceptions

Both within the Ohio Public Records Act and in separate statutes throughout the Ohio Revised Code, the General Assembly has identified items and information that are either removed from the definition of public record or are otherwise required or permitted to be withheld.⁷⁷ (See, Chapter Three: Exceptions to the Required Release of Public Records, for definitions, application, and examples of exceptions to the Public Records Act).

⁷⁷ R.C. 149.43(A)(1)(a-bb) (records, information, and other items that the General Assembly has determined are not public records or otherwise excepted).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

II. Chapter Two: Requesting Public Records

The Ohio Public Records Act sets out procedures, limits, and requirements designed to maximize requester success in obtaining access to public records and minimize the burden on public offices where possible. When making or responding to a public records request, it is important to be familiar with these procedures, limits and requirements so it is a smooth and cooperative process.

A. Rights and Obligations of a Public Records Requester

Any person can make a request for public records by asking a public office or person responsible for public records for specific, existing records. The requester may make a request in any manner the requester chooses: by phone, in person, or in an e-mail or letter. A public office cannot require the requester to identify him- or herself, or indicate why he or she is requesting the records unless a specific law requires it. Often, however, a discussion about the requester's purposes or interest in seeking certain information can aid the public office in locating and producing the desired records more efficiently.

1. "Any Person" May Make a Request

The requester need not be an Ohio or United States resident.⁷⁸ In fact, in the absence of a law to the contrary, foreign individuals and individuals living in a foreign country are entitled to inspect and copy public records.⁷⁹ The requester need not be an individual, but may be a corporation, government agency, or other body.⁸⁰

2. Proper Request for Specific, Existing Records

A requester must identify the records he or she is seeking "with reasonable clarity."⁸¹ The request must not be overly broad, and must describe what the requester is seeking "specifically and particularly."⁸² A court will not compel a public office to produce public records when the underlying request is ambiguous or overly broad.⁸³ For example, a request for "any and all records containing any reference whatsoever" to a particular person is an inappropriate public records request because it fails to identify the particular records sought.⁸⁴ (See Chapter Two: B. Rights and Obligations of Public Offices - 6. Clarifying the Request)

A requester must also request a record that actually exists at the time of the request,⁸⁵ not merely information the requester seeks to obtain.⁸⁶ For example, if a person asks a public office for a list of

⁷⁸ 2006 Ohio Op. Att'y Gen. No. 038.

⁷⁹ 2006 Ohio Op. Att'y Gen. No. 038.

⁸⁰ R.C. 1.59(C); 1990 Ohio Op. Att'y Gen. No. 050.

⁸¹ *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶17 (quoting *State ex rel. Morgan v. New Lexington*, 112 Ohio St.3d 33, 2006-Ohio-6365, ¶29); *State ex rel. Consumer News Serv., Inc. v. Worthington City Bd. of Edn.*, 97 Ohio St. 3d 58, 2002-Ohio-5311, ¶ 42.

⁸² *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶17; *State ex rel. Dillery v. Icsman*, 92 Ohio St.3d 312, 2001-Ohio-193; *Mitseff v. Wheeler*, 38 Ohio St. 3d 112 (1988); *State ex rel. Zauderer v. Joseph*, 62 Ohio App.3d 752 (10th Dist. 1989); *State ex rel. Dehler v. Spatny*, No. 2009-T-0075, 2010-Ohio-3052 (11th Dist.), *aff'd*, 2010-Ohio-5711; *State ex rel. Cushion v. Massillon*, No. 2010CA 00199, 2011-Ohio-4749 (5th Dist.), *appeal not allowed* 2012-Ohio-136, ¶¶ 52-55 (arbitrator fees paid to attorneys not included with particularity by request for records of legal fees or consulting fees).

⁸³ R.C. 149.43(B)(2); *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶19.

⁸⁴ *State ex rel. Dillery v. Icsman*, 92 Ohio St.3d 312, 314, 2001-Ohio-193.

⁸⁵ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm'rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶23 ("... in cases in which public records . . . are properly disposed of in accordance with a duly adopted records-retention policy, there is no entitlement to these records under the Public Records Act."); *State ex rel. Taxpayers Coalition v. Lakewood*, 86 Ohio St. 3d 385, 389-390, 1999-Ohio-114; *State ex rel. White v. Goldsberry*, 85 Ohio St.3d 153, 154, 1999-Ohio-447 (a public office has "no duty under R.C. 149.43 to create new records by searching for and compiling information from existing records."); *State ex rel. Cioffi v. Stuard*, No. 2009-T-0057, 2010-Ohio-829 (11th Dist.) (There was no violation of the Public Records Act when a Clerk of Courts failed to provide a hearing transcript that had never been created.).

⁸⁶ See, *Capers v. White*, 8th Dist No. 80713 (April 17, 2002) (requests for information are not enforceable in a public records mandamus); *State ex rel. Evans v. City of Parma*, 8th Dist No. 81236, 2003-Ohio-1159 (request for service calls from geographic area improper request); *State ex rel. Fant v. Tober*, 8th Dist No. 63737 (April 28, 1993) (office had no duty to seek out records which would contain information of interest to requester), affirmed by Ohio Sup. Ct. w/o opinion at 68 Ohio St.3d 117; see also, *State ex rel. Thomas v. Ohio State Univ.*, 71 Ohio St.3d 245, 1994-Ohio-261; *State ex rel. Rittner v. Fulton County*, No. F-10-020, 2010-Ohio-4055 (6th Dist.) (Improper request where requester sought only information on "how documents might be searched"); *Natl Fed'n of the Blind of Ohio v. Ohio Rehab. Serv. Comm'n*, No. 09AP-1177, 2010-Ohio-3384 (10th Dist.) (A request for

The Ohio Public Records Act

Chapter Two: Requesting Public Records

cases pending against it, but the office does not keep such a list, the public office is under no duty to create a list to respond to the request.⁸⁷ Additionally, there is no duty to provide records that were not in existence at the time of the request,⁸⁸ including those that later come into existence.⁸⁹

3. *Unless a Specific Law Provides Otherwise, Requests can be for any Purpose, and Need not Identify the Requestor or be Made in Writing*

A requester need not make a request for public records in writing, or identify him- or herself when making a request.⁹⁰ Requesters are not required to inspect or retrieve the records themselves; they may designate someone to inspect or receive copies of the requested records.⁹¹ In most circumstances, the requester need not specify the reason for the request,⁹² nor is there any requirement in the Ohio Public Records Act that a requester use particular wording to make a request.⁹³ Any requirement by the public office that the requester disclose his or her identity or the intended use of the requested public record constitutes a denial of the request.⁹⁴

However, the public office may ask requesters to provide their identity, or the intended use of the records, or make the request in writing, when the public office believes that any of these would help the public office identify, locate, or deliver the requested records. The public office must first let the requesters know that they may decline this option if they wish.⁹⁵ (See Chapter Two: B. Rights and Obligations of Public Offices - 6. Clarifying the Request)

4. *Requester Choices of Media on Which Copies are Made*

A requester must specify whether he or she would like to inspect the records or obtain copies.⁹⁶ If the requester asks for copies of the records, he or she has the right to choose the copy medium (paper, film, electronic file, etc.).⁹⁷ The requester can choose to have the record copied: (1) on paper, (2) in the same medium as the public office keeps them,⁹⁸ or (3) on any medium upon which the public office or person responsible for the public records determines the record can “reasonably be duplicated as an integral part of the normal operations of the public office...”⁹⁹ The public office may

information as to payments were made and received from state agencies was an improper request); *State ex rel. O’Shea & Assoc. Co., LPA v. Cuyahoga Metro. Hous. Auth.*, No. 93275, 2010-Ohio-3416 (8th Dist.) (A request for meetings that contained certain topics was an improper request for information and the public office was not required to seek out and retrieve those records which contain the information of interest to the requester).

⁸⁷ *Fant v. Flaherty*, 62 Ohio St.3d 426 (1992); *State ex rel. Fant v. Mengel*, 62 Ohio St.3d 197 (1991); *State ex rel. Welden v. Ohio St. Med. Bd.*, No. 11AP-139, 2011-Ohio-6560, ¶ 9 (10th Dist.) (because a list of addresses of every licensed physician did not exist, there was no clear legal duty to create such a record); *Pierce v. Dowler*, 12th Dist. No. CA93-08-024 (Nov. 1, 1993).

⁸⁸ *State ex rel. Striker v. Smith*, 129 Ohio St. 3d 168, 2011-Ohio-2878, ¶ 25; *State ex rel. Lanham v. Smith*, 112 Ohio St.3d 527, 2007-Ohio-609, ¶ 15; *State ex rel. Ohio Patrolmen’s Benevolent Assoc’n v. City of Mentor*, 89 Ohio St. 3d 440, 448, 2000-Ohio-214.

⁸⁹ *State ex rel. Taxpayers Coalition v. Lakewood*, 86 Ohio St. 3d 385, 392, 1999-Ohio-114; *State ex rel. Scanlon v. Deters*, 45 Ohio St. 3d 376 (1989); *Starks v. Wheeling Twp. Tr.*, Nos. 2008 CA 000037 and 2009 CA 000003, 2009-Ohio-4827 (5th Dist.).

⁹⁰ See, R.C. 149.43(B)(5).

⁹¹ *State ex rel. Sevayega v. Reis*, 88 Ohio St.3d 458, 459, 2000-Ohio-383; *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 427 (1994) (overruled on other grounds).

⁹² See, R.C. 149.43 (B)(5); see also, *Gilbert v. Summit County*, 104 Ohio St.3d 660, 2004-Ohio-7108, ¶10 (citing *State ex rel. Fant v. Enright*, 66 Ohio St.3d 186 (1993) (“[a] person may inspect and copy a ‘public record’ irrespective of his or her purpose for doing so.”)); *State ex rel. Consumer News Serv., Inc. v. Worthington City Bd. Of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311, ¶45 (purpose behind request to “inspect and copy public records is irrelevant.”); 1974 Ohio Op. Att’y Gen. No. 097; but compare, *State ex rel. Keller v. Cox*, 85 Ohio St.3d 279, 1999-Ohio-264 (police officer’s personal information was properly withheld from a criminal defendant who might use the information for “nefarious ends,” implicating constitutional right of privacy); R.C. 149.43(B)(5) (journalist seeking safety officer personal or residential information must certify disclosure would be in public interest).

⁹³ *Franklin County Sheriff’s Dep’t v. State Employment Relations Bd.*, 63 Ohio St.3d 498, 504 (1992) (“No specific form of request is required by R.C. 149.43.”).

⁹⁴ R.C. 149.43(B)(4).

⁹⁵ R.C. 149.43(B)(5).

⁹⁶ R.C. 149.43 (B); see also, generally, *Consumer News Servs., Inc. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2000-Ohio-5311; R.C. 149.43(B)(6)-(7).

⁹⁷ R.C. 149.43(B)(6); *State ex rel. Dispatch Printing Co. v. Morrow County Prosecutor’s Office*, 105 Ohio St.3d 172, 2005-Ohio-685, ¶12-13.

⁹⁸ *Gomez v. Ct. of Common Pleas*, No. 07-NO-341, 2007-Ohio-6433 (7th Dist.) (Although direct copies could not be made because the original recording device was no longer available, requester is still entitled to copies in available alternative format.).

⁹⁹ R.C. 149.43(B)(6).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

charge the requester the actual cost of copies made, and may require payment of copying costs in advance.¹⁰⁰

5. Requester Choices of Delivery or Transmission of Copies

A requester may personally pick up requested copies of public records, or may send a designee.¹⁰¹ Upon request, a public office must transmit copies of public records via the U.S. mail “or by any other means of delivery or transmission,” at the choice of the requester.¹⁰² The public office may require prepayment of postage or other delivery cost, as well as the cost of supplies used in mailing, delivery, or transmission.¹⁰³

6. Other Rights and Obligations of Requesters

A requester is entitled to prompt inspection of public records at all reasonable times during the regular business hours of the public office, to receive copies of public records within a reasonable period of time, and to access the public office's records retention schedules.¹⁰⁴ A requester may be required to revise an ambiguous or overly broad request with the help of the public office, or be offered the choice of giving additional information necessary to identify, locate, or deliver the requested records. Also, remember that, through legislation, the General Assembly may alter almost any general rights, obligations, or procedure in public records law for specific types of requesters, records, offices, or situations.¹⁰⁵ (See the Rights and Obligations of a Public Office segment in the next section for further discussion.)

B. Rights and Obligations of a Public Office

A public office must organize and maintain its public records so that it may make the records available in response to public requests, and must provide the public access to its records retention schedule. Upon receiving a public records request for specific, existing records, the public office must provide prompt inspection at no cost during regular business hours, or provide copies at cost within a reasonable period of time. The public office may withhold or redact specific records that are covered by an exception to the Ohio Public Records Act, but is required to give the requester an explanation, including legal authority, for each denial. The Ohio Public Records Act provides for negotiation and clarification to help identify, locate, and deliver requested records if: (1) a requester makes an ambiguous or overly broad request, or (2) the public office believes that asking for (a) the request in writing, or (b) the requester's identity or the intended use of the requested information would enhance the ability of the public office to provide the records. In addition to denials justified by exceptions, a public office may deny a request in the extreme circumstance where compliance would unreasonably interfere with the discharge of the office's duties.

1. Organization and Maintenance of Public Records

The Ohio Public Records Act requires public offices to organize and maintain public records “in a manner that they can be made available for inspection or copying” in response to public records requests.¹⁰⁶ The General Assembly has imposed this requirement in order to “facilitate broader access to public records.”¹⁰⁷ The Ohio Public Records Act does not require a public office or person

¹⁰⁰ R.C. 149.43(B)(1), (B)(6).

¹⁰¹ *State ex rel. Sevayega v. Reis*, 88 Ohio St.3d 458, 459, 2000-Ohio-383; *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 427 (1994).

¹⁰² R.C. 149.43(B)(7).

¹⁰³ R.C. 149.43(B)(7).

¹⁰⁴ R.C. 149.43(B)(1), (2).

¹⁰⁵ For additional discussion, see Chapter Two, Section C. “Statutes That Modify General Rights and Duties”.

¹⁰⁶ R.C. 149.43(B)(2). *State ex rel. Bardwell v. City of Cleveland*, 126 Ohio St.3d 195, 2010-Ohio-3267 (city police department did not fail to organize and maintain its public records in a manner available for inspection and copying when it kept pawnbroker reports on 3x5 notecards. While the Court noted that keeping these records on 8 1/2x11 paper could reduce delays in processing requests, there was no requirement to do so).

¹⁰⁷ R.C. 149.43(B)(2).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

responsible for public records to post those records online on the office's website.¹⁰⁸ A public office is not required to create new records to respond to a public records request, even if it is only a matter of compiling information from existing records.¹⁰⁹

A public office must have a copy of its current records retention schedule at a location readily available to the public.¹¹⁰ The records retention schedule can be a valuable tool for the public office to use to show a requester how the records kept by the office are organized and maintained, enabling the requester to describe records sought specifically enough for the office to identify them.

2. Request Must be for Specific, Existing Records

A public office need not fulfill requests that do not specifically and particularly describe which records a requester is seeking.¹¹¹ (See the corresponding duty of requesters in subsection A.2. of this Chapter.)

3. Prompt Inspection, or Copies Within a Reasonable Period of Time

There is no set, required time period for responding to a public records request. Instead, the requirement to provide "prompt" production of records for inspection, and to make copies available in a "reasonable amount of time,"¹¹² have both been interpreted by the courts as being "without delay" and "with reasonable speed,"¹¹³ with the reasonableness of the time taken in each case depending on the facts and circumstances of the particular request.¹¹⁴ These terms do not mean "immediately," or "without a moment's delay,"¹¹⁵ but the courts will find a violation of this requirement when an office cannot show that the time taken was reasonable.¹¹⁶ The following factors may contribute to the calculation of what is "prompt" or "reasonable" in a given circumstance:

¹⁰⁸ *State ex rel. Patton v. Rhodes*, 129 Ohio St. 3d 182, 2011-Ohio-3093, ¶¶ 15-16.

¹⁰⁹ *State ex rel. White v. Goldsberry*, 85 Ohio St.3d 153, 1999-Ohio-447; *State ex rel. Warren v. Warner*, 84 Ohio St.3d 432, 1999-Ohio-475; *State ex rel. Kerner v. State Teachers Retirement Bd.*, 82 Ohio St.3d 273, 1998-Ohio-242; *State ex rel. Wilson-Simmons v. Lake County Sheriff's Dept.*, 82 Ohio St.3d 37, 42 (1998); *State ex rel. Fant v. Mengel*, 62 Ohio St.3d 197 (1991).

¹¹⁰ R.C. 149.43(B)(2); for additional discussion, see Chapter Five, Section A.. "Records Management".

¹¹¹ *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788; *State ex rel. Dillery v. Icsman*, 92 Ohio St.3d 312, 2001-Ohio-193; *State ex rel. Zauderer v. Joseph*, 62 Ohio App.3d 752 (10th Dist. 1989).

¹¹² R.C. 149.43(B)(1); *Montgomery Cty. Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662, ¶10; *State ex rel. Consumer News Serv., Inc. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311, ¶35.

¹¹³ *State ex rel. Office of Montgomery Cty. Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662, ¶16; *State ex rel. Consumer News Serv., Inc. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311, ¶37; see also, *State ex rel. Wadd v. City of Cleveland*, 81 Ohio St.3d 50, 53, 1998-Ohio-444.

¹¹⁴ *State ex rel. Patton v. Rhodes*, 129 Ohio St. 3d 182, 2011-Ohio-3093, ¶ 20 (56 days to respond was not unreasonable under the circumstances); *State ex rel. Morgan v. Strickland*, 121 Ohio St.3d 600, 2010-Ohio-1901 ("Given the broad scope of the records requested, the governor's office's decision to review the records before producing them, to determine whether to redact exempt matter, was not unreasonable."); *State ex rel. Dispatch Printing Co. v. Johnson*, 106 Ohio St.3d 160, 2005-Ohio-4384, ¶44 (delay due to "breadth of the requests and the concerns over the employees' constitutional right of privacy" was not unreasonable); *State ex rel. Consumer News Serv., Inc. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311; *State ex rel. Stricker v. Cline*, No. 09CA107, 2010-Ohio-3592 (5th Dist.) (provision of records within nine business days was a reasonable period of time to respond to a records request.); *State ex rel. Holloman v. Collins*, No. 09AP-1184, 2010-Ohio-3034 (10th Dist.) (Assessing whether there has been a violation of the public records act, the critical time frame is not the number of days between when respondent received the public records request and when relator filed his action. Rather, the relevant time frame is the number of days it took for respondent to properly respond to the relator's public records request.).

¹¹⁵ *State ex rel. Office of Montgomery Cty. Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662, ¶10.

¹¹⁶ *State ex rel. Consumer News Serv., Inc. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311, ¶¶33-51 (respondent's six day delay when providing responsive records was neither prompt nor reasonable); see also, *Wadd v. City of Cleveland*, 81 Ohio St.3d 50, 53, 1998-Ohio-444 (thirteen to twenty-four day delay to provide access to accident reports was neither prompt nor reasonable); *State ex rel. Warren Newspapers, Inc. v. Hutson*, 70 Ohio St.3d 619, 624, 1994-Ohio-5 (police department taking four months to respond to a request for "all incident reports and traffic tickets written in 1992" was neither prompt nor reasonable); *State ex rel. Muni. Constr. Equip. Op. Labor Council v. Cleveland*, No. 95277, 2011-Ohio-117 (8th Dist.) (28 days to release two emergency response plans and two pieces of correspondence found not reasonable).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

Identification of Responsive Records:

- Clarify or revise request;¹¹⁷ and
- Identify records.¹¹⁸

Location & Retrieval:

- Locate records¹¹⁹ and retrieve from storage location, e.g., file cabinet, branch office, off-site storage facility.

Review, Analysis & Redaction:

- Examine all materials for possible release;¹²⁰
- Perform necessary legal review,¹²¹ or consult with knowledgeable parties;
- Redact exempt materials;¹²² and
- Provide explanation and legal authority for all redactions and/or denials.¹²³

Preparation:

- Obtain requester's choice of medium;¹²⁴ and
- Make copies.¹²⁵

Delivery:

- Wait for advance payment of costs;¹²⁶ and
- Deliver copies, or schedule inspection¹²⁷

The Ohio Supreme Court has held that no pleading of too much expense, or too much time involved, or too much interference with normal duties, can be used by the public office to evade the public's right to inspect and obtain a copy of public records within a reasonable time.¹²⁸

4. Inspection at No Cost During Regular Business Hours

A public office must make its public records available for inspection at all reasonable times during regular business hours.¹²⁹ "Regular business hours" means established business hours.¹³⁰ When a public office operates twenty-four hours a day, such as a police department, the office may adopt hours that approximate normal administrative hours during which inspection may be accomplished.¹³¹ Public offices may not charge requesters for inspection of public records.¹³²

¹¹⁷ R.C. 149.43(B)(2), (5).

¹¹⁸ R.C. 149.43(B)(2), (5).

¹¹⁹ R.C. 149.43(B)(5).

¹²⁰ *State ex rel. Morgan v. Strickland*, 121 Ohio St.3d 600, 2010-Ohio-1901; *State ex rel. Office of Montgomery Cty. Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662, ¶17 ("R.C. 149.43(A) envisions an opportunity on the part of the public office to examine records prior to inspection in order to make appropriate redactions of exempt materials." (quoting *State ex rel. Warren Newspapers, Inc. v. Hutson*, 70 Ohio St.3d 619, 623, 1994-Ohio-5)).

¹²¹ *State ex rel. Morgan v. Strickland*, 121 Ohio St.3d 600, 2010-Ohio-1901.

¹²² R.C. 149.43(A)(11),(B)(1); see, *State ex rel. Office of Montgomery Cty. Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662, ¶17 (clerk of courts was afforded time to redact social security numbers from requested records).

¹²³ R.C. 149.43(B)(3).

¹²⁴ R.C. 149.43(B)(6).

¹²⁵ R.C. 149.43(B)(1), (B)(6).

¹²⁶ R.C. 149.43(B)(6), (B)(7).

¹²⁷ R.C. 149.43(B)(1).

¹²⁸ *State ex rel. Wadd v. City of Cleveland*, 81 Ohio St.3d 50, 53-54, 1998-Ohio-444.

¹²⁹ R.C. 149.43(B); *State ex rel. Toledo Blade Co v. Seneca County Bd. of Comm'rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶37 ("The right of inspection, as opposed to the right to request copies, is not conditioned on the payment of any fee under R.C. 149.43.").

¹³⁰ *State ex rel. Butler County Bar Ass'n v. Robb*, 62 Ohio App.3d 298 (12th Dist. 1990) (rejecting requester's demand that a clerk work certain hours different from the clerk's regularly scheduled hours).

¹³¹ *State ex rel. Warren Newspapers, Inc. v. Hutson*, 70 Ohio St.3d 619, 1994-Ohio-5 (allowing records requests during all hours of the entire police department's operations is unreasonable).

¹³² *State ex rel. Warren Newspapers, Inc. v. Hutson*, 70 Ohio St.3d 619, 624, 1994-Ohio-5.

The Ohio Public Records Act

Chapter Two: Requesting Public Records

5. Copies and Delivery or Transmission, “At Cost”¹³³

A public office may charge costs for copies and for delivery or transmission, and may require payment of both costs in advance.¹³⁴ “At cost” includes the actual cost of making copies,¹³⁵ packaging, postage, and any other costs of the method of delivery or transmission chosen by the requester.¹³⁶ The cost of employee time cannot be included in the cost of copies or delivery.¹³⁷ One appellate court has held that a public office may choose to employ the services, and charge the requester the costs of, a private contractor to copy public records so long as the decision to do so is reasonable.¹³⁸

When a statute sets the cost of certain records or for certain requesters, the specific takes precedence over the general,¹³⁹ and the requester must pay the cost set by the statute.¹⁴⁰ For example, because R.C. 2301.24 requires that parties to a common pleas court action must pay court reporters the compensation rate set by the judges for court transcripts, a requester who is a party to the action may not use R.C. 149.43(B)(1) to obtain copies of the transcript at the actual cost of duplication.¹⁴¹ However, where a statute sets a fee for certified copies of an otherwise public record, and the requester does not request that the copies be certified, the office may only charge actual cost.¹⁴² Similarly, where a statute sets a fee for “photocopies” and the request is for electronic copies rather than photocopies, the office may only charge actual cost.¹⁴³

There is no obligation to provide free copies to someone who indicates an inability or unwillingness to pay for requested records.¹⁴⁴ The Ohio Public Records Act does not require that a public office allow those seeking a copy of the public record to make copies with their own equipment,¹⁴⁵ nor does it prohibit the public office from allowing this.

6. Clarifying the Request

A public office must interpret the Ohio Public Records Act broadly in favor of disclosure. However, a requester must first describe the records he or she seeks with reasonable clarity so that the public office can identify responsive records based on the manner in which it ordinarily maintains and accesses the public records it keeps.¹⁴⁶ A public office is not required to produce records when the underlying request is ambiguous or overly broad.¹⁴⁷

When a request lacks the details the office needs to identify where to look for responsive materials, or seeks what amounts to a complete duplication of the office’s files, the Public Records Act promotes cooperation to produce a successful, revised request.

¹³³ R.C. 149.43(B)(1).

¹³⁴ R.C. 149.43(B)(6), (B)(7); *State ex rel. Dehler v. Mohr*, 129 Ohio St. 3d 37, 2011-Ohio-959, ¶ 3 (requester was not entitled to copies of requested records, because he refused to submit prepayment).

¹³⁵ R.C. 149.43(B)(1) (copies of public records must be made available “at cost”); *State ex rel. Warren Newspapers, Inc. v. Hutson*, 70 Ohio St.3d 619, 625, 1994-Ohio-5 (public office cannot charge \$5.00 for initial page of copies or for employee labor for responding to public records requests; can only charge “actual cost” of copies).

¹³⁶ R.C. 149.43(B)(7); *State ex rel. Call v. Fragale*, 104 Ohio St.3d 276, 2004-Ohio-6589, ¶¶2-8.

¹³⁷ *State ex rel. Warren Newspapers, Inc. v. Hutson*, 70 Ohio St.3d 619, 626, 1994-Ohio-5.

¹³⁸ *State ex rel. Gibbs v. Concord Twp. Trustees*, 152 Ohio App.3d 387, 2003-Ohio-1586, ¶31 (11th Dist. 2003).

¹³⁹ R.C. 1.51 (rules of statutory construction).

¹⁴⁰ *State ex rel. Slagle v. Rogers*, 103 Ohio St.3d 89, 90, 2004-Ohio-4354, ¶5.

¹⁴¹ *State ex rel. Slagle v. Rogers*, 103 Ohio St.3d 89, 92, 2004-Ohio-4354, ¶15; for another example see R.C. 5502.12 (Dept. of Public Safety may charge \$4.00 for each accident report copy).

¹⁴² *State ex rel. Call v. Fragale*, 104 Ohio St.3d 276, 2004-Ohio-6589 (court offered uncertified records at actual cost, but may charge up to \$1.00 per page for certified copies pursuant to R.C. 2303.20); *State ex rel. Butler County Bar Ass’n v. Robb*, 66 Ohio App.3d 398 (12th Dist. 1990).

¹⁴³ *State ex rel. Data Trace Info. Svcs. v. Cudahoga Cty. Fiscal Offcr.*, Ohio Supreme Court Case No. 2010-2029, 2012-Ohio-753, ¶¶ 42-62.

¹⁴⁴ *State ex rel. Call v. Fragale*, 104 Ohio St.3d 276, 2004-Ohio-6589, ¶6; *Breeden v. Mitrovich*, No. 2005-L-055, 2005-Ohio-5763, ¶10 (11th Dist.).

¹⁴⁵ R.C. 149.43(B)(6); For discussion of previous law, see 2004 Ohio Op. Att’y Gen. No. 011 (county recorder may not prohibit person from using digital camera to duplicate records nor assess a copy fee).

¹⁴⁶ *State ex rel. Dehler v. Spatny*, 127 Ohio St.3d 312, 2010-Ohio-5711; *State ex rel. Morgan v. Strickland*, 121 Ohio St.3d 600, 2010-Ohio-1901; *State ex rel. Zauderer v. Joseph*, 62 Ohio App.3d 752 (10th Dist. 1989).

¹⁴⁷ R.C. 149.43(B)(2); *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶19.

The Ohio Public Records Act

Chapter Two: Requesting Public Records

a. Mandatory Clarification in Response to Ambiguous or Overly Broad Request

The Ohio Public Records Act allows a public office to deny any overly broad or ambiguous records request. However, the public office is required to give the requester the opportunity to revise the request by explaining how it ordinarily maintains and accesses the records it keeps. The office's records retention schedules can be a helpful starting point, because they categorize records based on how they are used and the purpose they serve.

What is An Ambiguous or Overly Broad Request?

An ambiguous request is one that lacks the clarity a public office needs to ascertain what the requestor is seeking and where to look for records that might be responsive. The wording may be vague or subject to interpretation.

An overly broad request is one that is so inclusive that the public office is unable to identify the records sought based on the manner in which the office routinely organizes and accesses records. Public records requests that are worded like legal discovery requests - for example, a request for "any and all" records "pertaining in any way to" a particular activity of the office or of a particular employee - are often overly broad for purposes of the Public Records Act because they lack the specificity the office needs to identify and locate only responsive records. The courts have found requests overly broad when they seek what amounts to a complete duplication of a major category of a public office's records. Examples of overly broad requests include requests for:

- All records containing particular names or words;¹⁴⁸
- Duplication of all records having to do with a particular topic, or all records of a particular type;¹⁴⁹
- Every report filed with the public office for a particular time period (if the office does not organize records in that manner).¹⁵⁰

Although a public office has a duty to facilitate broader access to public records by organizing and maintaining them so they are available for inspection or copying,¹⁵¹ using an organizational system different from, and inconsistent with, a given request does not mean that the public office has violated this duty.¹⁵² At least one court has held that the primary concern of a retrieval system is to accommodate the mission of the office, and that providing reasonable access for citizens is secondary.¹⁵³ For instance, if a person requests copies of all police service calls for a particular

¹⁴⁸ *State ex rel. Dillery v. Icsman*, 92 Ohio St.3d 312, 2001-Ohio-193.

¹⁴⁹ *State ex rel. Dehler v. Spatny*, 127 Ohio St.3d 312, 2010-Ohio-5711, ¶¶ 1-3 (request for prison quartermaster's orders and receipts for clothing over seven years); *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-2788, ¶19 (request for all work-related e-mails, texts, and correspondence of an elected official during six-months in office); *State ex rel. Zidonis v. Cols. State Comm. College*, No. 10AP-961, 2011-Ohio-6817 (10th Dist.), *appeal pending* (request for all litigation files and all grievance files for a period over six years, and for all e-mails between two employees during joint employment); *State ex rel. Daugherty v. Mohr*, No. 11AP-5, 2011-Ohio-6453, ¶¶ 32-35 (10th Dist.) (request for all policies, e-mails, or memos regarding whether prison officials are authorized to 'triple cell' inmates into segregation); *State ex rel. Davila v. City of Bellefontaine*, No. 8-11-01, 2011-Ohio-4890, ¶¶ 36-43 (3rd Dist.) (request to inspect 9-1-1 tapes covering 15 years); *State ex rel. Davila v. City of East Liverpool*, No. 10 CO 16, 2011-Ohio-1347, ¶¶ 22-28 (7th Dist.), *discretionary appeal not allowed*, 2011-Ohio-4217 (request to access tape recorded 9-1-1 calls and radio traffic over seven years); *State ex rel. Zauderer v. Joseph*, 62 Ohio App.3d 752 (10th Dist. 1989) (request for all accident reports filed on a given date with two law enforcement agencies).

¹⁵⁰ *State ex rel. Zauderer v. Joseph*, 62 Ohio App.3d 752 (10th Dist. 1989).

¹⁵¹ R.C. 149.43(B)(2).

¹⁵² See, *State ex rel. Oriana House, Inc. v. Montgomery*, Nos. 04AP-504, 2005-Ohio-3377 (10th Dist.) (the fact that requester made what it believed to be a specific request does not mandate that the public office keep its records in such a way that access to the records was possible); *State ex rel. Evans v. City of Parma*, No. 81236, 2003-Ohio-1159 (8th Dist.).

¹⁵³ *State ex rel. Zauderer v. Joseph*, 62 Ohio App.3d 752 (10th Dist. 1989).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

geographical area identified by street names, but the computer program cannot identify calls based on street names, the request does not match the method of retrieval and is not one that the office has a duty to fulfill.¹⁵⁴

b. Optional Negotiation When Identity, Purpose, or Request in Writing Would Assist Identifying, Locating, or Delivering Requested Records

As noted elsewhere, a requester cannot be required to make a request in writing, or to reveal his or her identity and/or reasons for requesting records. In fact, requiring the requester to disclose identity or intended use constitutes a denial of the request.¹⁵⁵ However, in the event that a public office believes that either a written request, knowing the intended use of the information, or knowing the requester's identity would benefit the requester by enhancing the ability of the public office to identify, locate, or deliver the requested records, the public office may inform the requester that giving this information is not mandatory, and then ask if the requester is willing to provide that information to assist the public office in fulfilling the request.¹⁵⁶

7. Duty to Withhold Certain Records

A public office must withhold records subject to a mandatory, "must not release" exception to the Public Records Act in response to a public records request. (See Chapter Three, Section A. Categories of Exceptions - 1. "Must Not Release.")

8. Option to Withhold or Release Certain Records

Records subject to a discretionary exception give the public office the option to either withhold or release the record subject to that exception. (See Chapter Three, Section A. Categories of Exceptions – 2. "May Release, But May Choose to Withhold.")

9. No Duty to Release Non-Records

A public office need not disclose or create items that are "non-records," or compile new records from other existing records. As noted in Chapter One, there is no obligation that a public office produce non-records – items that do not document the organization, functions, policies, decisions, procedures, operations, or other activities of the office.¹⁵⁷ A record must document something that the office does.¹⁵⁸ The Ohio Supreme Court expressly rejected the notion that an item is a "record" simply because the public office could use the item to carry out its duties and responsibilities.¹⁵⁹ Instead, the public office must actually use the item; otherwise it is not a record.¹⁶⁰ The Public Records Act itself does not restrict a public office from releasing non-records, but other laws may prohibit a public officer from releasing certain information in non-records.¹⁶¹

¹⁵⁴ *State ex rel. Evans v. City of Parma*, No. 81236, 2003-Ohio-1159 (8th Dist.).

¹⁵⁵ R.C. 149.43(B)(4).

¹⁵⁶ R.C. 149.43(B)(5).

¹⁵⁷ *State ex rel. Dispatch Printing Co. v. Johnson*, 106 Ohio St.3d 160, 2005-Ohio-4384, ¶25 (citations omitted); *State ex rel. Fant v. Enright*, 66 Ohio St.3d 186, 188 (1993) ("To the extent that any item contained in a personnel file is not a 'record,' i.e., does not serve to document the organization, etc., of the public office, it is not a public record and need not be disclosed."); R.C. 149.011(G).

¹⁵⁸ *State ex rel. Wilson-Simmons v. Lake County Sheriff's Dept.*, 82 Ohio St.3d 37 (1998) (allegedly racist emails circulated between public employees are not "records" when they were not used to conduct the business of the public office).

¹⁵⁹ See, *State ex rel. Beacon Journal Publ'g Co. v. Whitmore*, 83 Ohio St.3d 61, 1998-Ohio-180.

¹⁶⁰ See, 2007 Ohio Op. Att'y Gen. No. 034 (an item of physical evidence in the possession of the Prosecuting Attorney that was not introduced as evidence was found not to be a "record"); *State ex rel. WBNS-TV, Inc. v. Dues*, 101 Ohio St.3d 406, 2004-Ohio-1497, ¶27 (judge used redacted information to decide whether to approve settlement); *State ex rel. Beacon Journal Publ'g Co. v. Whitmore*, 83 Ohio St.3d 61, 1998-Ohio-180 (judge read unsolicited letters but did not rely on them in sentencing a criminal defendant, therefore, letters did not serve to document any activity of the public office and were not "records"); *State ex rel. Sensel v. Leone*, 85 Ohio St.3d 152, 1999-Ohio-446 (letters alleging inappropriate behavior of coach not "records" and can be discarded) (citing to *Whitmore*, *supra*); *State ex rel. Carr v. Caltrider*, Franklin C.P. No. 00CVH07-6001 (May 16, 2001); *State ex rel. Wilson-Simmons v. Lake County Sheriff's Dept.*, 82 Ohio St.3d 37 (1998) (allegedly racist e-mail messages circulated between public employees were not "records").

¹⁶¹ E.g., R.C. 1347.01 et seq. (Ohio Personal Information Systems Act).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

A public office is not required to create new records to respond to a public records request, even if it is only a matter of compiling information from existing records.¹⁶² For example, if a person asks a public office for a list of cases pending against it, but the office does not keep such a list, the public office is under no duty to create a list to respond to the request.¹⁶³ Nor must the office conduct a search for and retrieve records that contain described information that is of interest to the requester.¹⁶⁴

10. Denial of a Request, Redaction, and a Public Office's Duties of Notice

Both the withholding of an entire record and the redaction of any part of a record are considered a denial of the request to inspect or copy that particular item.¹⁶⁵ Any requirement by the public office that the requester disclose the requester's identity or the intended use of the requested public record also constitutes a denial of the request.¹⁶⁶

a. Redaction – Statutory Definition

“Redaction” means obscuring or deleting any information that is exempt from the duty to permit public inspection or copying from an item that otherwise meets the definition of a “record.”¹⁶⁷

For records on paper, redaction is the blacking or whiting out of non-public information in an otherwise public document. A public office may redact audio, video, and other electronic records by analogous technical processes that obscure or delete specific content. “If a public record contains information that is exempt from the duty to permit public inspection or to copy the public record, the public office or the person responsible for the public record shall make available all of the information within the public record that is not exempt.”¹⁶⁸ Therefore, a public office may redact only that part of a record subject to an exception or other valid basis for withholding. However, an office may withhold an entire record where excepted information is “inextricably intertwined” with the entire content of a particular record such that redaction cannot protect the excepted information.¹⁶⁹

The Public Records Act states that a redaction will be considered a denial of a request to inspect or copy the redacted information, except if a federal or state law authorizes or requires the public office to make the redaction.¹⁷⁰

b. Requirement to Notify of and Explain Redactions and Withholding of Records

Public offices must either “notify the requester of any redaction or make the redaction plainly visible.”¹⁷¹ In addition, if an office denies a request in part or in whole, the public office must “provide the requester with an explanation, including legal authority, setting forth why the request

¹⁶² *State ex rel. White v. Goldsberry*, 85 Ohio St.3d 153, 1999-Ohio-447; *State ex rel. Warren v. Warner*, 84 Ohio St.3d 432, 433, 1999-Ohio-475; *State ex rel. Kerner v. State Teachers Retirement Bd.*, 82 Ohio St.3d 273, 1998-Ohio-242; *State ex rel. Wilson-Simmons v. Lake County Sheriff's Dept.*, 82 Ohio St.3d 37, 42 (1998); *State ex rel. Fant v. Mengel*, 62 Ohio St.3d 197 (1991).

¹⁶³ *Fant v. Flaherty*, 62 Ohio St.3d 426 (1992); *State ex rel. Fant v. Mengel*, 62 Ohio St.3d 197 (1991); *Pierce v. Dowler*, 12th Dist. No. CA93-08-024 (Nov. 1, 1993).

¹⁶⁴ *State ex rel. White v. Goldsberry*, 85 Ohio St.3d 153, 154, 1999-Ohio-447 (a public office has “no duty under R.C. 149.43 to create new records by searching for and compiling information from existing records”).

¹⁶⁵ R.C. 149.43(B)(1).

¹⁶⁶ R.C. 149.43(B)(4).

¹⁶⁷ R.C. 149.43(A)(11).

¹⁶⁸ R.C. 149.43(B)(1).

¹⁶⁹ See, *State ex rel. Master v. City of Cleveland*, 76 Ohio St.3d 340, 1996-Ohio-300. See also, *State ex rel. McGee v. Ohio State Bd. of Psychology*, 49 Ohio St.3d 59, 60 (1990) (where exempt information is so “intertwined” with the public information as to reveal the exempt information from the context, the record itself, and not just the exempt information, may be withheld).

¹⁷⁰ R.C. 149.43(B)(1).

¹⁷¹ R.C. 149.43(B)(1).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

was denied.¹⁷² If the requester made the initial request in writing, then the office must also provide its explanation for the denial in writing.¹⁷³

c. No Obligation to Respond to Duplicate Request

Where a public office denies a request, and the requester sends a follow-up letter reiterating a request for essentially the same records, the public office is not required to provide an additional response.¹⁷⁴

d. No Waiver of Unasserted, Applicable Exceptions

If the requester later files a mandamus action against the public office, the public office is not limited to the explanation(s) previously given for denial, but may rely on additional reasons or legal authority in defending the mandamus action.¹⁷⁵

11. Burden or Expense of Compliance

A public office cannot deny or delay response to a public records request on the grounds that responding will interfere with the operation of the public office.¹⁷⁶ However, when a request unreasonably interferes with the discharge of the public office's duties, the office may not be obligated to comply.¹⁷⁷ For example, a requester does not have the right to the complete duplication of voluminous files of a public office.¹⁷⁸

12. Other Rights and Obligations of Public Offices

A public records request may be made by any person, not just a citizen of Ohio. The requester is not generally required to give his or her identity, intended use of the information, or make the request in writing. If the request is oral, it is recommended that the recipient write down the details of and confirm them with the requester. The public office must provide requested records in any of the following media specified by the requester: (a) paper, (b) the same medium on which the public office keeps the record, or (c) any other medium on which the record can reasonably be duplicated "as an integral part of the normal operations of the public office."¹⁷⁹ The public office must also transmit requested copies to a requester by any available requested means of delivery or transmission, but the public office may require the requester to pay the cost of the selected means in advance. (See Chapter Two, Section B. Rights and Obligations of a Public Office.)

¹⁷² R.C. 149.43(B)(3).

¹⁷³ R.C. 149.43(B)(3).

¹⁷⁴ *State ex rel. Laborers International v. Summerville*, 122 Ohio St.3d 1234, 2009-Ohio-4090.

¹⁷⁵ R.C. 149.43(B)(3).

¹⁷⁶ *State ex rel. Beacon Journal Publ'g Co. v. Andrews*, 48 Ohio St.2d 283 (1976) ("[n]o pleading of too much expense, or too much time involved, or too much interference with normal duties, can be used by the [public office] to evade the public's right to inspect and obtain a copy of public records within a reasonable amount of time.").

¹⁷⁷ *State ex rel. Dehler v. Mohr*, 129 Ohio St.3d 37, 2011-Ohio-959 (allowing inmate to personally inspect requested records in another prison would have created security issues, unreasonably interfered with the official's discharge of their duties, and violated prison rules); *State ex rel. Warren Newspapers, Inc. v. Hutson*, 70 Ohio St.3d 619, 623, 1994-Ohio-5 ("unreasonabl[e] interfere[nce] with the discharge of the duties of the officer having custody" of public records creates an exception to the rule that public records should be generally available to the public) (citing *State ex rel. Natl. Broadcasting Co. v. Cleveland*, 38 Ohio St.3d 79, 81 (1988)); *Barton v. Shupe*, 37 Ohio St.3d 308 (1988); *State ex rel. Patterson v. Ayers*, 171 Ohio St. 369 (1960) ("anyone may inspect [public] records at any time, subject only to the limitation that such inspection does not endanger the safety of the record, or unreasonably interfere with the discharge of the duties of the officer having custody of the records"); *State ex rel. Zauderer v. Joseph*, 62 Ohio App.3d 752 (10th Dist. 1989).

¹⁷⁸ *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-788, ¶17 (the Public Records Act "does not contemplate that any individual has the right to a complete duplication of voluminous files kept by government agencies." (citation omitted)).

¹⁷⁹ R.C. 149.43(B)(6),(7); *State ex rel. Dispatch Printing Co. v. Morrow Cty. Pros. Office*, 105 Ohio St.3d 172, 2005-Ohio-685, ¶13.

The Ohio Public Records Act

Chapter Two: Requesting Public Records

C. Statutes That Modify General Rights and Duties

Through legislation, the General Assembly can change the preceding rights and duties for particular records, for particular public offices, for particular requesters, or in specific situations. Be aware that the general rules of public records law may be modified in a variety and combination of ways. Below are a few examples of modifications to the general rule.

1. Particular Records

- (a) Although most DNA records kept by the Ohio Bureau of Criminal Identification and Investigation (BCI&I) are protected from disclosure by exceptions,¹⁸⁰ Ohio law requires that the results of DNA testing of an inmate who obtains post-conviction testing must be disclosed to any requester,¹⁸¹ which would include results of testing conducted by BCI&I.
- (b) Certain Ohio sex offender records must be posted on a public website, without waiting for an individual public records request.¹⁸²
- (c) Ohio law specifies that a public office's release of an "infrastructure record" or "security record" to a private business for certain purposes does not waive these exceptions,¹⁸³ despite the usual rule that voluntary release to a member of the public waives any exception(s).¹⁸⁴
- (d) Journalists may inspect, but not copy, some of the records to which they have special access, despite the general right to choose either inspection or copies.¹⁸⁵
- (e) Contracts and financial records of moneys expended in relation to services provided under those contracts to federal, state or local government by another governmental entity or agency, or by most nonprofit corporations or associations, shall be deemed to be public records, except as provided by R.C. 149.431.¹⁸⁶

2. Particular Public Offices

- (a) The Ohio Bureau of Motor Vehicles is authorized to charge a non-refundable fee of four dollars for each highway patrol accident report for which it receives a request,¹⁸⁷ and a coroner's office may charge a record retrieval and copying fee of twenty-five cents per page, with a minimum charge of one dollar,¹⁸⁸ despite the general requirement that a public office may only charge the "actual cost" of copies.¹⁸⁹
- (b) Ohio's courts are not subject to the Ohio Public Records Act. Rather, courts apply the records access rules of the Ohio Supreme Court Rules of Superintendence.¹⁹⁰

¹⁸⁰ R.C. 109.573(D),(E),(G)(1); R.C. 149.43(A)(1)(j).

¹⁸¹ R.C. 2953.81(B).

¹⁸² R.C. 2950.08(A) (BCI&I sex offender registry and notification, or "SORN" information, not open to the public); *but compare*, R.C. 2950.13(A)(11) (certain SORN information must be posted as a database on the internet and is a public record under R.C. 149.43).

¹⁸³ R.C. 149.433(C).

¹⁸⁴ See, e.g., *State ex rel. Cincinnati Enquirer v. Dupuis*, 98 Ohio St.3d 126, 2002-Ohio-7041.

¹⁸⁵ R.C. 4123.88(D) (Industrial Commission or Workers Compensation Bureau shall disclose to journalist addresses and telephone numbers of claimants, and the dependents of those claimants); R.C. 313.10(D) ("A journalist may submit to the coroner a written request to view preliminary autopsy and investigative notes and findings, suicide notes, or photographs of the decedent made by the coroner").

¹⁸⁶ R.C. 149.431; *State ex rel. Bell v. Brooks*, 130 Ohio St. 3d 87, 2011-Ohio-4897, ¶¶ 30-40.

¹⁸⁷ R.C. 5502.12 (also provides that other agencies which submit such reports may charge requesters who claim an interest arising out of a motor vehicle accident a non-refundable fee not to exceed four dollars).

¹⁸⁸ R.C. 313.10(B).

¹⁸⁹ *State ex rel. Warren Newspapers, Inc. v. Hutson*, 70 Ohio St.3d 619, 1994-Ohio-5. See also, *State ex rel. Russell v. Thomas*, 85 Ohio St.3d 83, 1999-Ohio-435 (one dollar per page did not represent actual cost of copies); 2001 Ohio Op. Atty. Gen. No. 012.

¹⁹⁰ Rules of Superintendence for the Courts of Ohio. For additional discussion, see Chapter Six: Court Records.

The Ohio Public Records Act

Chapter Two: Requesting Public Records

3. Particular Requesters or Purposes

- (a) Directory information concerning public school students may not be released if the intended use is for a profit-making plan or activity.¹⁹¹
- (b) Journalists, commercial requesters, and incarcerated persons are subject to combinations of modified rights and obligations, discussed below.

4. Modified Records Access by Certain Requesters

The rights and obligations of the following requesters differ from those generally provided by the Ohio Public Records Act. The intended use of the records, or motive behind the request, may be relevant. Also, the requester may be required to provide more information or make his or her request in a specific fashion. Some requesters are given greater access to records than other persons, and some are more restricted. These are only examples. Changes to the law are constantly occurring, so be sure to check for any current law modifying access to the particular public records with which you are concerned.

a. Prison inmates

Prison inmates may request public records,¹⁹² but they are limited to a statutorily mandated process if requesting any public record concerning a criminal investigation or prosecution or a juvenile delinquency investigation that otherwise would be a criminal investigation or prosecution if the subject were an adult.¹⁹³ An inmate's designee may not make a public records request on behalf of the inmate that the inmate is prohibited from making directly.¹⁹⁴ The criminal investigation records that may be requested by an inmate using this process are broader than those defined under the Confidential Law Enforcement Investigatory Records (CLEIRs) exception, and include offense and incident reports.¹⁹⁵ A public office is not required to produce such records in response to an inmate request unless the inmate obtains a finding from the judge who sentenced or otherwise adjudicated the inmate's case that the information sought is necessary to support what appears to be a justiciable claim.¹⁹⁶ The inmate's request must be filed in the original criminal action against the inmate, not in a separate, subsequent forfeiture action involving the inmate.¹⁹⁷ Unless an inmate requesting public records concerning a criminal prosecution has first followed these requirements, any suit to enforce his or her request will be dismissed.¹⁹⁸ The appropriate remedy for an inmate to seek if he or she follows these requirements is an appeal of the sentencing judge's findings, not a mandamus action.¹⁹⁹ Any public records that were obtained by a litigant prior to the ruling in *Steckman v. Jackson* are not excluded for use in the litigant's post-conviction proceedings.²⁰⁰

¹⁹¹ R.C. 3319.321(A) (Further, the school "may require disclosure of the requester's identity or the intended use of the directory information . . . to ascertain whether the directory information is for use in a profit-making plan or activity.").

¹⁹² See *State ex rel. Dehler v. Collins*, No. 09AP-703, 2010-Ohio-5436 (10th Dist.) (correctional facilities may be able to limit the access to, and provision of, requested records due to personnel and safety considerations); see also, *State ex rel. Dehler v. Kelly*, No. 2009-T-0084, 2010-Ohio-3053 (11th Dist.) (Prison officials had to comply with various requests submitted by inmate.).

¹⁹³ R.C. 149.43(B)(8). NOTE: The language is not limited to requests for criminal investigations concerning the inmate who is making the request.

¹⁹⁴ *State ex rel. Barb v. Cuyahoga Cty. Jury Commr.*, 128 Ohio St. 3d 528, 2011-Ohio-1914.

¹⁹⁵ *State ex rel. Russell v. Thornton*, 111 Ohio St.3d 409, 2006-Ohio-5858, ¶¶9-18; *State ex rel. Sevayega v. Reis*, 88 Ohio St.3d 458, 2000-Ohio-383.

¹⁹⁶ R.C. 149.43(B)(8); *State v. Wilson*, No. 23734, 2011-Ohio-4195 (2nd Dist.), *discretionary appeal not allowed* 2012-Ohio-136 (application for clemency is not a "justiciable claim"); *State v. Rodriguez*, No. WD-10-062, 2011-Ohio-1397 (6th Dist.) (relator identified no pending proceeding to which his claims of evidence tampering would be material).

¹⁹⁷ *State of Ohio v. Lather*, No. S-08-036, 2009-Ohio-3215 (6th Dist.); *State of Ohio v. Chatfield*, No. 10CA12, 2010-Ohio-4261 (5th Dist.) (inmate may file R.C. 149.43(B)(8) motion *pro se*, even if currently represented by criminal counsel in the original action).

¹⁹⁸ *State ex rel. Barb v. Cuyahoga Cty. Jury Commr.*, No. 93326, 2009-Ohio-3301 (8th Dist.); *Hall v. State*, No. 2008-T-0073, 2009-Ohio-404 (11th Dist.); *State ex rel. Russell v. Thornton*, 111 Ohio St.3d 409, 2006-Ohio-5858, ¶¶9-18; *State ex rel. Sevayega v. Reis*, 88 Ohio St.3d 458, 2000-Ohio-383.

¹⁹⁹ *State of Ohio v. Thornton*, No. 23291, 2009-Ohio-5049 (2nd Dist.).

²⁰⁰ *State v. Broom*, 123 Ohio St.3d 114, 2009-Ohio-4778.

The Ohio Public Records Act

Chapter Two: Requesting Public Records

b. Commercial Requesters

Unless a specific statute provides otherwise,²⁰¹ it is irrelevant whether the intended use of requested records is for commercial purposes.²⁰² However, if an individual or entity is making public records requests for commercial purposes, the public office receiving the requests can limit the number of records “that the office will transmit by United States mail to ten per month.”²⁰³

While the Revised Code does not specifically define “commercial purposes”²⁰⁴ it does require that the term be narrowly construed, and lists specific activities excluded from the definition:²⁰⁵

- Reporting or gathering news;
- Reporting or gathering information to assist citizen oversight or understanding of the operation or activities of government; or
- Nonprofit educational research.

c. Journalists

Several statutes grant “journalists”²⁰⁶ enhanced access to certain records that are not available to other requesters. This enhanced access is sometimes conditioned on the journalist providing information or representations not normally required of a requester.

For example, a journalist may obtain the actual residential address of a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the Bureau of Criminal Identification and Investigation. If the individual's spouse, former spouse, or child is employed by a public office, a journalist may obtain the name and address of that spouse or child's employer in this manner as well.²⁰⁷ A journalist may also request customer information maintained by a municipally owned or operated public utility, other than social security numbers and any private financial information such as credit reports, payment methods, credit card numbers, and bank account information.²⁰⁸ In order to obtain this information, however, the journalist must:

- Make the request in writing and sign the request;
- Identify himself or herself by name, title, and employer's name and address; and
- State that disclosure of the information sought would be in the public interest.²⁰⁹

(See Journalist Request Table on next page for more details.)

²⁰¹ E.g., R.C. 3319.321(A) (prohibits schools from releasing student directory information “to any person or group for use in a profit-making plan or activity.”).

²⁰² 1990 Ohio Op. Att’y Gen. No. 050; see also, R.C. 149.43(B)(4); but see, R.C. 149.43(B)(7) (public office may limit copies mailed to requester if purpose is commercial).

²⁰³ R.C. 149.43(B)(7) (“unless the person certifies to the office in writing that the person does not intend to use or forward the requested records, or the information contained in them, for commercial purposes”). NOTE: The limit only applies to requested transmission “by United States mail.”

²⁰⁴ The statute does not contain a general definition of “commercial purposes” but does define “commercial” in the context of requests to the Bureau of Motor Vehicles. There, “commercial” is defined as “profit-seeking production, buying, or selling of any good, service, or other product.” R.C. 149.43(F)(2)(c).

²⁰⁵ R.C. 149.43(B)(7).

²⁰⁶ R.C. 149.43(B)(9)(c) states: “As used in [division (B) of R.C. 149.43], “journalist” means a person engaged in, connected with, or employed by any news medium, including a newspaper, magazine, press association, news agency, or wire service, a radio or television station, or a similar medium, for the purpose of gathering, processing, transmitting, compiling, editing, or disseminating information for the general public.”

²⁰⁷ R.C. 149.43(B)(9)(a).

²⁰⁸ R.C. 149.43(B)(9)(b).

²⁰⁹ R.C. 149.43(B)(9)(a) and (b); see also, 2007 Ohio Op. Att’y Gen. No. 039 (“[R.C. 2923.129(B)(2)] prohibits a journalist from making a reproduction of information about the licensees of concealed carry licenses by any means, other than through his own mental processes.”).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

<i>Journalist Requests</i>		
<i>Type of Request</i>	<i>Ohio Revised Code Section</i>	<i>Requester may:</i>
Actual personal residential address of a: <ul style="list-style-type: none"> Peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or BCI&I Agent 	149.43(B)(9)(a)	Inspect or copy the record(s)
Employer name and address, if the employer is a public office, of a spouse, former spouse, or child of the following: <ul style="list-style-type: none"> Peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or BCI&I Agent 	149.43(B)(9)(a)	Inspect or copy the record(s)
Customer information maintained by a municipally owned or operated public utility, other than: <ul style="list-style-type: none"> social security numbers private financial information such as credit reports, payment methods, credit card numbers, and bank account information 	149.43(B)(9)(b)	Inspect or copy the record(s)
Coroner Records, including: <ul style="list-style-type: none"> Preliminary autopsy and investigative notes Suicide notes Photographs of the decedent made by the coroner or those directed or supervised by the coroner 	313.10(D)	Inspect the record(s) only, but may <i>not</i> copy them or take notes
Concealed Carry Weapon (CCW) Permits: Name, county of residence, and date of birth of a person for whom the sheriff issued, suspended, or revoked a permit for a concealed weapon: <ul style="list-style-type: none"> License Replacement license Renewal license Temporary emergency license Replacement temporary emergency license 	2923.129(B)(2)	Inspect the record(s) only, but may <i>not</i> copy them or take notes
Workers Compensation Initial Filings, including: <ul style="list-style-type: none"> Addresses and telephone numbers of claimants, regardless of whether their claims are active or closed, and the dependents of those claimants. 	4123.88(D)(1)	Inspect or copy the record(s)

The Ohio Public Records Act

Chapter Two: Requesting Public Records

Actual confidential personal residential address of a: <ul style="list-style-type: none">• Public children service agency employee• Private child placing agency employee• Juvenile court employee• Law enforcement agency employee Note: The journalist must adequately identify the person whose address is being sought, AND must make the request to the agency by which the individual is employed OR to the agency that has custody of the records.	2151.142 (D)	Inspect or copy the records(s)
--	--------------	--------------------------------

5. *Modified Access to Certain Public Offices' Records*

As with requesters, the rights and obligations of public offices can be modified by law. Some of these modifications include imposing conditions on obtaining records in volume and setting permissible charges for copying. The following provisions are only examples. The law is subject to change, so be sure to check for any current law modifying access to the particular public records with which you are concerned.

a. Bulk Commercial Requests from Ohio Bureau of Motor Vehicles

"The bureau of motor vehicles may adopt rules pursuant to Chapter 119 of the Revised Code to reasonably limit the number of bulk commercial special extraction requests made by a person for the same records or for updated records during a calendar year. The rules may include provisions for charges to be made for bulk commercial special extraction requests for the actual cost of the bureau, plus special extraction costs, plus ten percent. The bureau may charge for expenses for redacting information, the release of which is prohibited by law."²¹⁰ The statute sets out definitions of "actual cost," "bulk commercial extraction request," "commercial," "special extraction costs," and "surveys, marketing, solicitation, or resale for commercial purposes."²¹¹

b. Copies of Coroner's Records

Generally, all records of a coroner's office are public records subject to inspection by the public.²¹² A coroner's office may provide copies to a requester upon a written request and payment by the requester of a retrieval and copying fee, at the rate of twenty-five cents per page or a minimum fee of one dollar.²¹³ However, the following are not public records: preliminary autopsy and investigative notes and findings; photographs of a decedent made by the coroner's office; suicide notes; medical and psychological records of the decedent provided to the coroner; records of a deceased individual that are part of a confidential enforcement investigatory record; and laboratory reports generated from analysis of physical evidence by the coroner's laboratory that is discoverable under Criminal Rule 16.²¹⁴ The following three classes of requesters may request the full coroner's report, including the above materials that are otherwise excepted from disclosure, pursuant to the guidelines in R.C. § 313.10(C)-(E): (1) next of kin of the decedent or the representative of the decedent's estate; (2) journalists; and (3) insurers. Next of kin and insurers are able to request copies of the coroner's full and complete record of the decedent.²¹⁵ Journalists may only view the coroner's materials otherwise excluded from public records but may

²¹⁰ R.C. 149.43(F)(1).

²¹¹ These definitions are set forth at R.C. 149.43(F)(2) (a-d), and (F)(3).

²¹² R.C. § 313.10 (B).

²¹³ R.C. § 313.10 (B).

²¹⁴ R.C. § 313.10 (A)(2)(a)-(f).

²¹⁵ R.C. § 313.10 (C), (E).

The Ohio Public Records Act

Chapter Two: Requesting Public Records

not make copies of materials.²¹⁶ The coroner may notify the decedent's next of kin if a journalist or insurer has made a request pursuant to R.C. § 313.10(D) or (E).²¹⁷

²¹⁶ R.C. § 313.10 (D).
²¹⁷ R.C. § 313.10 (F).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

III. Chapter Three: Exceptions to the Required Release of Public Records²¹⁸

While the Ohio Public Records Act presumes and favors public access to government records, the General Assembly has created exceptions to protect certain records from mandatory release. The Ohio Public Records Act does not define categories of exceptions, but the following guide may be useful in handling public records requests.

A. Categories of Exceptions

There are two types of exceptions, and they are almost always created by state or federal statutes or codes.

1. “Must Not Release”

The first type of exception prohibits a public office from releasing specific records or information to the public. Such records are prohibited from release in response to a public records request, often under civil or criminal penalty, and the public office has no choice but to deny the request. These mandatory restrictions are expressly included as exceptions to the Ohio Public Records Act by what is referred to as the “catch-all” exception in R.C. 149.43(A)(1)(v): “records the release of which is prohibited by state or federal law.” These laws can include constitutional provisions,²¹⁹ statutes,²²⁰ common law,²²¹ or authorized state or federal administrative codes.²²² Local ordinances, however, cannot create public records exceptions.

A few “must not release” exceptions apply to public offices on behalf of, and subject to the decisions of, another person. For example, a public legal or medical office may be restricted by the attorney-client or physician-patient privileges from releasing certain records of their clients or patients.²²³ In such cases, if the client or patient chooses to waive the privilege, the public office would be released from the otherwise mandatory exception.²²⁴

2. “May Release, But May Choose to Withhold”

The other type of exception is discretionary and gives a public office the choice of either withholding or releasing specific records often by excluding certain records from the definition of public records.²²⁵ This means that the public office does not have to disclose these records in response to a public records request; however, it may do so if it chooses without fear of punishment under the law. Such provisions, usually state or federal statutes, are sometimes referred to as “discretionary exceptions.” Some laws contain ambiguous titles or text such as “confidential” or “private,” but the test for public records purposes is whether a particular law applied to a particular request actually prohibits release of a record or gives the public office the choice to withhold the record.

²¹⁸ For purposes of this section only the term “exception” will be used to describe laws authorizing the withholding of records from public records requests. The term “exemption” is often used in this field, apparently interchangeably.

²¹⁹ *State ex rel. Keller v. Cox*, 85 Ohio St.3d 279, 1999-Ohio-264.

²²⁰ See e.g., *State ex rel. Beacon Journal Publ'g Co. v. Akron*, 104 Ohio St.3d 399, 2004-Ohio-6557 (applying R.C. 2151.421).

²²¹ For example, common law attorney-client privilege. *State ex rel. Leslie v. Ohio Hous. Fin. Agency*, 105 Ohio St.3d 261, 2005-Ohio-1508, ¶27.

²²² *State ex rel. Lindsay v. Dwyer*, 108 Ohio App.3d 462, 467 (10th Dist. 1996) (STRS properly denied access to beneficiary form pursuant to Ohio Administrative Code); 2000 Ohio Op. Att'y Gen. No. 036 (federal regulation prohibits release of service member's discharge certificate without service member's written consent). But, compare, *State ex rel. Gallon & Takacs Co. v. Conrad*, 123 Ohio App.3d 554, 561 (10th Dist. 1997) (if regulation was promulgated outside of agency's statutory authority, the invalid rule will not constitute an exception to the public records act).

²²³ *State ex rel. Nix v. City of Cleveland*, 83 Ohio St.3d 379, 1998-Ohio-290.

²²⁴ See, *State ex rel. Dreamer v. Mason*, 115 Ohio St.3d 190, 2007-Ohio-4789 (illustrates the interplay of attorney-client privilege, waiver, public records law, and criminal discovery).

²²⁵ 2000 Ohio Op. Att'y Gen. No. 021 (“R.C. 149.43 does not expressly prohibit the disclosure of items that are excluded from the definition of public record, but merely provides that their disclosure is not mandated.”); see also, 2001 Ohio Op. Att'y Gen. No. 041.

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

B. Multiple and Mixed Exceptions

Many records are subject to more than one exception. Some may be subject to both a discretionary exception (giving the public office the option to withhold), as well as a mandatory exception (which prohibits release), so it is important for public offices to find all exceptions that apply to a particular record, rather than acting on the first one that is found to apply.

C. Waiver of an Exception

If a valid exception applies to a particular record, but the public office discloses it anyway, the office is deemed to have waived²²⁶ (abandoned) that exception for that particular record, especially if the disclosure was to a person whose interests are antagonistic to those of the public office.²²⁷ However, “waiver does not necessarily occur when the public office that possesses the information makes limited disclosures [to other public officials] to carry out its business.”²²⁸ Under such circumstances, the information has never been disclosed to the public.²²⁹

D. Applying Exceptions

In Ohio, the records of a public office belong to the people, not to the government officials holding them.²³⁰ Accordingly, the public records law must be liberally interpreted in favor of disclosure,²³¹ and any exceptions in the law that permit certain types of records to be withheld from disclosure must be narrowly construed.²³² The public office has the burden of establishing that an exception applies, and does not meet that burden if it has not proven that the requested records fall squarely within the exception.²³³ The Ohio Supreme Court has stated that “in enumerating very narrow, specific exceptions to the public records statute, the General Assembly has already weighed and balanced the competing public policy considerations between the public’s right to know how its state agencies make decisions and the potential harm, inconvenience or burden imposed on the agency by disclosure.”²³⁴

A “well-settled principle of statutory construction [is] that ‘when two statutes, one general and the other special, cover the same subject matter, the special provision is to be construed as an exception to the general statute which might otherwise apply.’”²³⁵ Accordingly, where a statute permits a court to designate a fee, parties to an action must pay the court reporter for copies of court transcripts even

²²⁶ *State ex rel. Wallace v. State Med. Bd.*, 89 Ohio St.3d 431, 435 (2000) (“Waiver” is defined as a voluntary relinquishment of a known right.).

²²⁷ See, e.g., *State ex rel. Cincinnati Enquirer v. Dupuis*, 98 Ohio St.3d 126, 2002-Ohio-7041; *State ex rel. Gannett Satellite Network, Inc. v. Petro*, 80 Ohio St.3d 261, 1997-Ohio-319; *State ex rel. Zuem v. Leis*, 56 Ohio St.3d 20 (1990); *Dept. of Liquor Control v. B.P.O.E. Lodge 0107*, 62 Ohio St. 3d 1452 (1991) (introduction of record at administrative hearing waives any bar to dissemination); *State ex rel. Coleman v. City of Norwood*, 1st Dist. No. C-890075 (Aug. 2, 1989) (“the visual disclosure of the documents to relator [the requester in this case] waives any contractual bar to dissemination of these documents”); *Covington v. Backner*, Franklin Cty. C.P. No. 98 CVH-07-5242, (June 1, 2000) (attorney-client privilege waived where staff attorney had reviewed, duplicated, and inadvertently produced documents to defendants during discovery).

²²⁸ *State ex rel. Musial v. N. Olmstead*, 106 Ohio St.3d 459, 2005-Ohio-5521, ¶15 (forwarding police investigation records to a city’s ethics commission did not constitute waiver); *State ex rel. Cincinnati Enquirer v. Sharp*, 151 Ohio App.3d 756, 761, 2003-Ohio-1186 (1st Dist.) (statutory confidentiality of documents submitted to municipal port authority not waived when port authority shares documents with county commissioners).

²²⁹ *State ex rel. Musial v. N. Olmstead*, 106 Ohio St.3d 459, 465, 2005-Ohio-5521, ¶35-39; *State ex rel. Cincinnati Enquirer v. Sharp*, 151 Ohio App.3d 756, 761, 2003-Ohio-1186 (1st Dist.).

²³⁰ *White v. Clinton Cty. Bd. Of Comm’rs.*, 76 Ohio St.3d 416, 420 (1996); *Dayton Newspapers, Inc. v. Dayton*, 45 Ohio St.2d 107, 109 (1976) (quoting *State ex rel. Patterson v. Ayers*, 171 Ohio St. 369, 371 (1960)).

²³¹ *State ex rel. Mahajan v. State Medical Bd.*, 127 Ohio St.3d 497, 2010-Ohio-5995, ¶21; *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm’rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶17; *State ex rel. Carr v. City of Akron*, 112 Ohio St.3d 351, 2006-Ohio-6714, ¶29.

²³² *State ex rel. Cincinnati Enquirer v. Jones-Kelley*, 118 Ohio St.3d 81, 2008-Ohio-1770, ¶10 (“A custodian does not meet this burden if it has not proven that the requested records fall squarely within the exception.”); *State ex rel. Carr v. City of Akron*, 112 Ohio St.3d 351, 2006-Ohio-6714, ¶30 (“Insofar as Akron asserts that some of the requested records fall within certain exceptions to disclosure under R.C. 149.43, we strictly construe exceptions against the public records custodian, and the custodian has the burden to establish the applicability of an exception.”).

²³³ *State ex rel. Rocker v. Guernsey County Sheriff’s Office*, 126 Ohio St.3d 224, 2010-Ohio-3288, ¶7.

²³⁴ *State ex rel. James v. Ohio State Univ.*, 70 Ohio St.3d 168, 172, 1994-Ohio-246; NOTE: The Ohio Supreme Court has not authorized courts or other records custodians to create new exceptions to R.C. 149.43 based on a balancing of interests or generalized privacy concerns. *State ex rel. WBNS TV, Inc. v. Dues*, 101 Ohio St.3d 406, 2004-Ohio-1497, ¶31.

²³⁵ *State ex rel. Slagle v. Rogers*, 103 Ohio St.3d 89, 92, 2004-Ohio-4354, ¶14 (citing *State ex rel. Dublin Securities, Inc. v. Ohio Div. of Securities*, 68 Ohio St.3d 426, 429, 1994-Ohio-340 (1994)); see, R.C. 1.51.

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

though it may be in excess of the court's "actual cost" to duplicate that record.²³⁶ (See Chapter Two: C. Statutes That Modify General Rights and Duties)

Another rule of construction courts often apply when interpreting a statute is the maxim *expressio unius est exclusio alterius* - "the expression of one thing is the exclusion of another."²³⁷ Applying this maxim would mean that if a statute expressly states that particular records of a public office are public, the remaining records would not be public. However, Ohio's Supreme Court has clearly stated that just the opposite is true when applied to public records: if a statute expressly states that specific records of a public office are public, it does not mean that all other records of that office are not public, i.e., that the other records are exempt from disclosure.²³⁸

Simply put, if a record does not clearly fit into one of the exceptions listed by the General Assembly, and is not otherwise prohibited from disclosure by other state or federal law, it must be disclosed.

E. Exceptions Enumerated in the Public Records Act

The Ohio Public Records Act contains a list of records and types of information removed from the definition of "public records."²³⁹ The full text of those exceptions appears in R.C. 149.43(A)(1), a copy of which is included in Appendix A. Here, these exceptions (bb) are addressed in brief summaries. Note that although the language removing a record from the definition of "public records" gives the public office the choice of withholding or releasing the record, many of these records are further subject to other statutes that prohibit their release.²⁴⁰

(a) Medical records, which are defined as any document or combination of documents that:

1) pertain to a patient's medical history, diagnosis, prognosis, or medical condition,

and

2) were generated and maintained in the process of medical treatment.²⁴¹

Records meeting this definition need not be disclosed.²⁴² Birth, death, and hospital admission or discharge records are not considered medical records for purposes of Ohio's public records law.²⁴³ Reports generated for reasons other than medical diagnosis or treatment, such as for employment or litigation purposes, are not "medical records" exempt from disclosure under the Public Records Act.²⁴⁴ However, other statutes or federal constitutional rights may prohibit disclosure,²⁴⁵ in which case the records or information are not public records under the "catch-all exception," R.C. 149.43(A)(1)(v).

²³⁶ *State ex rel. Slagle v. Rogers*, 103 Ohio St.3d 89, 2004-Ohio-4354, ¶18 ("R.C. 2301.24 is a specific statute that requires a party to an action to pay the designated fee to the court reporter when seeking transcripts or copies of transcripts in the action.") For additional discussion of costs, see Chapter Two: B. Rights and Obligations of a Public Office.

²³⁷ Black's Law Dictionary, 581 (6th Ed. 1990).

²³⁸ *Franklin County Sheriff's Dept. v. State Employment Relations Bd.*, 63 Ohio St.3d 498 (1992) (while categories of records designated in R.C. 4117.17 clearly are public records, all other records must still be analyzed under R.C. 149.43).

²³⁹ R.C. 149.43(A)(1)(a)-(bb)

²⁴⁰ See, Chapter Three: B. Multiple and Mixed Exceptions.

²⁴¹ R.C. 149.43(A)(1)(a) (applying Public Records Act definition of "medical records" at R.C. 149.43(A)(3)).

²⁴² R.C. 149.43(A)(3); *State ex rel. Strothers v. Wertheim*, 80 Ohio St.3d 155, 158, 1997-Ohio-349; 1999 Ohio Op. Att'y Gen. No. 06; but compare, *State ex rel. Cincinnati Enquirer v. Adcock*, No. C-040064, 2004-Ohio-7130 (1st Dist.).

²⁴³ R.C. 149.43(A)(3).

²⁴⁴ See *State ex rel. O'Shea & Assoc. v. Cuyahoga Metro. Housing Auth.*, Ohio Supreme Court Case No. 2010-1536, 2012-Ohio-115, ¶¶ 41-43 (questionnaires and release authorizations generated to address lead exposure in city-owned housing not "medical records" despite touching on childrens' medical histories); *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 144-45, 1995-Ohio-248 (a police psychologist report obtained to assist in the police hiring process is not a medical record); *State of Ohio v. Hall*, 141 Ohio App.3d 561, 2000-Ohio-4059 (4th Dist.) (psychiatric reports compiled solely to assist court with competency to stand trial determination are not medical records).

²⁴⁵ See, e.g., 42 U.S.C. §§ 12101 et seq. (1990) (Americans with Disabilities Act); 29 U.S.C. §§ 2601 et seq. (1993) (Family and Medical Leave Act).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

(b) Records pertaining to probation and parole proceedings or proceedings related to the imposition of community control sanctions²⁴⁶ and post-release control sanctions.²⁴⁷ Examples of records covered by this exception include:

- Pre-sentence investigation reports;²⁴⁸
- Records relied on to compile a pre-sentence investigation report;²⁴⁹
- Documents reviewed by the Parole Board in preparation for a parole hearing;²⁵⁰ and
- Records of parole proceedings.²⁵¹

(c) All records associated with the statutory process through which minors may obtain judicial approval for abortion procedures in lieu of parental consent. This exception includes records from both trial and appellate-level proceedings.²⁵²

(d), (e), and (f): These three exceptions all relate to the confidentiality of adoption proceedings.

Documents removed from the definition of “public record” include:

- Records pertaining to adoption proceedings;²⁵³
- Contents of an adoption file maintained by the Department of Health;²⁵⁴
- A putative father registry;²⁵⁵ and
- An original birth record after a new birth record has been issued²⁵⁶

In limited circumstances, release of adoption records and proceedings may be appropriate. For example:

- The Department of Job and Family Services may release a putative father’s registration form to the mother of the minor or to the agency or attorney who is attempting to arrange the minor’s adoption.²⁵⁷
- Non-identifying social and medical histories may be released to an adopted person who has reached majority or to the adoptive parents of a minor.²⁵⁸
- An adult adopted person may be entitled to the release of identifying information or access to his or her adoption file.²⁵⁹

(g) Trial preparation records: “trial preparation record,” for the purposes of the Ohio Public Records Act, is defined as “any record that contains information that is specifically compiled in reasonable anticipation of, or in defense of, a civil or criminal action or proceeding, including the independent thought processes and personal trial preparation of an attorney.”²⁶⁰

²⁴⁶ R.C. 149.43(A)(9) (“Community control sanction” has the same meaning as in R.C. 2929.01).

²⁴⁷ R.C. 149.43(A)(1)(b); R.C. 149.43(A)(10) (“Post-release control sanction” has the same meaning as in R.C. 2967.01).

²⁴⁸ *MADD v. Gosser*, 20 Ohio St.3d 30, 32 n. 2 (1985).

²⁴⁹ *Hadlock v. Polito*, 74 Ohio App.3d 764, 766 (8th Dist. 1991).

²⁵⁰ *Lipshutz v. Shoemaker*, 49 Ohio St.3d 88, 90 (1990).

²⁵¹ *Gaines v. Adult Parole Authority*, 5 Ohio St.3d 104 (1983).

²⁵² R.C. 149.43(A)(1)(c) (referencing R.C. 2505.073(B)).

²⁵³ R.C. 149.43(A)(1)(d).

²⁵⁴ R.C. 149.43(A)(1)(d) (referencing R.C. 3705.12).

²⁵⁵ R.C. 149.43(A)(1)(e) (referencing R.C. 3107.062, 3111.69).

²⁵⁶ R.C. 3705.12(A)(2).

²⁵⁷ R.C. 3107.063.

²⁵⁸ R.C. 3107.17(D).

²⁵⁹ R.C. 149.43(A)(1)(f); R.C. 3107.38(B) (adopted person whose adoption was decreed prior to January 1, 1964 may request adoption file); R.C. 3107.40, 3107.41 (access to adoption file for person whose adoption was decreed after January 1, 1964 is dependent on whether the adoption file has either a denial of release form or an authorization of release form).

²⁶⁰ R.C. 149.43(A)(4).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

Documents that a public office obtains through discovery during litigation are considered trial preparation records.²⁶¹ In addition, material compiled for a public attorney's personal trial preparation constitutes a trial preparation record.²⁶² The trial preparation exception does not apply to settlement agreements or settlement proposals,²⁶³ or where there is insufficient evidence that litigation was reasonably anticipated at the time records were prepared.²⁶⁴

- (h) Confidential Law Enforcement Investigatory Records: CLEIRs are defined²⁶⁵ as records that (1) pertain to a law enforcement matter, and (2) have a high probability of disclosing any of the following:
- The identity of an uncharged suspect;
 - The identity of an information source or witness to whom confidentiality has been “reasonably promised;”
 - Information that would tend to reveal the identity of a source or witness, where the source or witness was “reasonably promised” confidentiality;
 - Specific confidential investigatory techniques or procedures or specific investigatory work product; or
 - Information that would endanger the life or physical safety of law enforcement personnel, a crime victim, a witness, or a confidential information source.
- (i) Records containing confidential “mediation communications” (R.C. 2710.03) or records relating to the Ohio Civil Rights Commission’s discrimination complaint, investigation, and conciliation process (R.C. 4112.05).²⁶⁶
- (j) DNA records stored in the state DNA database pursuant to R.C. 109.573.²⁶⁷
- (k) Inmate records released by the Department of Rehabilitation and Correction to the Department of Youth Services or a court of record pursuant to R.C. 5120.21(E).²⁶⁸
- (l) Records of the Department of Youth Services (DYS) regarding children in its custody that are released to the Department of Rehabilitation and Correction (DRC) for the limited purpose of carrying out the duties of the DRC.²⁶⁹
- (m) Intellectual property records; while this exception sounds broad on its face, it has a specific definition for the purposes of the Ohio Public Records Act, and is limited to those records that are produced or collected: (1) by or for state university faculty or staff; (2) in relation to studies or research on an educational, commercial, scientific, artistic, technical, or scholarly issue; and (3) which have not been publicly released, published, or patented.²⁷⁰

²⁶¹ *Cleveland Clinic Found. v. Levin*, 120 Ohio St.3d 1210, 2008-Ohio-6197, ¶10.

²⁶² *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 431-32 (1994).

²⁶³ *State ex rel. Cincinnati Enquirer v. Dupuis*, 98 Ohio St.3d 126, 2002-Ohio-7041, ¶¶16-21.

²⁶⁴ See *State ex rel. O’Shea & Assoc. v. Cuyahoga Metro. Housing Auth.*, Ohio Supreme Court Case No. 2010-1536, 2012-Ohio-115, ¶ 44.

²⁶⁵ R.C. 149.43(A)(2).

²⁶⁶ R.C. 149.43(A)(1)(i).

²⁶⁷ R.C. 149.43(A)(1)(j).

²⁶⁸ R.C. 5120.21(A).

²⁶⁹ R.C. 5139.05(D)(1); see, R.C. 5139.05(D) for all records maintained by DYS of children in its custody.

²⁷⁰ R.C. 149.43(A)(1)(m); R.C. 149.43(A)(5); see also, *State ex rel. Physicians Comm. for Responsible Medicine v. Bd. of Trs. of Ohio State Univ.*, 108 Ohio St.3d 288, 2006-Ohio-903 (In finding university’s records of spinal cord injury research to be exempt intellectual property records, Court ruled that limited sharing of the records with other researchers to further the advancement of spinal cord injury research did not mean that the records had been “publicly released”).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

- (n) Donor profile records. Similar to the intellectual property exception, the “donor profile records” exception is given a specific, limited definition for the purposes of the Public Records Act. First, it only applies to records about donors or potential donors to public colleges and universities.²⁷¹ Second, the names and reported addresses of all donors and the date, amount, and condition of their donation(s), are all public information.²⁷² The exception applies to all other donor or potential donor records.
- (o) Records maintained by the Ohio Department of Job and Family Services on statutory employer reports of new hires.²⁷³
- (p) Peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT or investigator of the Bureau of Criminal Identification and Investigation residential and familial information.²⁷⁴
- (q) Trade secrets of certain county and municipal hospitals: “Trade secrets” are defined at R.C. 1333.61(D), the definitional section of Ohio’s Uniform Trade Secrets Act.
- (r) Information pertaining to the recreational activities of a person under the age of eighteen. This includes any information that would reveal the person’s:
 - Address or telephone number, or that of person’s guardian, custodian, or emergency contact person;
 - Social Security Number, birth date, or photographic image;
 - Medical records, history, or information; or
 - Information sought or required for the purpose of allowing that person to participate in any recreational activity conducted or sponsored by a public office or obtain admission privileges to any recreational facility owned or operated by a public office.²⁷⁵
- (s) Listed records of a child fatality review board (except for the annual reports the boards are required by statute to submit to the Ohio Department of Health).²⁷⁶ The listed records are also prohibited from unauthorized release by R.C. 307.629(B).
- (t) Records and information provided to the executive director of a public children services agency or prosecutor regarding the death of a minor from possible abuse, neglect, or other criminal conduct. Some of these records are prohibited from release to the public. Others may become public depending on the circumstances.²⁷⁷
- (u) Nursing home administrator licensing test materials, examinations, or evaluation tools.²⁷⁸
- (v) Records the release of which is prohibited by state or federal law; this is often called the catch-all exception. Although state and federal statutes can create both mandatory and discretionary exceptions by themselves, this provision also incorporates as exceptions by reference any statutes or administrative code that prohibit the release of specific records. An agency rule designating particular records as confidential that is properly promulgated by a state or federal agency will constitute a valid catch-all exception²⁷⁹ because such rules have the effect of law.²⁸⁰

²⁷¹ R.C. 149.43(A)(6) (“‘Donor profile record’ means all records about donors or potential donors to a public institution of higher education . . .”).

²⁷² R.C. 149.43(A)(6).

²⁷³ R.C. 149.43(A)(1)(o) (referencing R.C. 3121.894).

²⁷⁴ R.C. 149.43(A)(7); see, Chapter Six, Section C. (“Residential and Familial Information of Covered Professions”).

²⁷⁵ R.C. 149.43(A)(1)(r); R.C. 149.43(A)(8).

²⁷⁶ R.C. 149.43(A)(1)(s) (referencing R.C. 307.621-.629).

²⁷⁷ R.C. 149.43(A)(1)(t) (referencing R.C. 5153.171).

²⁷⁸ R.C. 149.43(a)(1)(u) (referencing R.C. 4751.04).

²⁷⁹ *State ex rel. Lindsay v. Dwyer*, 108 Ohio App.3d 462 (10th Dist. 1996) (State Teachers Retirement System properly denied access to beneficiary form pursuant to Ohio Administrative Code); 2000 Ohio Op. Att’y Gen. No. 036 (service member’s discharge certificate prohibited from release by Governor’s Office of Veterans Affairs, per federal regulation, without service member’s written consent).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

But, if the rule was promulgated outside the authority statutorily granted to the agency, the rule is not valid and will not constitute an exception to disclosure.²⁸¹

- (w) Proprietary information of or relating to any person that is submitted to or compiled by the Ohio Venture Capital Authority.²⁸²
- (x) All information and evaluations regarding the preparedness and capacity of trauma centers “to respond to disasters, mass casualties, and bioterrorism.”²⁸³
- (y) Financial statements and data any person submits for any purpose to the Ohio Housing Finance Agency or the Controlling Board in connection with applying for, receiving, or accounting for financial assistance from the agency, and information that identifies any individual who benefits directly or indirectly from financial assistance from the agency.
- (z) Records and information relating to foster caregivers and children housed in foster care, as well as children enrolled in licensed, certified, or registered child care centers. This exception applies only to records held by county agencies or the Ohio Department of Job and Family Services.²⁸⁴
- (aa) Military discharges recorded with a county recorder.²⁸⁵
- (bb) Usage information including names and addresses of specific residential and commercial customers of a municipally owned or operated public utility.

F. Exceptions Affecting Personal Privacy

Ohio has no general privacy law comparable to the federal Privacy Act.²⁸⁶ Accordingly, there is no general “privacy exception” to the Ohio Public Records Act. However, a public office is obligated to protect certain non-public record personal information from unauthorized dissemination.²⁸⁷ Though many of the exceptions to the Public Records Act apply to information people would consider “private,” this section focuses specifically on records and information that are protected by: (1) the right to privacy found in the United States Constitution; and (2) R.C. 149.45 and R.C. 319.28(B), which Ohio laws designed to protect personal information on the internet; and (3) Ohio’s Personal Information Systems Act, Chapter 1347 of the Ohio Revised Code.

1. Constitutional Right to Privacy

The U.S. Supreme Court recognizes a constitutional right to informational privacy under the Fourteenth Amendment’s Due Process Clause. This right protects people’s “interest in avoiding divulgence of highly personal information,”²⁸⁸ but must be balanced against the public interest in the information.²⁸⁹ Such information cannot be disclosed unless disclosure “narrowly serves a compelling state interest.”²⁹⁰

²⁸⁰ *Columbus and Southern Ohio Elec. Co. v. Indus. Comm.*, 64 Ohio St.3d 119, 122 (1992); *Doyle v. Ohio Bureau of Motor Vehicles*, 51 Ohio St.3d 46, 48 (1990); *State ex rel. DeBoe v. Indus. Comm.*, 161 Ohio St. 67 (1954) (paragraph one of syllabus).

²⁸¹ *State ex rel. Gallon & Takacs Co., L.P.A. v. Conrad*, 123 Ohio App.3d 554, 560-61 (10th Dist. 1997) (BWC administrative rule prohibiting release of managed care organization applications was unauthorized attempt to create exception to Public Records Act).

²⁸² R.C. 149.43(A)(1)(w); see, R.C. 150.01.

²⁸³ R.C. 149.43(A)(1)(x); R.C. 3701.072.

²⁸⁴ R.C. 149.43(A)(1)(z); see, R.C. 5101.29.

²⁸⁵ R.C. 149.43(A)(1)(aa); see, R.C. 317.24.

²⁸⁶ 5 U.S.C. 552a.

²⁸⁷ See, e.g., R.C. 1347.05(G) (Public offices must “[t]ake reasonable precautions to protect personal information in the system from unauthorized modification, destruction, use, or disclosure”).

²⁸⁸ *Kallstrom v. City of Columbus*, 136 F.3d 1055 (6th Cir. 1998) (citing *Whalen v. Roe*, 429 U.S. 589, 598-600 (1977)).

²⁸⁹ *Kallstrom v. City of Columbus*, 136 F.3d 1055, 1061 (6th Cir. 1998) (citing *Whalen v. Roe*, 429 U.S. 589, 602-04 (1977)); *Nixon v. Administrator of Gen. Servs.* (1977), 433 U.S. 425; see also, *J. P. v. DeSanti*, 653 F.2d 1080, 1091 (6th Cir. 1981).

²⁹⁰ *Kallstrom v. City of Columbus*, 136 F.3d 1055, 1059 (6th Cir. 1998).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

In Ohio, the U.S Court of Appeals for the Sixth Circuit has limited this right to informational privacy to interests that “are of constitutional dimension,” that are considered “fundamental rights” or rights implicit in the concept of ordered liberty.”²⁹¹ That is, the consequence of disclosure must implicate some other right protected by the Constitution.

In the Sixth Circuit case of *Kallstrom v. City of Columbus*, several police officers sued the city for releasing their unredacted personnel files to an attorney for members of a criminal gang whom the officers had investigated and were testifying against in a major drug case. The personnel files contained the officers’ and their family members’ addresses and phone numbers, as well as banking information, Social Security Numbers, and photo IDs.²⁹² The Court held that, because release of the information could lead to the gang members causing the officers bodily harm, the officers’ fundamental constitutional rights to personal security and bodily integrity were at stake.²⁹³ The Court also described this constitutional right as a person’s “interest in preserving [one’s] life.”²⁹⁴ The Court then found that the Ohio Public Records Act did not require release of the files in this manner, because the disclosure did not “narrowly [serve] the state’s interest in ensuring accountable government.”²⁹⁵

Based on the Sixth Circuit’s holding in *Kallstrom*, the Ohio Supreme Court subsequently held that police officers have a constitutional right to privacy in the officers’ personal information that could be used by defendants in a criminal case to “achieve nefarious ends.”²⁹⁶ The Ohio Supreme Court has also suggested that the constitutional right to privacy would come into play where “release of personal information [would create] an unacceptable risk that a child could be victimized.”²⁹⁷

In another Sixth Circuit case, a county sheriff held a press conference “to release the confidential and highly personal details” of a rape.²⁹⁸ The Sixth Circuit held that a rape victim has a “fundamental right of privacy in preventing government officials from gratuitously and unnecessarily releasing the intimate details of the rape,” where release of the information served no penalogical purpose.²⁹⁹ The Court indicated that release of some of the details may have been justifiable if the disclosure would have served “any specific law enforcement purpose,” including apprehending the suspect, but no such justification was offered in this case.³⁰⁰

Neither the Ohio Supreme Court nor the Sixth Circuit have applied the constitutional right to privacy broadly. Public offices and individuals should thus be aware of this potential protection, but know that it is limited to circumstances involving fundamental rights, and that most personal information is not protected by it.

2. Personal Information Listed Online

R.C. 149.45 requires public offices to redact, and permits certain individuals to request redaction of, specific personal information³⁰¹ from any records made available to the general public on the

²⁹¹ *Kallstrom v. City of Columbus*, 136 F.3d 1055, 1062 (6th Cir. 1998) (quoting *J. P. v. DeSanti*, 653 F.2d 1080, 1090 (6th Cir. 1981) (internal citations omitted in original)).

²⁹² *Kallstrom v. City of Columbus*, 136 F.3d 1055, 1059 (6th Cir. 1998).

²⁹³ *Kallstrom v. City of Columbus*, 136 F.3d 1055, 1063 (6th Cir. 1998) (quoting *Doe v. Claiborne County*, 103 F.3d 495, 507 (6th Cir. 1996)).

²⁹⁴ *Kallstrom v. City of Columbus*, 136 F.3d 1055, 1063 (6th Cir. 1998) (quoting *Nishiyama v. Dickson County*, 814 F.2d 277, 380 (6th Cir. 1987)) (en banc)).

²⁹⁵ *Kallstrom v. City of Columbus*, 136 F.3d 1055, 1065 (6th Cir. 1998).

²⁹⁶ *State ex rel. Keller v. Cox*, 85 Ohio St.3d 279, 282, 1999-Ohio-264; see also *State ex rel. Cincinnati Enquirer v. Streicher*, No. C-100820, 2011-Ohio-4498 (1st Dist.), pending appeal (risk of harm from release of identities of officers involved in fatal incident with motorcycle club implicated fundamental rights to due process).

²⁹⁷ *State ex rel. McCleary v. Roberts*, 88 Ohio St.3d 365, 372, 2000-Ohio-345.

²⁹⁸ *Bloch v. Ribar*, 156 F.3d 673, 676 (6th Cir. 1998).

²⁹⁹ *Bloch v. Ribar*, 156 F.3d 673, 686 (6th Cir. 1998).

³⁰⁰ *Bloch v. Ribar*, 156 F.3d 673, 686 (6th Cir. 1998).

³⁰¹ “Personal information” is defined as an individual’s: social security number, federal tax identification number, driver’s license number or state identification number, checking account number, savings account number, or credit card number. R.C. 149.45(A)(1).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

internet.³⁰² A person must make this request in writing on a form developed by the Attorney General, specifying the information to be redacted and providing any information that identifies the location of that personal information.³⁰³ In addition to the right of all persons to request the redaction of personal information defined above, persons in certain covered professions can also request the redaction of their actual residential address from any records made available by public offices to the general public on the internet.³⁰⁴ When a public office receives a request for redaction, it must act in accordance with the request within five business days, if practicable.³⁰⁵ If the public office determines that redaction is not practicable, it must explain to the individual why the redaction is impracticable within five business days.³⁰⁶

R.C. 149.45 separately requires all public offices to redact, encrypt, or truncate the Social Security Numbers of individuals from any documents made available to the general public on the internet.³⁰⁷ If a public office becomes aware that an individual's Social Security Number was not redacted, the office must redact the Social Security Number within a reasonable period of time.³⁰⁸

The statute provides that a public office is not liable in a civil action for any alleged harm as a result of the failure to redact personal information or addresses on records made available on the internet to the general public, unless the office acted with a malicious purpose, in bad faith, or in a wanton or reckless manner.³⁰⁹

In addition to the protections listed above, R.C. 319.28 allows a covered professional³¹⁰ to submit a request, by affidavit, to remove his or her name from the general tax list of real and public utility property and insert initials instead.³¹¹ Upon receiving such a request, the county auditor shall act within five days in accordance with the request.³¹² If removal is not possible, the auditor's office must explain why the removal and insertion is impracticable.³¹³

*3. Ohio Personal Information Systems Act*³¹⁴

Ohio's Personal Information Systems Act (PISA) applies to those items to which the Ohio Public Records Act does not apply; that is, records that have been determined to be non-public, and items and information that are not "records" as defined by the Ohio Public Records Act.³¹⁵ The General Assembly has made clear that PISA is not designed to deprive the public of otherwise public information by incorporating the following provisions with respect to the Ohio Public Records and Open Meetings Acts:

- The provisions of this chapter shall not be construed to prohibit the release of public records, or the disclosure of personal information in public records, as defined in [the

³⁰² R.C. 149.45(C)(1).

³⁰³ This form is available at <http://www.OhioAttorneyGeneral.gov/files/Forms/Forms-for-Consumers/Request-To-Redact-Personal-Information>.

³⁰⁴ Covered professions include: peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or BCI & I investigator. (R.C. 149.45(A)(2)) For additional discussion, see Chapter Six: C. Residential and Familial Information of Covered Professions; R.C. 149.45(D) (1) (this section does not apply to county auditor offices). The request must be on a form developed by the Attorney General, which is available at [http://www.OhioAttorneyGeneral.gov/files/Forms/Forms-for-Law-Enforcement/Request-To-Redact-Address-\(1\)](http://www.OhioAttorneyGeneral.gov/files/Forms/Forms-for-Law-Enforcement/Request-To-Redact-Address-(1)).

³⁰⁵ R.C. 149.45(C)(2); R.C. 149.45(D)(2).

³⁰⁶ R.C. 149.45(C)(2); R.C. 149.45(D)(2). NOTE: Explanation of the impracticability of redaction by the public office can be either oral or written.

³⁰⁷ R.C. 149.45(B)(1),(2); NOTE: A public office is also obligated to redact social security numbers from records that were posted before the effective date of R.C. 149.45.

³⁰⁸ R.C. 149.45(E)(1).

³⁰⁹ R.C. 149.45(E)(2).

³¹⁰ A peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT or investigator of the bureau of criminal identification and investigation. R.C. 319.28(B)(1).

³¹¹ R.C. 319.28(B)(1).

³¹² R.C. 319.28(B)(2).

³¹³ R.C. 319.28(B)(2).

³¹⁴ R.C. Chapter 1347.

³¹⁵ R.C. 149.011(G).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

Ohio Public Records Act], or to authorize a public body to hold an executive session for the discussion of personal information if the executive session is not authorized under division (G) of [the Ohio Open Meetings Act].³¹⁶

- The disclosure to members of the general public of personal information contained in a public record, as defined in section 149.43 of the Revised Code, is not an improper use of personal information under this chapter.³¹⁷
- As used in the Personal Information Systems Act, “confidential personal information” means personal information that is not a public record for purposes of [the Ohio Public Records Act].³¹⁸

The following definitions apply to the non-records and non-public records that are covered by PISA:

“Personal information” means:

1. Any information that describes anything about a person; **or**
2. that indicates actions done by or to a person; **or**
3. that indicates that a person possesses certain personal characteristics; **and**
4. that contains, and can be retrieved from a system by, a name, identifying number, symbol, or other identifier assigned to a person.³¹⁹

“Confidential personal information” means personal information that is not a public record for purposes of section 149.43 of the Revised Code.³²⁰

A personal information “system” is:

1. Any collection or group of related records that are kept in an organized manner and maintained by a state or local agency; **and**
2. from which personal information is retrieved by the name of the person or by some identifying number, symbol, or other identifier assigned to the person; **including**,
3. records that are stored manually and electronically.³²¹

The following are not “systems” for purposes of PISA:

- Collected archival records in the custody of or administered under the authority of the Ohio Historical Society;
- Published directories, reference materials or newsletters; or
- Routine information that is maintained for the purpose of internal office administration, the use of which would not adversely affect a person.³²²

PISA generally requires accurate maintenance and prompt deletion of unnecessary personal information from “personal information systems” maintained by public offices, and protects personal information from unauthorized dissemination.³²³ Based on provisions added to the law in 2009, state

³¹⁶ R.C. 1347.04(B).

³¹⁷ R.C. 1347.04(B).

³¹⁸ R.C. 1347.15(A)(1).

³¹⁹ R.C. 1347.01(E).

³²⁰ R.C. 1347.15(A)(1).

³²¹ R.C. 1347.01(F).

³²² R.C. 1347.01(F).

³²³ See, R.C. 1347.01 et seq.

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

agencies³²⁴ must adopt rules under Chapter 119 of the Revised Code regulating access to the confidential personal information the agency keeps, whether electronically or on paper.³²⁵ No person shall knowingly access “confidential personal information” in violation of these rules,³²⁶ and no person shall knowingly use or disclose “confidential personal information” in a manner prohibited by law.³²⁷ A state agency may not employ persons who have violated access, use, or disclosure laws regarding confidential personal information.³²⁸ In general, state and local agencies must “[t]ake reasonable precautions to protect personal information in the system from unauthorized modification, destruction, use, or disclosure.”³²⁹

Sanctions for violations of PISA

The enforcement provisions of PISA can include injunctive relief, civil damages, and/or criminal penalties, depending on the nature of the violation(s).³³⁰

Note: Because PISA concerns the treatment of non-records and non-public records, it is not set out in great detail in this Sunshine Law manual. Public offices can find more detailed guidance on implementing the provision of PISA concerning limitations on access to confidential personal information at <http://privacy.ohio.gov/government>, under the heading “ORC 1347.15 Guidance.” Public offices should also consult with their legal counsel.

G. Exceptions Created by Other Laws (by Topic)

1. Attorney-Client Privilege, Discovery, and Other Litigation Items

a. Attorney-Client Privilege

“The attorney-client privilege is one of the oldest recognized privileges for confidential communications.”³³¹ Attorney-client privileged records and information must not be revealed without the client’s waiver.³³² Such records are thus prohibited from release by both state and federal law for purposes of the catch-all exception to the Ohio Public Records Act.

The attorney-client privilege arises whenever legal advice of any kind is sought from a professional legal advisor in his or her capacity as such, and the communications relating to that purpose, made in confidence by the client, are at the client’s instance permanently protected from disclosure by the client or the legal advisor.³³³ Records or information within otherwise public records that meet those criteria must be withheld or redacted in order to preserve attorney-client privilege. For example, drafts of proposed bond documents prepared by an attorney are protected by attorney-client privilege, and are not subject to disclosure.³³⁴

³²⁴ R.C. 1347.15(A)(2); 2010 Ohio Ap. Att’y Gen. No. 016 (Ohio Bd. of Tax Appeals is a “judicial agency” for purposes of R.C. 1347.15).

³²⁵ R.C. 1347.15(B).

³²⁶ R.C. 1347.15(H)(1).

³²⁷ R.C. 1347.15(H)(2).

³²⁸ R.C. 1347.15(H)(3).

³²⁹ R.C. 1347.05(G).

³³⁰ R.C. 1347.10, 1347.15, and 1347.99.

³³¹ *State ex rel. Leslie v. Ohio Hous. Fin. Agency*, 105 Ohio St.3d 261, 2005-Ohio-1508, ¶19 (quoting *Swidler & Berlin v. United States*, 524 U.S. 399 (1998)).

³³² *State ex rel. Leslie v. Ohio Hous. Fin. Agency*, 105 Ohio St.3d 261, 2005-Ohio-1508, ¶18; see e.g., *Reed v. Baxter*, 134 F.3d 351, 356 (6th Cir. 1998); *State ex rel. Nix v. City of Cleveland*, 83 Ohio St.3d 379, 383, 1998-Ohio-290; *TBC Westlake, Inc. v. Hamilton Cty. Bd. of Revision*, 81 Ohio St.3d 58, 1998-Ohio-445; *State ex rel. Besser v. Ohio State Univ.*, 87 Ohio St.3d 535, 2000-Ohio-475; *State ex rel. Thomas v. Ohio State Univ.*, 71 Ohio St.3d 245, 1994-Ohio-261.

³³³ *State ex rel. Leslie v. Ohio Hous. Fin. Agency*, 105 Ohio St.3d 261, 265, 2005-Ohio-1508, ¶21 (quoting *Reed v. Baxter*, 134 F. 3d 351, 355-56 (6th Cir. 1998)).

³³⁴ *State ex rel. Benesch, Friedlander, Coplan & Aronoff, LLP v. City of Rossford*, 140 Ohio App.3d 149, 156 (6th Dist. 2000).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

The privilege applies to records of communications between public office clients and their attorneys in the same manner that it does for private clients and their counsel.³³⁵

Communications between a client and his or her attorney's agent may also be subject to the attorney-client privilege.³³⁶ The privilege also applies to "documents containing communications between members of ... a represented ... public entity ... about the legal advice given."³³⁷ For example, itemized attorney billing statements to a public office that contain descriptions of work performed may be protected by the attorney-client privilege.³³⁸

b. Criminal Discovery

The Ohio Supreme Court has determined that in a pending criminal proceeding, defendants may only seek records through discovery under the Rules of Criminal Procedure.³³⁹ However, this limitation does not extend to police initial incident reports, which must be made available immediately, even to the defendant.³⁴⁰

Before 1994, many criminal defendants were circumventing the discovery process by using the Ohio Public Records Act to obtain more records than they would otherwise have been entitled to receive.³⁴¹ This tactic was prohibited in the landmark case of *State ex rel. Steckman v. Jackson*. The Ohio Supreme Court found that allowing criminal defendants to use the Public Records Act in that manner, among other things, "uneveled" the playing field because prosecutors had no similar right to obtain additional discovery outside the criminal rules.³⁴² However, when the records requested by criminal defendants are not related to their ongoing criminal case, the discovery limitation does not apply.³⁴³ Such requests must be analyzed in the same manner as any other public records request.

Note that when the prosecutor discloses materials to the defendant pursuant to the rules of criminal procedure, that disclosure does not mean those records automatically become available for public disclosure.³⁴⁴ The prosecutor does not waive³⁴⁵ applicable public records exceptions, such as trial preparation records or confidential law enforcement records,³⁴⁶ simply by complying with discovery rules.³⁴⁷

c. Civil Discovery

Unlike in the criminal arena, in pending civil court proceedings the parties are not confined to the materials available under the civil rules of discovery.³⁴⁸ A civil litigant is permitted to use the Ohio Public Records Act in addition to the more restricted limits associated with civil discovery.³⁴⁹ The

³³⁵ *State ex rel. Leslie v. Ohio Hous. Fin. Agency*, 105 Ohio St.3d 261, 2005-Ohio-1508, ¶23 (attorney-client privilege applies to communications between state agency personnel and their in-house counsel); *American Motors Corp. v. Huffstutler*, 61 Ohio St.3d 343 (1991).

³³⁶ *State ex rel. Toledo Blade v. Toledo-Lucas Cty. Port Auth.*, 121 Ohio St. 3d 537, 2009-Ohio-1767 (a factual investigation may invoke the attorney-client privilege). *State v. Post*, 32 Ohio St.3d 380, 385 (1987).

³³⁷ See, *State ex rel. Thomas v. Ohio State Univ.*, 71 Ohio St.3d 245, 251, 1994-Ohio-261.

³³⁸ *State ex rel. Dawson v. Bloom-Carroll Local School Dist.*, 131 Ohio St.3d 10, 2011-Ohio-6009.

³³⁹ *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 432 (1994) ("information, not subject to discovery pursuant to Crim.R. 16(B), contained in the file of a prosecutor who is prosecuting a criminal matter, is not subject to release as a public record pursuant to R.C. 149.43 and is specifically exempt from release as a trial preparation record in accordance with R.C. 149.43(A)(4)").

³⁴⁰ *State ex rel. Rasul-Bey v. Onunwor*, 94 Ohio St.3d 119, 120, 2002-Ohio-67 (criminal defendant's limitation to using only criminal discovery does not apply to initial incident reports, which are subject to immediate release upon request); *State of Ohio v. Twyford*, No. 98-JE-56, 2001-Ohio-3241 (7th Dist.).

³⁴¹ *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 428 (1994).

³⁴² *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 428-29 (1994).

³⁴³ *State ex rel. Keller v. Cox*, 85 Ohio St.3d 279, 281-82, 1999-Ohio-264 (where records sought have no relation to crime or case, *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420 (1994) is not applicable).

³⁴⁴ *State ex rel. WHIO-TV-7 v. Lowe*, 77 Ohio St.3d 350, 355, 1997-Ohio-271.

³⁴⁵ See Chapter Three: C. Waiver of an Exception.

³⁴⁶ See Chapter Three: E. Exceptions Enumerated in the Public Records Act - (g) trial preparation records; see also, Chapter Six: A. CLEIRs.

³⁴⁷ *State ex rel. WHIO-TV-7 v. Lowe*, 77 Ohio St.3d 350, 354-55, 1997-Ohio-271.

³⁴⁸ *Gilbert v. Summit County*, 104 Ohio St.3d 660, 661-62, 2004-Ohio-7108.

³⁴⁹ *Gilbert v. Summit County*, 104 Ohio St.3d 660, 661-62, 2004-Ohio-7108.

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

nature of a request as either discovery or request for public records will determine available enforcement.³⁵⁰

As to the use of these public records as evidence in litigation, the Ohio Rules of Evidence govern.³⁵¹ Justice Stratton's concurring opinion in *Gilbert v. Summit County*, 104 Ohio St. 3d 660 (2004), noted that "trial courts have discretion to admit or exclude evidence."³⁵² She stated more directly, "trial courts have discretion to impose sanctions for discovery violations, one of which could be exclusion of that evidence," and concluded that, "even though a party may effectively circumvent a discovery deadline by acquiring a document through a public records request, it is the trial court that ultimately determines whether those records will be admitted in the pending litigation."³⁵³

d. Prosecutor and Government Attorney Files (Trial Preparation and Work Product)

R.C. 149.43(A)(1)(g) excepts from release any "trial preparation records," which are defined as "any record that contains information that is specifically compiled in reasonable anticipation of, or in defense of, a civil or criminal action or proceeding, including the independent thought processes and personal trial preparation of an attorney."³⁵⁴ Documents that a public office obtains as a litigant through discovery will ordinarily qualify as "trial preparation records,"³⁵⁵ as would the material compiled for a specific criminal proceeding by a prosecutor or the personal trial preparation by a public attorney.³⁵⁶ Attorney trial notes and legal research are "trial preparation records," which may be withheld from disclosure.³⁵⁷ Virtually everything in a prosecutor's file during an active prosecution is either material compiled in anticipation of a specific criminal proceeding or personal trial preparation of the prosecutor, and is therefore exempt from public disclosure as "trial preparation" material.³⁵⁸ However, unquestionably non-exempt materials do not transform into "trial preparation records" simply by virtue of being held in a prosecutor's file.³⁵⁹ For example, routine offense and incident reports are subject to release while a criminal case is active, including those in the files of the prosecutor.³⁶⁰

The common law attorney work product doctrine also protects a broader range of materials than attorney-client privilege.³⁶¹ The doctrine provides a qualified privilege,³⁶² and is incorporated into Rule 26 of the Ohio and Federal Rules of Civil Procedure. Ohio Civ.R. 26(B)(3) protects material "prepared in anticipation of litigation or for trial." The rule protects the "notes or documents containing the mental impressions, conclusions, opinions, or legal theories of its attorney or other representative concerning the litigation."³⁶³

³⁵⁰ *State ex rel. TP Mech. Contractors, Inc. v. Franklin Cty. Bd. of Comm'rs*, No. 09AP-235, 2009-Ohio-3614 (10th Dist.).

³⁵¹ R. Evid. 803(8), 1005; *State of Ohio v. Curti*, 153 Ohio App.3d 183, 2003-Ohio-3286, ¶15 (7th Dist.).

³⁵² *Gilbert v. Summit County*, 104 Ohio St.3d 660, 2004-Ohio-7108, ¶11.

³⁵³ *Gilbert v. Summit County*, 104 Ohio St.3d 660, 2004-Ohio-7108, ¶11.

³⁵⁴ R.C. 149.43(A)(4).

³⁵⁵ *Cleveland Clinic Found. v. Levin*, 120 Ohio St.3d 1210, 2008-Ohio-6197, ¶10.

³⁵⁶ *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 431-32 (1994).

³⁵⁷ *State ex rel. Nix v. City of Cleveland*, 83 Ohio St.3d 379, 384-85, 1998-Ohio-290.

³⁵⁸ *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 432 (1994); *State ex rel. Towler v. O'Brien*, No. 04AP-752, 2005-Ohio-363, ¶¶14-16 (10th Dist.).

³⁵⁹ *State ex. Rel. WLWT-TV-5 v. Leis*, 77 Ohio St.3d 357, 361, 1997-Ohio-273. See also *State ex rel. Fasul-Bey v. Onunwor*, 94 Ohio St.3d 119, 120, 2002-Ohio-67 (finding that a criminal defendant was entitled to immediate release of initial incident reports).

³⁶⁰ *State ex rel. Fasul-Bey v. Onunwor*, 94 Ohio St.3d 119, 120, 2002-Ohio-67 (finding that a criminal defendant's limitation to discovery does not apply to initial incident reports, which are subject to immediate release upon request); *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 435 (1994).

³⁶¹ *Schaefer, Inc. v. Garfield Mitchell Agency, Inc.*, 82 Ohio App.3d 322 (2nd Dist. 1992); *Hickman v. Taylor*, 329 U.S. 495 (1947).

³⁶² *Squire, Sanders & Dempsey, L.L.P. v. Givaudan Flavors Corp.*, 127 Ohio St.3d 161, 2010-Ohio-4469, ¶55.

³⁶³ *Id.* ¶ 54, 60.

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

e. Settlement Agreements and Other Contracts

Where a governmental entity is party to a settlement, the trial preparation records exception will not apply to the settlement agreement.³⁶⁴ But the parties are entitled to redact any information within the settlement agreement that is subject to the attorney-client privilege.³⁶⁵ Any provision within the agreement that specifies it shall be kept confidential is void and unenforceable because a contractual provision will not supersede Ohio public records law.³⁶⁶

2. Income Tax Returns³⁶⁷

Generally, any information gained as a result of municipal and State income tax returns, investigations, hearings, or verifications are confidential and may only be disclosed as permitted by law.³⁶⁸ Ohio's municipal tax code provides that information may only be disclosed (1) in accordance with a judicial order; (2) in connection with the performance of official duties; or (3) in connection with authorized official business of the municipal corporation.³⁶⁹ One Attorney General Opinion found that W-2 federal tax forms prepared and maintained by a township as an employer are public records, but that W-2 forms filed as part of a municipal income tax return are confidential.³⁷⁰ Release of municipal income tax information to the Auditor of State is permissible for purposes of facilitating an audit.³⁷¹

Federal tax returns and "return information" are also confidential.³⁷² W-4 forms are confidential as "return information," which includes data with respect to the determination of the existence of liability, or the amount thereof, of any person for any tax.³⁷³

3. Trade Secrets

Trade secrets are defined in R.C. 1333.61(D) and include "any information, including . . . any business information or plans, financial information, or listing of names" that:

1. Derives actual or potential independent economic value from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use;
and
2. Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.³⁷⁴

"An entity claiming trade secret status bears the burden to identify and demonstrate that the material is included in categories of protected information under the statute and additionally must take some active steps to maintain its secrecy."³⁷⁵ The Ohio Supreme Court has adopted the following factors in analyzing a trade secret claim: "(1) the extent to which the information is known outside the business; (2) the extent to which it is known to those inside the business, *i.e.*, by the employees; (3) the

³⁶⁴ *State ex rel. Cincinnati Enquirer v. Dupuis*, 98 Ohio St.3d 126, 2002-Ohio-7041, ¶¶11-21; *State ex rel. Kinsley v. Berea Bd. of Educ.*, 64 Ohio App.3d 659, 663 (8th Dist. 1990); *State ex rel. Sun Newspapers v. City of Westlake Bd. of Educ.*, 76 Ohio App.3d 170, 172-73 (8th Dist. 1991).

³⁶⁵ *State ex rel. Sun Newspapers v. City of Westlake Bd. of Educ.*, 76 Ohio App.3d 170, 173 (8th Dist. 1991); see also Chapter Three, Section G "Exceptions Created by Other Laws – 1.a. Attorney-Client Privilege."

³⁶⁶ *Keller v. City of Columbus*, 100 Ohio St.3d 192, 2003-Ohio-5599, ¶ 20; *State ex rel. Findley Publ'g Co. v. Hancock County Bd. of Comm'rs*, 80 Ohio St.3d 134, 136-37, 1997-Ohio-353; see generally Chapter Three: G. "Exceptions Created by Other Laws – 8. Contractual Confidentiality."

³⁶⁷ See Chapter Six: B. "Application to Employment Records."

³⁶⁸ R.C. 5747.18(C); R.C. 718.13(A); see also *Reno v. City of Centerville*, 2nd Dist. No. 20078, 2004-Ohio-781.

³⁶⁹ R.C. 718.13; see also *City of Cincinnati v. Grogan*, 141 Ohio App.3d 733, 755 (1st Dist. 2001) (finding that, under Cincinnati Municipal Code, the city's use of tax information in a nuisance-abatement action constituted an official purpose for which disclosure is permitted).

³⁷⁰ 1992 Ohio Op. Att'y Gen. No. 013.

³⁷¹ See R.C. 5747.18(C); see also 1992 Ohio Op. Att'y Gen. No. 010.

³⁷² 26 U.S.C. 6103(a).

³⁷³ 26 U.S.C. 6103(b)(2)(A).

³⁷⁴ R.C. 1333.61(D) (adopts the Uniform Trade Secrets Act); see also R.C. 149.43(A)(1)(m); R.C. 149.43(A)(5).

³⁷⁵ *State ex rel. Besser v. Ohio St. Univ.*, 89 Ohio St.3d 396, 400, 2000-Ohio-207 ("Besser II").

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

precautions taken by the holder of the trade secret to guard the secrecy of the information; (4) the savings effected and the value to the holder in having the information as against competitors; (5) the amount of effort or money expended in obtaining and developing the information; and (6) the amount of time and expense it would take for others to acquire and duplicate the information.”³⁷⁶ The maintenance of secrecy is important, but does not require that the trade secret be completely unknown to the public in its entirety. If parts of the trade secret are in the public domain, but the value of the trade secret derives from the parts being taken together with other secret information, then the trade secret remains protected under Ohio law.³⁷⁷

Trade secret law is underpinned by “the protection of competitive advantage in private, not public, business.”³⁷⁸ However, the Ohio Supreme Court has held that certain governmental entities can have trade secrets in limited situations.³⁷⁹ Signed non-disclosure agreements do not create trade secret status for otherwise publicly disclosable documents.³⁸⁰

An in camera inspection may be necessary to determine if disputed records contain trade secrets.³⁸¹

4. Juvenile Records

Although it is a common misconception, there is no Ohio law that categorically excludes all juvenile records from public records disclosure.³⁸² While juvenile records maintained by the juvenile court typically are not available for public inspection and copying,³⁸³ juvenile records maintained by law enforcement agencies, in general, are treated no differently than adult records, including records identifying a juvenile suspect, victim, or witness.³⁸⁴ Thus, law enforcement agencies are not typically permitted by law to redact information about juveniles from their records based simply on the juvenile’s age. Further, most information held by local law enforcement offices may be shared with other law enforcement agencies and local schools.

When analyzing a public records request for juvenile records, a law enforcement agency must evaluate the applicability of the confidential law enforcement investigatory records exception.³⁸⁵ In other words, law enforcement agencies should treat the suspect, victim, witness, or source as it would an adult in the same role, e.g., redact a suspect’s identity only if the suspect is “uncharged.”³⁸⁶

Additionally, the office must assess whether any state or federal laws require redaction of some or all information. For instance, one important state law exception applies after a juvenile has been

³⁷⁶ *State ex rel. Besser v. Ohio St. Univ.*, 89 Ohio St.3d 396, 399-400, 2000-Ohio-207 (citation omitted).

³⁷⁷ *State ex rel. Besser v. Ohio St. Univ.*, 89 Ohio St.3d 396, 399-400, 2000-Ohio-207.

³⁷⁸ *State ex rel. Toledo Blade Co. v. Univ. of Toledo Found.*, 65 Ohio St.3d 258, 264 (1992).

³⁷⁹ *State ex rel. Besser v. Ohio St. Univ.*, 87 Ohio St.3d 535, 543, 2000-Ohio-475 (“Besser I”) (finding that a public entity can have its own trade secrets); *State ex rel. Lucas County Bd. of Comm’rs v. Ohio EPA*, 88 Ohio St.3d 166, 171, 2000-Ohio-282; *State ex rel. Plain Dealer v. Ohio Dept. of Ins.*, 80 Ohio St.3d 513, 524-25, 1997-Ohio-75; compare *State ex rel. Gannett Satellite Info. Network v. Shirey*, 76 Ohio St.3d 1224, 1224-25, 1997-Ohio-206 (finding that resumes are not trade secrets of a private consultant); *State ex rel. Rea v. Ohio Dept. of Ed.*, 81 Ohio St.3d 527, 533, 1998-Ohio-334 (finding that proficiency tests are public record after they have been administered; but compare *State ex rel. Perrea v. Cincinnati Pub. Sch.*, 123 Ohio St.3d 410, 2009-Ohio-4762, ¶¶ 32-33 (holding that a public school had proven that certain semester examination records met the statutory definition of “trade secret” in R.C. 1333.61(D))).

³⁸⁰ *State ex rel. Plain Dealer v. Ohio Dept. of Ins.*, 80 Ohio St.3d 513, 527, 1997-Ohio-75.

³⁸¹ *State ex rel. Allright Parking of Cleveland, Inc. v. Cleveland*, 63 Ohio St.3d 772, 776 (1992) (finding that an in camera inspection may be necessary to determine whether disputed records contain trade secrets); *State ex rel. Lucas County Bd. of Comm’rs v. Ohio EPA*, 88 Ohio St.3d 166, 2000-Ohio-282; *State ex rel. Besser v. Ohio St. Univ.*, 89 Ohio St.3d 396, 404-405, 2000-Ohio-207 (“Besser II”) (following an in camera inspection, the Court held that a University’s business plan and memoranda concerning a medical center did not constitute “trade secrets”).

³⁸² 1990 Ohio Op. Att’y Gen. No. 101.

³⁸³ 1990 Ohio Op. Att’y Gen. No. 101; see also Juv. R of Civ. Proc. 37(B); but compare *State ex rel. Scripps Howard Broadcasting Co. v. Cuyahoga County Ct. of Common Pleas*, 73 Ohio St.3d 19, 21-22 (1995) (determining that the release of a transcript of a juvenile contempt proceeding was required when proceedings were open to the public).

³⁸⁴ 1987 Ohio Op. Att’y Gen. No. 010; see also 1990 Ohio op. Att’y Gen. No. 099 (opining that a local board of education may request and receive information regarding student drug or alcohol use from the public records of law enforcement agencies).

³⁸⁵ See Chapter Six: A. “CLEIRs.”

³⁸⁶ R.C. 149.43(A)(2)(a).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

fingerprinted and photographed on the basis of a covered arrest or custody.³⁸⁷ Once that happens, the fingerprints, photographs, and other records relating to the arrest or custody must not be disclosed, except as provided in the governing statute.³⁸⁸ Another state law pertains to information related to alleged child abuse or neglect. The Ohio Supreme Court has held that the state law protecting the confidentiality of a child abuse report and the information contained therein applies to the records of law enforcement.³⁸⁹

Other examples of state law exceptions to public disclosure of juvenile records include: (1) records of social, mental and physical examinations conducted pursuant to a juvenile court order;³⁹⁰ (2) records held by the Department of Youth Services pertaining to juveniles in its custody;³⁹¹ (3) reports regarding allegations of child abuse;³⁹² (4) sealed or expunged juvenile records;³⁹³ (5) juvenile probation records;³⁹⁴ and (6) certain records of children's services agencies.³⁹⁵

Federal laws prohibit disclosure of records associated with federal juvenile delinquency proceedings.³⁹⁶ Additionally, these laws restrict the disclosure of fingerprints and photographs of a juvenile found guilty in federal delinquency proceedings of committing a crime that would have been a felony if the juvenile were prosecuted as an adult.³⁹⁷

5. Social Security Numbers³⁹⁸

Social Security Numbers (SSNs) should be redacted before the disclosure of public records, including court records.³⁹⁹ The Ohio Supreme Court has held that while the federal Privacy Act (5 U.S.C. § 552a) does not expressly prohibit release of one's SSN, the Act does create an expectation of privacy as to the use and disclosure of the SSN.⁴⁰⁰

³⁸⁷ R.C. 2151.313(A)(3) (stating that "[t]his section does not apply to a child to whom either of the following applies: (a) The child has been arrested or otherwise taken into custody for committing, or has been adjudicated a delinquent child for committing, an act that would be a felony if committed by an adult or has been convicted of or pleaded guilty to committing a felony. (b) There is probable cause to believe that the child may have committed an act that would be a felony if committed by an adult.").

³⁸⁸ R.C. 2151.313; *State ex rel. Carpenter v. Chief of Police*, 8th Dist. No. 62482 (Sep. 17, 1992) (noting that "other records" may include the juvenile's statement or an investigator's report if they would identify the juvenile).

³⁸⁹ *State ex rel. Beacon Journal Publ'g Co. v. Akron*, 104 Ohio St.3d 399, 2004-Ohio-6557, ¶¶44-45 (finding that information obtained in connection with allegations of child abuse or neglect may be redacted from police files, including the incident report, pursuant to a valid catch-all exception in R.C. 2151.421(H)).

³⁹⁰ Juv. R. of Civ. Proc. 32(B).

³⁹¹ R.C. 5139.05(D).

³⁹² R.C. 2151.421(H)(1); *State ex rel. Beacon Journal Publ'g Co. v. Akron*, 104 Ohio St.3d 399, 2004-Ohio-6557, ¶¶44-45.

³⁹³ R.C. 2151.355 through .358; *See State ex rel. Doe v. Smith*, 123 Ohio St. 3d 44, 2009-Ohio-4149, ¶¶ 6, 9, 38, 43 (where records were sealed pursuant to R.C. 2151.356, the response, "There is no information available," was a violation of R.C. 149.43(B)(3) requirement to provide a sufficient explanation, with legal authority, for the denial) see also Chapter Six: D. "Court Records."

³⁹⁴ R.C. 2151.14.

³⁹⁵ R.C. 5153.17.

³⁹⁶ 18 U.S.C. §§ 5038(a), 5038(c), 5038(e) of the Federal Juvenile Delinquency Act (18 U.S.C. §§ 5031-5042) (these records can be accessed by authorized persons and law enforcement agencies).

³⁹⁷ See 18 U.S.C. § 5038(d).

³⁹⁸ See Chapter Six: B. "Application to Employment Records."

³⁹⁹ *State ex rel. Office of Montgomery County Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662, ¶18 (finding that the clerk of courts correctly redacted SSNs from criminal records before disclosure); *State ex rel. Highlander v. Rudduck*, 103 Ohio St.3d 370, 2004-Ohio-4952, ¶25 (noting that SSNs should be removed before releasing court records); see also *State ex rel. Beacon Journal Publ'g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117, ¶25 (finding that the personal information of jurors was used only to verify identification, not to determine competency to serve on the jury, and SSNs, telephone numbers, driver's license numbers, may be redacted); *State ex rel. Wadd v. Cleveland*, 81 Ohio St.3d 50, 53, 1998-Ohio-444 (stating that "there is nothing to suggest that Wadd would not be entitled to public access [...] following prompt redaction of exempt information such as Social Security Numbers"); *State ex rel. Beacon Journal Publ'g Co. v. Kent State*, 68 Ohio St.3d 40, 43, 1993-Ohio-146 (determining, on remand, that the Court of appeals may redact confidential information, such as SSNs); 2004 Ohio Op. Att'y Gen. No. 045 (opining that court files may be redacted to conceal SSNs and other information the release of which would violate constitutional right to privacy; *Lambert v. Hartman*, 517 F.3d 433, 445 (6th Cir. 2008) (determining that, as a policy matter, a clerk of court's decision to allow public internet access to people's SSNs was "unwise").

⁴⁰⁰ *State ex rel. Beacon Journal Publ'g v. City of Akron*, 70 Ohio St.3d 605, 607, 1994-Ohio-6 (determining that city employees had an expectation of privacy of their SSNs such that they must be redacted before release of public records to newspapers); compare *State ex rel. Cincinnati Enquirer v. Hamilton County*, 75 Ohio St.3d 374, 378, 1996-Ohio-214 (finding that SSNs contained in 911 tapes are public records subject to disclosure); but see R.C. 4931.49(E), 4931.99(E) (providing that information from a database that serves public safety answering point of 911 system may not be

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

Any federal, state, or local government agency that asks individuals to disclose their SSNs must advise the person: (1) whether that disclosure is mandatory or voluntary and, if mandatory, under what authority the SSN is solicited; and (2) what use will be made of it.⁴⁰¹ In short, a SSN can only be disclosed if an individual has been given prior notice that the SSN will be publicly available.

However, the Ohio Supreme Court has ruled that 911 tapes must be made immediately available for public disclosure⁴⁰² without redaction, even if the tapes contain SSNs.⁴⁰³ The Court explained that there is no expectation of privacy when a person makes a 911 call. Instead, there is an expectation that the information will be recorded and disclosed to the public.⁴⁰⁴ Similarly, the Ohio Attorney General has opined that there is no expectation of privacy in official documents containing SSNs.⁴⁰⁵

The Ohio Supreme Court's interpretation of Ohio law with respect to release and redaction of SSNs is binding on public offices within the state. However, a narrower view expressed by a 2008 federal appeals court decision⁴⁰⁶ is worth noting, as it may impact future Ohio Supreme Court opinions regarding the extent of a person's constitutional right to privacy in his or her SSN. In *Lambert v. Hartman*, the U.S. Sixth Circuit Court of Appeals looked to its own past decisions to find a constitutional privacy right in personal information in only two situations: (1) where release of personal information could lead to bodily harm,⁴⁰⁷ and (2) where the information released was of a sexual, personal, and humiliating nature.⁴⁰⁸ The Court explained that it would only balance an individual's right to control the nature and extent of information released about that individual against the government's interest in disseminating the information when a fundamental liberty interest is involved.⁴⁰⁹ The interest asserted in *Lambert* - protection from identity theft and the resulting financial harm - was found not to implicate a fundamental right, especially when compared to the fundamental interests found in earlier cases; i.e., preserving the lives of police officers and their family members from "a very real threat"⁴¹⁰ by a violent gang and withholding the "highly personal and extremely humiliating details"⁴¹¹ of a rape.

6. Student Records⁴¹²

The federal Family Education Rights and Privacy Act of 1974 (FERPA)⁴¹³ prohibits educational institutions from releasing a student's "education records"⁴¹⁴ without the written consent of the eligible

disclosed); 1996 Ohio Op. Att'y Gen. No. 034 (opining that a county recorder is under no duty to obliterate SSN before making a document available for public inspection where the recorder presented with the document was asked to file it).

⁴⁰¹ Privacy Act of 1974, Pub. L. No. 93-579, 88 Stat. 1896 (5 U.S.C. § 552a (West 2000)).

⁴⁰² *State ex rel. Dispatch Printing Co. v. Morrow County Prosecutor's Office*, 105 Ohio St.3d 172, 2005-Ohio-685, ¶5; *State ex rel. Cincinnati Enquirer v. Hamilton County*, 75 Ohio St.3d 374, 377, 1996-Ohio-214; but see R.C. 4931.49(E), 4931.99(E) (providing that information from a database that serves public safety answering point of 911 system may not be disclosed).

⁴⁰³ *State ex rel. Cincinnati Enquirer v. Hamilton County*, 75 Ohio St.3d 374, 377, 1996-Ohio-214.

⁴⁰⁴ *State ex rel. Dispatch Printing Co. v. Morrow County Prosecutor's Office*, 105 Ohio St.3d 172, 2005-Ohio-685; *State ex rel. Cincinnati Enquirer v. Hamilton County*, 75 Ohio St.3d 374, 1996-Ohio-214.

⁴⁰⁵ 1996 Ohio Op. Att'y Gen. No. 034 (opining that the federal Privacy Act does not require county recorders to redact SSNs from copies of official records); but see R.C. 149.45(B)(1) (specifying that no public office shall make any document containing an individual's SSN available on the internet without removing the number from that document).

⁴⁰⁶ *Lambert v. Hartman*, 517 F.3d 433, 445 (6th Cir. 2008).

⁴⁰⁷ *Kallstrom v. City of Columbus*, 136 F.3d 1055 (6th Cir. 1998).

⁴⁰⁸ *Bloch v. Ribar*, 156 F.3d 673, 686-87 (6th Cir. 1998) (determining that a sheriff's publication of details of a rape implicated the victim's right to be free from governmental intrusion into matters touching on sexuality and family life, and permitting such an instruction would be to strip away the very essence of her personhood).

⁴⁰⁹ *Lambert v. Hartman*, 517 F.3d 433, 440 (6th Cir. 2008).

⁴¹⁰ *Lambert v. Hartman*, 517 F.3d 433, 441 (6th Cir. 2008) citing *Kallstrom v. City of Columbus*, 136 F.3d 1055, 1063 (6th Cir. 2008).

⁴¹¹ *Bloch v. Ribar*, 156 F.3d 673, 676 (6th Cir. 2008).

⁴¹² See also School Records in Chapter Six: B. Employment Records.

⁴¹³ 20 U.S.C. § 1232g.

⁴¹⁴ The Ohio Supreme Court held that "university disciplinary records are not 'educational records.'" *State ex rel. The Miami Student v. Miami Univ.*, 79 Ohio St.3d 168, 172, 1997-Ohio-386. In contrast, the United States Court of Appeals for the Sixth Circuit has held that "[u]nder a plain language interpretation of FERPA, student disciplinary records are education records because they directly relate to a student and are kept by that student's university." *United States of America v. Miami Univ.*, 294 F.3d 797, 812 (6th Cir.

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

student⁴¹⁵ or his or her parents, except as permitted by the Act.⁴¹⁶ “Education records” are records directly related to a student that are maintained by an education agency or institution or by a party acting for the agency or institution.⁴¹⁷ The term encompasses records such as school transcripts, attendance records, and student disciplinary records.⁴¹⁸

A record is considered to be “directly related” to a student if it contains “personally identifiable information.” The latter term is defined broadly: it covers not only obvious identifiers such as student and family member names, addresses, and Social Security Numbers, but also personal characteristics or other information that would make the student’s identity easily linkable.⁴¹⁹ In evaluating records for release, an institution must consider what the records requester already knows about the student to determine if that knowledge, together with the information to be disclosed, would allow the requester to ascertain the student’s identity.

The federal FERPA law applies to all students, regardless of grade level. In addition, Ohio has adopted laws specifically applicable to public school students in grades K-12.⁴²⁰ Those laws provide that, unless otherwise authorized by law, no public school employee is permitted to release or permit access to personally identifiable information – other than directory information – concerning a public school student without written consent of the student’s parent, guardian, or custodian if the student is under 18, or of the student if the student is 18 or older.⁴²¹

“Directory information” is one of several exceptions to the requirement that an institution obtain written consent prior to disclosure. “Directory information” is “information...that would not generally be considered harmful or an invasion of privacy if disclosed.”⁴²² It includes a student’s name, address, telephone listing, date and place of birth, major field of study, participation in official recognized activities and sports, weight and height of members of athletic teams, dates of attendance, date of graduation, and awards achieved. Pursuant to federal law, post-secondary institutions designate what they will unilaterally release as directory information. For K-12 students, Ohio law leaves that designation to each school district board of education. Institutions at all levels must notify parents and eligible students and give them an opportunity to opt out of disclosure of their directory information.⁴²³

7. Infrastructure & Security Records

In 2002, the Ohio legislature enacted an anti-terrorism bill. Among other changes to Ohio law, the bill created two new categories of records that are exempt from mandatory public disclosure: “infrastructure records” and “security records.”⁴²⁴ Other state and federal⁴²⁵ laws may create exceptions for the same or similar records.

a. Infrastructure Records

An “infrastructure record” is any record that discloses the configuration of a public office’s “critical systems,” such as its communications, computer, electrical, mechanical, ventilation, water,

2002). For a discussion of the contrast between the two jurisdictions, see *State ex rel. Evans v. Montgomery County Cmty. Coll. Dist.*, Montgomery C.P. No. 2011 CV 01969, pp. 6-7 (Oct. 20, 2011).

⁴¹⁵ 34 C.F.R. § 99.3: “Eligible student” means a student who has reached 18 years of age or is attending an institution of post-secondary education.

⁴¹⁶ 34 C.F.R. § 99.30.

⁴¹⁷ 34 C.F.R. § 99.3.

⁴¹⁸ *United States v. Miami Univ.*, 294 F.3d 797, 802-03 (6th Cir. 2002); see also *United States v. Miami Univ.*, 91 F. Supp.2d 1132 (S.D. Ohio 2000).

⁴¹⁹ 34 C.F.R. § 99.3.

⁴²⁰ R.C. 3319.321.

⁴²¹ R.C. 3319.321(B).

⁴²² 34 C.F.R. § 99.3.

⁴²³ 34 C.F.R. § 99.37.

⁴²⁴ R.C. 149.433.

⁴²⁵ E.g., 6 U.S.C. §§ 131 *et seq.*, 6 C.F.R. 29 (providing that the federal Homeland Security Act of 2002 prohibits disclosure of certain “critical infrastructure information” shared between state and federal agencies).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

plumbing, or security systems.⁴²⁶ Simple floor plans or records showing the spatial relationship of the public office are not infrastructure records.⁴²⁷

Infrastructure records may be disclosed for purposes of construction, renovation, or remodeling of a public office without waiving the exempt status of that record.⁴²⁸

b. Security Records

A “security record” is “any record that contains information directly used for protecting or maintaining the security of a public office against attack, interference, or sabotage or to prevent, mitigate, or respond to acts of terrorism.”⁴²⁹ Security records may be disclosed for purposes of construction, renovation, or remodeling of a public office without waiving the exempt status of that record.⁴³⁰

8. Contractual Confidentiality

Parties to a public contract, including settlement agreements⁴³¹ and collective bargaining agreements, cannot nullify the Ohio Public Records Act’s guarantee of public access to public records.⁴³² Nor can an employee handbook confidentiality provision alter the status of public records.⁴³³ In other words, a contract cannot nullify or restrict the public’s access to public records.⁴³⁴ Absent a statutory exception, a “public entity cannot enter into enforceable promises of confidentiality with respect to public records.”⁴³⁵

9. Protective Orders & Sealed/Expunged Court Records⁴³⁶

When the release of court records would prejudice the rights of the parties in an ongoing criminal or civil proceeding,⁴³⁷ court rules may permit a protective order prohibiting release of the records.⁴³⁸

Similarly, where court records have been properly expunged or sealed, they are not available for public disclosure.⁴³⁹ However, when a responsive record is sealed, the public office must provide the

⁴²⁶ R.C. 149.433(A)(2).

⁴²⁷ R.C. 149.433(A)(2).

⁴²⁸ R.C. 149.433(C).

⁴²⁹ R.C. 149.433(A)(3)(a)-(b); *State ex rel. Bardwell v. Cordray*, 181 Ohio App.3d 661, 2009-Ohio-1265, ¶¶68-70 (10th Dist.) (applying the statute).

⁴³⁰ R.C. 149.433(C).

⁴³¹ Chapter Three: G. “Exceptions Created by Other Laws” -1.e. “Settlement Agreements and Other Contracts.”

⁴³² *Keller v. City of Columbus*, 100 Ohio St.3d 192, 2003-Ohio-5599, ¶23 (stating that “[a]ny provision in a collective bargaining agreement that establishes a schedule for the destruction of public record is unenforceable if it conflicts with or fails to comport with all the dictates of the Public Records Act.”); *State ex rel. Dispatch Printing Co. v. City of Columbus*, 90 Ohio St.3d 39, 40-41, 2000-Ohio-8; *State ex rel. Findlay Publ’g Co. v. Hancock County Bd. of Comm’rs.*, 80 Ohio St.3d 134, 137, 1997-Ohio-353; *Toledo Police Patrolman’s Ass’n v. City of Toledo*, 94 Ohio App.3d 734, 739 (6th Dist. 1994); *State ex rel. Kinsley v. Berea Bd. of Educ.*, 64 Ohio App.3d 659, 663 (8th Dist. 1990); *Bowman v. Parma Bd. of Educ.*, 44 Ohio App.3d 169, 172 (8th Dist. 1988); *State ex rel. Dwyer v. City of Middletown*, 52 Ohio App.3d 87, 91 (12th Dist. 1988); *State ex rel. Toledo Blade Co. v. Telb, Lucas C.P.*, 50 Ohio Misc. 2d 1, 8 (Feb. 8, 1990); *State ex rel. Sun Newspapers v. City of Westlake Bd. of Educ.*, 76 Ohio App.3d 170, 173 (8th Dist. 1991).

⁴³³ *State ex rel. Russell v. Thomas*, 85 Ohio St.3d 83, 85, 1999-Ohio-435.

⁴³⁴ *State ex rel. Gannett Satellite Info. Network v. Shirey*, 76 Ohio St.3d 1224, 1997-Ohio-206.

⁴³⁵ *State ex rel. Findlay Publ’g Co. v. Hancock County Bd. of Comm’rs.*, 80 Ohio St.3d 134, 137, 1997-Ohio-353; *State ex rel. Allright Parking of Cleveland, Inc. v. Cleveland*, 63 Ohio St.3d 772, 776 (1992) (reversing and remanding on grounds that the court failed to examine records in camera to determine the existence of trade secrets); *State ex rel. Nat’l Broadcasting Co., Inc. v. City of Cleveland*, 82 Ohio App.3d 202 (8th Dist. 1992).

⁴³⁶ Chapter Six: D. “Court Records.”

⁴³⁷ *State ex rel. Vindicator Printing Co. v. Watkins*, 66 Ohio St.3d 129, 137-38 (1993) (prohibiting disclosure of pretrial court records prejudicing rights of criminal defendant) (overruled on other grounds); *Adams v. Metallica*, 143 Ohio App.3d 482, 493-95 (1st Dist. 2001) (applying balancing test to determine whether prejudicial record should be released where filed with the court); *but see State ex rel. Highlander v. Ruddick*, 103 Ohio St.3d 370, 2004-Ohio-4952, ¶¶9-20 (pending appeal from court order unsealing divorce records does not preclude writ of mandamus claim).

⁴³⁸ *State ex rel. Cincinnati Enquirer v. Dinkelacker*, 144 Ohio App.3d 725, 730-33 (1st Dist. 2001) (finding that a trial judge was required to determine whether release of records would jeopardize defendant’s right to a fair trial).

⁴³⁹ *State ex rel. Cincinnati Enquirer v. Winkler*, 101 Ohio St.3d 382, 2004-Ohio-1581, ¶4 (“*Winkler III*”) (affirming trial court’s sealing order per R.C. 2953.52); *Dream Fields, LLC v. Bogart*, 175 Ohio App.3d 165, 2008-Ohio-152, ¶5 (1st Dist.) (stating that “[u]nless a court record contains information that is excluded from being a public record under R.C. 149.43, it shall not be sealed and shall be available for public inspection. And the party wishing to seal the record has the duty to show that a statutory exclusion applies [...] just because the parties have agreed that they want the records sealed is not enough to justify the sealing.”); see also Chapter Six D. “Court Records.”

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

explanation for withholding, including the legal authority under which the record was sealed.⁴⁴⁰ Even absent statutory authority, trial courts, “in unusual and exceptional circumstances,” have the inherent authority to seal court records.⁴⁴¹ When exercising this authority, however, courts should balance the individual’s privacy interest against the government’s legitimate need to provide public access to records of criminal proceedings.⁴⁴²

10. Grand Jury Records

Ohio Criminal Rule 6 provides that “(E) [d]eliberations of the grand jury and the vote of any grand juror shall not be disclosed,” and provides for withholding of other specific grand jury matters by certain persons under specific circumstances. Materials covered by Criminal Rule 6 include transcripts, voting records, subpoenas, and the witness book.⁴⁴³ In contrast to those items that document the deliberations and vote of a grand jury, evidentiary documents that would otherwise be public records remain public records, regardless of their having been submitted to the grand jury.⁴⁴⁴

11. Copyright Prohibitions to Disclosure

Public offices may be faced with the quandary of whether to release copyrighted materials in response to public records requests. Federal copyright law is designed to protect “original works of authorship,” which may exist in one of several specified categories.⁴⁴⁵ Specifically, works of authorship include the following categories of materials: (1) literary works; (2) musical works (including any accompanying words); (3) dramatic works (including any accompanying music); (4) pantomimes and choreographic works; (5) pictorial, graphic, and sculptural works; (6) motion pictures and other audiovisual works; (7) sound recordings; and (8) architectural works.⁴⁴⁶

Ohio’s Public Records Act does not contain any exceptions preventing a public office from responding to a valid public records request for copyrighted materials. However, federal copyright law provides certain copyright owners the exclusive right of reproduction,⁴⁴⁷ which means public offices could expose themselves to legal liability if they reproduce copyrighted public records in response to a public records request. If a public record sought by a requestor is copyrighted material that the public office does not possess the right to reproduce or copy via a copyright ownership or license, the public office is not typically authorized to make copies of this material under federal copyright law.⁴⁴⁸ However, there are some exceptions to this rule. For example, in certain situations, the copying of a portion of a copyrighted work may be permitted.⁴⁴⁹ One possible solution to responding to requests for copyrighted material is for a public office to make the copyrighted material available for inspection rather than reproducing it.

⁴⁴⁰ *State ex rel. Doe v. Smith*, 123 Ohio St. 3d 44, 2009-Ohio-4149, ¶¶ 6, 9, 38, 43 (response, “There is no information available,” was a violation of R.C. 149.43(B)(3) requirement to provide a sufficient explanation, with legal authority, for the denial).

⁴⁴¹ *Pepper Pike v. Doe*, 66 Ohio St.2d 374, 376 (1981); but compare *State ex rel. Highlander v. Rudduck*, 103 Ohio St.3d 370, 2004-Ohio-4952, ¶1 (determining that divorce records were not properly sealed when an order results from “unwritten and informal court policy”).

⁴⁴² *Pepper Pike v. Doe*, 66 Ohio St.2d 374, (1981), paragraph two of the syllabus.

⁴⁴³ *State ex rel. Beacon Journal v. Waters*, 67 Ohio St.3d 321 (1993); Fed Crim. R. 6.

⁴⁴⁴ *State ex rel. Dispatch v. Morrow Co. Prosecutor*, 105 Ohio St.3d 172, 2005-Ohio-685, ¶15 citing *State ex rel. Cincinnati Enquirer v. Hamilton County*, 75 Ohio St.3d 374, 378 (1996); *State ex rel. Gannett Satellite Info. Network v. Petro*, 80 Ohio St.3d 261, 267 (1997).

⁴⁴⁵ 17 U.S.C. § 102(a).

⁴⁴⁶ 17 U.S.C. § 102(a)(1)-(8).

⁴⁴⁷ 17 U.S.C. § 102(a).

⁴⁴⁸ Because of the complexity of copyright law and the fact-specific nature of this area, public bodies should resolve public records related copyright issues with their legal counsel.

⁴⁴⁹ See 17 U.S.C. § 107; *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 560-61 (1985) (providing that, in determining whether the intended use of the protected work is “fair use,” a court must consider these facts, which are not exclusive: (1) the purpose and character of the use, including whether the intended use is commercial or for nonprofit educational purposes; (2) the nature of the protected work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the most important factor: the effect of the intended use upon the market for or value of the protected work).

The Ohio Public Records Act

Chapter Three: Exceptions to the Required Release of Public Records

12. EMS Run Sheets

When a run sheet created and maintained by a county emergency medical services (EMS) organization documents treatment of a living patient, the EMS organization may redact information that pertains to the patient's medical history, diagnosis, prognosis, or medical condition.⁴⁵⁰ The organization may not redact patients' names, addresses, and other non-medical personal information as part of the medical records exception.⁴⁵¹

13. FOIA Does Not Apply to Ohio Public Offices

The federal Freedom of Information Act (FOIA) is a federal law that does not apply to state or local agencies or officers.⁴⁵² A request for government records from a state or local agency in Ohio is governed by the Ohio Public Records Act. Requests for records and information from a federal office located in Ohio (or anywhere else in the country or the world) are governed by FOIA.⁴⁵³

14. Driver's Privacy Protection

An authorized recipient of personal information about an individual that the Bureau of Motor Vehicles obtained in connection with a motor vehicle record may redisclose the personal information only for certain purposes.⁴⁵⁴

⁴⁵⁰ 1999 Ohio Op. Att'y Gen. No. 006.

⁴⁵¹ 1999 Ohio Op. Att'y Gen. No. 006.

⁴⁵² *State ex rel. WBNS-TV, Inc. v. Dues*, 101 Ohio St.3d 406, 2004-Ohio-1497, ¶35; *State ex rel. Cincinnati Enquirer v. Dupuis*, 98 Ohio St.3d 126, 2002-Ohio-7041, ¶32.

⁴⁵³ 5 U.S.C. § 552.

⁴⁵⁴ R.C. 4501(C), O.A.C. 4501:1-12-02.

The Ohio Public Records Act

Chapter Four: Enforcement and Liabilities

IV. Chapter Four: Enforcement and Liabilities

The Ohio Public Records Act is a “self-help” statute, in that a person who believes that the Act has been violated must independently pursue a remedy, rather than asking a public official such as the Ohio Attorney General to initiate legal action on his or her behalf. If a public office or person responsible for public records fails to produce requested records, or otherwise fails to comply with the requirements of division (B) of the Ohio Public Records Act, the requester can file a lawsuit to seek a writ of mandamus⁴⁵⁵ to enforce compliance, and may apply for various sanctions. This section discusses the basic aspects of a mandamus suit and the types of monetary awards available.

A. Public Records Act Statutory Remedies

1. Parties

A person allegedly “aggrieved by” a public office’s failure to comply with Division (B) of the Ohio Public Records Act may file an action in mandamus⁴⁵⁶ against the public office or any person responsible for the office’s public records.⁴⁵⁷ The person who files the suit is called the “relator,” and the named public office or person responsible for the records is called the “respondent.”

2. Where to File

The relator can file the mandamus action in any one of three courts: the common pleas court of the county where the alleged violation occurred, the court of appeals for the appellate district where the alleged violation occurred, or the Ohio Supreme Court.⁴⁵⁸ If a relator files in the Supreme Court, the Court may refer the case to mediation counsel for a settlement conference.⁴⁵⁹

When an official responsible for records has denied a public records request, no administrative appeal to the official's supervisor is necessary before filing a mandamus action in court.⁴⁶⁰

3. When to File

Due to the recent addition of the civil forfeiture provisions, the likely statute of limitations for filing a public records mandamus action is within ten years after the cause of action accrues.⁴⁶¹ However, if the respondent can show that unreasonable and inexcusable delay in asserting a known right cause material prejudice to the respondent, the defense of laches may apply.⁴⁶²

4. Requirements to Prevail

To be entitled to a writ of mandamus, the relator must prove a clear legal right to the requested relief and that the respondent had a clear legal duty to perform the requested act.⁴⁶³ In a public records

⁴⁵⁵ “Mandamus” here means a court command to a governmental office to correctly perform a mandatory function. Black’s Law Dictionary (7th ed. 1999) 973.

⁴⁵⁶ R.C. 149.43(C)(1); *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶12 (providing that “[m]andamus is the appropriate remedy to compel compliance with R.C. 149.43, Ohio’s Public Records Act”).

⁴⁵⁷ *State ex rel. Cincinnati Post v. Schweikert*, 38 Ohio St.3d 170, 174 (1988) (finding that mandamus does not have to be brought against the person who actually withheld the records or committed the violation; it can be brought against any “person responsible” for public records in the public office); *State ex rel. Mothers Against Drunk Drivers v. Gosser*, 20 Ohio St.3d 30 (1985), paragraph two of the syllabus (stating that “[w]hen statutes impose a duty on a particular official to oversee records, that official is the ‘person responsible’ under” the Public Records Act); see also Chapter One: B. “Public Office –[A private Entity, Even if not a ‘Public Office,’ Can Be ‘A Person Responsible for Public Records’].”

⁴⁵⁸ R.C. 149.43(C)(1).

⁴⁵⁹ S.Ct. Prac. R. XIV, § 6 (providing that a Court may, sua sponte or on motion by a party, refer cases to mediation counsel and, unless otherwise ordered by the Court, this does not alter the filing deadlines for the action).

⁴⁶⁰ *State ex rel. Multimedia, Inc. v. Whalen*, 48 Ohio St.3d 41, 42 (1990) (overruled on other grounds).

⁴⁶¹ R.C. 2305.14.

⁴⁶² *State ex rel. Carver v. Hull*, 70 Ohio St.3d 570, 577 (1994); *State ex rel. Moore v. Sanders*, 65 Ohio St.2d 72, 74 (1981).

⁴⁶³ *State ex rel. Scanlon v. Deters*, 45 Ohio St.3d 376, 377 (1989) (overruled on other grounds); *State ex rel. Fields v. Cervenik*, No. 86889, 2006-Ohio-3969, ¶4 (8th Dist.).

The Ohio Public Records Act

Chapter Four: Enforcement and Liabilities

mandamus, this usually includes showing that, when the requester made the request, she specifically described the records being sought,⁴⁶⁴ and specified in the mandamus action the records withheld or other failure to comply.⁴⁶⁵ A person is not entitled to file a mandamus action to request public records unless a prior request for those records has already been made and was denied.⁴⁶⁶ Only those particular records that were requested from the public office can be litigated in the mandamus action.⁴⁶⁷ If these requirements are met, the respondent then has the burden of proving in court that any items withheld are exempt from disclosure,⁴⁶⁸ and of countering any other alleged violations of R.C. 149.43(B). The court, if necessary, will review in camera (in private) the materials that were withheld or redacted.⁴⁶⁹ To the extent any doubt or ambiguity exists as to the duty of the public office, the public records law will be liberally interpreted in favor of disclosure.⁴⁷⁰

Unlike most mandamus actions, a relator in a statutory public records mandamus action need not prove a lack of adequate remedy at law.⁴⁷¹ Also note that, if a respondent provides requested records to the relator after the filing of a public records mandamus action, all or part of the case may be rendered moot, or concluded.⁴⁷² However, even if the case is rendered moot,⁴⁷³ the relator may still be entitled to attorney fees.⁴⁷⁴

B. Liabilities of the Public Office under the Public Records Act⁴⁷⁵

In a properly filed mandamus action, if a court determines that the public office or the person responsible for public records failed to comply with an obligation contained in R.C. 149.43(B), the relator shall be entitled to an award of all court costs,⁴⁷⁶ and may receive an award of attorney fees and/or statutory damages, as detailed below.

1. Attorney Fees

If the court renders a judgment ordering the respondent to comply with R.C. 149.43(B), then the court may award reasonable attorney fees.⁴⁷⁷ An award of attorney fees upon finding a violation is not mandatory,⁴⁷⁸ and litigation expenses, other than court costs, are not recoverable at all.⁴⁷⁹ A court

⁴⁶⁴ *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶17; *State ex rel. Morgan v. New Lexington*, 112 Ohio St.3d 33, 2006-Ohio-6365, ¶26 (stating that “it is the responsibility of the person who wishes to inspect and/or copy records to identify with reasonable clarity the records at issue.”); *State ex rel. Zauderer v. Joseph*, 62 Ohio App.3d 752 (10th Dist. 1989).

⁴⁶⁵ *State ex rel. Citizens for Envtl. Justice v. Campbell*, 93 Ohio St.3d 585, 586, 2001-Ohio-1617.

⁴⁶⁶ *State ex rel. Taxpayers Coalition v. Lakewood*, 86 Ohio St. 3d 385, 390, 1999-Ohio-114; *State ex rel. Ross v. Vivo*, No. 08 MA 157, 2008-Ohio-4819, ¶15 (7th Dist.).

⁴⁶⁷ *State ex rel. Lanham v. Smith*, 112 Ohio St.3d 527, 2007-Ohio-609, ¶14 (stating that “R.C. 149.43(C) requires a prior request as a prerequisite to a mandamus action.”); *State ex rel. Bardwell v. Cordray*, 181 Ohio App.3d 661, 2009-Ohio-1265, ¶15 (10th Dist.) (finding that “[t]here can be no ‘failure’ of a public office to make a public record available ‘in accordance with division (B),’ without a request for the record under division (B).”).

⁴⁶⁸ *Gilbert v. Summit County*, 104 Ohio St.3d 660, 2004-Ohio-7108, ¶16 (citing *State ex rel. Nat’l Broadcasting Co. v. City of Cleveland*, 38 Ohio St.3d 79 (1988) (“NBC I”).

⁴⁶⁹ *State ex rel. Besser v. Ohio St. Univ.*, 89 Ohio St.3d 396, 400, 2000-Ohio-207 (“Besser II”); *State ex rel. Seballos v. SERS*, 70 Ohio St.3d 667, 1994-Ohio-80; *State ex rel. Nat’l Broadcasting Co. v. City of Cleveland*, 38 Ohio St.3d 79 (1988).

⁴⁷⁰ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm’rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶17; *State ex rel. Carr v. City of Akron*, 112 Ohio St.3d 351, 2006-Ohio-6714, ¶29 (finding that, when assessing a public records mandamus claim, R.C. 149.43 should be construed liberally in favor of broad access, and noting that any doubt is resolved in favor of disclosure of public records).

⁴⁷¹ *State ex rel. Gaydosh v. Twinsburg*, 93 Ohio St.3d 576, 580, 2001-Ohio-1613.

⁴⁷² *State ex rel. Striker v. Smith*, 129 Ohio St.3d 168, 2011-Ohio-2878, ¶ 22; *State ex rel. Cincinnati Enquirer, Div. of Gannett Satellite Info. Network, Inc. v. Dupuis*, 98 Ohio St.3d 126, 2002-Ohio-7041, ¶8; *State ex rel. Calvary v. Upper Arlington*, 89 Ohio St.3d 229, 231, 2000-Ohio-142.

⁴⁷³ *State ex rel. Cincinnati Enquirer v. Heath*, 121 Ohio St.3d 165, 2009-Ohio-590, ¶11.

⁴⁷⁴ *State ex rel. Dillery v. Icsman*, 92 Ohio St.3d 312, 2001-Ohio-193; *State ex rel. Ohio Patrolmen’s Benevolent Ass’n v. Mentor*, 89 Ohio St.3d 440, 449, 2000-Ohio-214.

⁴⁷⁵ Remedies based on the content of records released are separate matters. *Mehta v. Ohio Univ.*, 194 Ohio App. 3d, 2011-Ohio-3484, ¶ 63 (10th Dist.) (“there is no legal authority in Ohio providing for blanket immunity from defamation for any and all content included within a public record.”).

⁴⁷⁶ R.C. 149.43(C)(2)(a).

⁴⁷⁷ R.C. 149.43(C)(2)(b).

⁴⁷⁸ *State ex rel. Doe v. Smith*, 123 Ohio St.3d 44, 2009-Ohio-4149; *State ex rel. Laborers Int’l Union of N. Amer., Local Union No. 500 v. Summerville*, 122 Ohio St.3d 1234, 2009-Ohio-4090.

⁴⁷⁹ *State ex rel. Doe v. Smith*, 123 Ohio St.3d 44, 2009-Ohio-4149.

The Ohio Public Records Act

Chapter Four: Enforcement and Liabilities

shall award reasonable attorney fees if either: (1) the public office failed to respond to the public records request in accordance with the time allowed under R.C. 149.43(B);⁴⁸⁰ or (2) the public office promised to permit inspection or deliver copies within a specified period of time but failed to fulfill that promise.⁴⁸¹ If attorney fees are awarded under either of these provisions, they may be reduced or eliminated at the discretion of the court (see Section 5, below). Attorney fee awards are generally reviewed on appeal under an abuse of discretion standard.⁴⁸²

2. Amount of Fees

Only those attorney fees directly associated with the mandamus,⁴⁸³ and only fees paid or actually owed,⁴⁸⁴ may be awarded. The relator is entitled to fees only insofar as the requests had merit.⁴⁸⁵ Reasonable attorney fees also include reasonable fees incurred to produce proof of the reasonableness and amount of the fees and to otherwise litigate entitlement to the fees.⁴⁸⁶ The opportunity to collect attorney fees does not apply when the relator appears before the court *pro se* (without an attorney), even if the *pro se* relator is an attorney.⁴⁸⁷ A relator may waive a claim for attorney fees by not including any argument in support in their merit brief.⁴⁸⁸ Court costs and reasonable attorney's fees awarded in public records mandamus actions are considered remedial rather than punitive.⁴⁸⁹

3. Statutory Damages

A person who transmits a valid written request for public records by hand delivery or certified mail⁴⁹⁰ is entitled to receive statutory damages if a court finds that the public office failed to comply with its obligations under R.C. 149.43(B).⁴⁹¹ The award of statutory damages is not considered a penalty, but is intended to compensate the requestor for injury arising from lost use⁴⁹² of the requested information, and if lost use is proven, then injury is conclusively presumed. Statutory damages are fixed at \$100 for each business day during which the respondent fails to comply with division (B), beginning with the day on which the relator files a mandamus action to recover statutory damages, up to a maximum of \$1000. This means that a respondent may stop further accrual of statutory damages by fully complying with division (B) before the maximum is reached.

4. Recovery of Deleted E-mail Records

The Ohio Supreme Court has determined that if there is evidence showing that records in e-mail format have been deleted in violation of a public office's records retention and disposition schedule,

⁴⁸⁰ R.C. 149.43(C)(2)(b)(i); *State ex rel. Braxton v. Nichols*, Nos. 93653, 93654, and 93655, 2010-Ohio-3193 (8th Dist.).

⁴⁸¹ R.C. 149.43(C)(2)(b)(ii).

⁴⁸² *State ex rel. Doe v. Smith*, 123 Ohio St.3d 44, 2009-Ohio-4149.

⁴⁸³ *State ex rel. Gannett Satellite Info. Network v. Petro*, 81 Ohio St.3d 1234, 1236, 1998-Ohio-638 (determining that fees incurred as a result of other efforts to obtain the same records was not related to the mandamus action and were excluded from the award).

⁴⁸⁴ See *State ex rel. O'Shea & Assoc. v. Cuyahoga Metro. Housing Auth.*, Ohio Supreme Court Case No. 2010-1536, 2012-Ohio-115, ¶ 45.

⁴⁸⁵ *State ex rel. Cranford v. Cleveland*, 103 Ohio St.3d 196, 2004-Ohio-4884, ¶25 (denying relator's attorney's fees due to "meritless request"); *State ex rel. Dillery v. Icsman*, 92 Ohio St.3d 312, 317, 2001-Ohio-193.

⁴⁸⁶ R.C. 149.43(C)(2)(c); *State ex rel. Miller v. Brady*, 123 Ohio St.3d 255, 2009-Ohio-4942.

⁴⁸⁷ *State ex rel. Yant v. Conrad*, 74 Ohio St.3d 681, 684, 1996-Ohio-234; *State ex rel. Thomas v. Ohio St. Univ.*, 71 Ohio St.3d 245, 251, 1994-Ohio-261.

⁴⁸⁸ *State ex rel. Data Trace Info. Svcs. v. Cuyahoga Cty. Fiscal Offcr.*, Ohio Supreme Court Case No. 2010-2029, 2012-Ohio-753, ¶ 69, citing *Mun. Constr. Equip. Operators' Labor Council*, 114 Ohio St.3d 183, 2007-Ohio-3831, ¶ 83.

⁴⁸⁹ R.C. 149.43(C)(2)(c).

⁴⁹⁰ *State ex rel. Data Trace Info. Svcs. v. Cuyahoga Cty. Fiscal Offcr.*, Ohio Supreme Court Case No. 2010-2029, 2012-Ohio-753, ¶ 70; *State ex rel. Mahajan v. State Med. Bd. of Ohio*, 127 Ohio St.3d 497, 2010-Ohio-5995, ¶ 59; *State ex rel. Miller v. Brady*, 123 Ohio St.3d 255, 2009-Ohio-4942.

⁴⁹¹ R.C. 149.43(C)(1).

⁴⁹² R.C. 149.43(C)(1); but see *State ex rel. Bardwell v. Rocky River Police Dep't*, No. 91022, 2009-Ohio-727, ¶63 (8th Dist.) (finding that a public official's improper request for requester's identity, absent proof that this resulted in actual "lost use" of the records requested, does not provide a basis for statutory damages).

The Ohio Public Records Act

Chapter Four: Enforcement and Liabilities

the public office has a duty to recover the contents of deleted e-mails and to provide access to them.⁴⁹³ The courts will consider the relief available to the requester based on the following factors:

- a. There must be a determination made as to whether deleted e-mails have been destroyed, as there is no duty to create or provide non-existent records.
- b. The requestor must make a *prima facie* showing that the e-mails were deleted in violation of applicable retention schedules, unrebutted by defendant(s).
- c. There must be some evidence that recovery of the e-mails may be successful.
- d. While the expense of the recovery services is not a consideration, the recovery efforts need only be “reasonable, not Herculean,” consistent with a public office’s general duties under the Public Records Act; and
- e. There must be a determination made as to who should bear the expense of forensic analysis.⁴⁹⁴

5. *Reduction of Attorney Fees and Civil Penalty*⁴⁹⁵

After any reasonable attorney’s fees and any civil penalty are calculated and awarded, the court may reduce or eliminate either or both such awards, if the court determines both of the following:⁴⁹⁶

- a. That, based on the law as it existed at the time, a well-informed person responsible for the requested public records reasonably would have believed that the conduct of the respondent did not constitute a failure to comply with an obligation in accordance with R.C. 149.43(B), and,
- b. That a well-informed person responsible for the requested public records reasonably would have believed that the conduct of the public office would serve the public policy that underlies the authority that it asserted as permitting that conduct.

C. *Liabilities Applicable To Either Party*

The following remedies may be available against a party under the circumstances set out by statute or rule. They are applicable regardless of whether the party represents him- or herself (“*pro se*”), or is represented by counsel.

1. *Frivolous Conduct*

Any party adversely affected by frivolous conduct of another party may move the court, not more than 30 days after the entry of final judgment, for an award of court costs, reasonable attorney’s fees, and other reasonable expenses incurred in connection with the civil action or appeal.⁴⁹⁷

Where the court determines that the accused party has engaged in frivolous conduct, a party

⁴⁹³ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm’rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶41 (note that board did not contest the status of the requested e-mails as public records).

⁴⁹⁴ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm’rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶51 (finding that, where newspaper sought to inspect improperly deleted e-mails, the public office had to bear the expense of forensic recovery).

⁴⁹⁵ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm’rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶48 (finding that the statutory standards for awarding attorney fees apply to records requests and cases filed after September 29, 2007, the effective date of the amendment creating the standard); *State ex rel. Cincinnati Enquirer v. Jones-Kelley*, 118 Ohio St.3d 81, 2008-Ohio-1770, ¶47, fn. 1.

⁴⁹⁶ R.C. 149.43(C)(1)(a)-(b) (providing for a reduction of civil penalty); R.C. 149.43(C)(2)(c)(i)-(ii) (providing for a reduction in attorney’s fees); *State ex rel. Cincinnati Enquirer v. Ronan*, 127 Ohio St.3d 236, 2010-Ohio-5680, ¶17 (even if court had found denial of request contrary to statute, requester would not have been entitled to attorney fees because the public office’s conduct was reasonable); *State ex rel. Rohm v. Fremont City Sch. Dist. Bd. of Educ.*, No. S-09-030, 2010-Ohio-2751 (6th Dist.) (respondent did not demonstrate reasonable belief that its actions did not constitute a failure to comply).

⁴⁹⁷ R.C. 2323.51.

The Ohio Public Records Act

Chapter Four: Enforcement and Liabilities

adversely affected by the conduct may recover the full amount of the reasonable attorney fees incurred, even fees paid or in the process of being paid by an insurance carrier.⁴⁹⁸

2. Civil Rule 11

Civ.R. 11 provides, in part:

“The signature of an attorney or *pro se* party constitutes a certificate by the attorney or party that the attorney or party has read the document; that to the best of the attorney's or party's knowledge, information, and *belief* there is *good ground* to support it; and that it is not interposed for delay. ... For a willful violation of this rule, an attorney or *pro se* party, upon motion of a party or upon the court's own motion, may be subjected to appropriate action, including an award to the opposing party of expenses and reasonable attorney fees incurred in bringing any motion under this rule.”

For an example of Rule 11 sanctions ordered in a public records mandamus action, see *State ex rel. Bardwell*, 127 Ohio St. 3d 202, 2010-Ohio-5073, 937 N.E.2d 1274.

⁴⁹⁸ *State ex rel. Striker v. Cline*, 130 Ohio St. 3d 214, 2011-Ohio-5350, ¶¶ 7, 23-25.

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

V. Chapter Five: Other Obligations of a Public Office

Public offices have other obligations with regard to the records that they keep. These include:

- Managing public records by organizing them such that they can be made available in response to public records requests,⁴⁹⁹ and ensuring that all records—public or not—are maintained and disposed of only in accordance with properly adopted, applicable records retention schedules.⁵⁰⁰
- Maintaining a copy of the office's current records retention schedules at a location readily available to the public.⁵⁰¹
- Adopting and posting an office public records policy;⁵⁰² and
- Ensuring that all elected officials associated with the public office, or their designees, obtain three hours of certified public records training through the Ohio Attorney General's office once during each term of office.⁵⁰³

Additionally, the Ohio Auditor of State's office recommends that public offices log and track the public records requests they receive to ensure compliance with the access provisions of the Ohio Public Records Act. Auditor of State Bulletin 2011-006 sets out and explains the office's recommended Best Practices for Complying with Public Records Requests.⁵⁰⁴

A. Records Management

Records are a crucial component of the governing process. They contain information that supports functions affecting every person in government and within its jurisdiction. Like other important government resources, records and the information they contain must be well managed to ensure accountability, efficiency, economy, and overall good government.

The term "records management" encompasses two distinct obligations of a public office, each of which furthers the goals of the Ohio Public Records Act. First, in order to facilitate broader access to public records, a public office must organize and maintain the public records it keeps in a manner such that they can be made available for inspection or copying in response to a public records request.⁵⁰⁵ Second, in order to facilitate transparency in government, and as one means of preventing the circumvention of Ohio Public Records Act, Ohio's records retention law, R.C. 149.351, prohibits unauthorized removal, destruction, mutilation, transfer, damage, or disposal of any record or part of a record, except as provided by law or under the rules adopted by the records commissions (i.e., pursuant to approved records retention schedules).⁵⁰⁶ Therefore, in the absence of a law or retention schedules permitting disposal of particular records, an office lacks the required authority to dispose of those records, and must maintain them until proper authority to dispose of them is obtained. In the meantime, the records remain subject to public records requests. Public offices at various levels of government, including state agencies, county boards and commission, and local political subdivisions, have different resources and processes for adopting records retention schedules. Those are described in this section.

A public office shall only create records that are "necessary for the adequate and proper documentation of the organization, functions, policies, decisions, procedures, and essential transactions of the agency and for the protection of the legal and financial rights of the state and persons directly affected by the

⁴⁹⁹ R.C. 149.43(B)(2).

⁵⁰⁰ R.C. 149.351(A).

⁵⁰¹ R.C. 149.43(B)(2).

⁵⁰² R.C. 149.43(E)(1).

⁵⁰³ R.C. 149.43(E)(1).

⁵⁰⁴ See Auditor of State Bulletin 2011-006 at <http://www.auditor.state.oh.us/services/lgs/bulletins/2011/2011-006.pdf>.

⁵⁰⁵ R.C. 149.43 (B)(2); see Chapter Two: B. "Rights and Obligations of a Public Office" (providing more information about records management in the context of public records requests).

⁵⁰⁶ R.C. 149.351(A); *Rhodes v. City of New Philadelphia*, 129 Ohio St.3d 304, 2011-Ohio-3279, 851 N.E.2d 782, ¶14.

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

agency's activities.⁵⁰⁷ This standard only addresses the records required to be created by a public office, which may receive many records in addition to those it creates.

1. Records Management Programs

a. Local Government Records Commissions

Authorization for disposition of local government records is provided by applicable statutes, and by rules adopted by records commissions at the county,⁵⁰⁸ township⁵⁰⁹, and municipal⁵¹⁰ levels. Records commissions also exist for each library district,⁵¹¹ special taxing district,⁵¹² school district,⁵¹³ and educational service center.⁵¹⁴

Records commissions are responsible for reviewing applications for one-time disposal of obsolete records, as well as records retention schedules submitted by government offices within their jurisdiction.⁵¹⁵ Once a commission has approved an application or schedule, it is forwarded to the State Archives at the Ohio Historical Society for review and identification of records⁵¹⁶ that the State Archives deems to be of continuing historical value.⁵¹⁷ Upon completion of that process, the Ohio Historical Society will forward the application or schedule to the Auditor of State for approval or disapproval.⁵¹⁸

b. State Records Program

The Ohio Department of Administrative Services administers the records program for legislative and judicial branches of government⁵¹⁹ and for all state agencies, with the exception of state-supported institutions of higher education.⁵²⁰ Among its other duties, the state records program is responsible for establishing "general schedules" for the disposal of certain types of records common to most state agencies. State agencies must affirmatively adopt any existing general schedules they wish to utilize.⁵²¹ Once a general schedule has been officially adopted by a state agency, when the time specified in the general schedule has elapsed, the records identified should no longer have sufficient administrative, legal, fiscal, or other value to warrant further preservation by the state.⁵²²

If a state agency keeps a record series that does not fit into an existing state general schedule, or if it wishes to modify the language of a general schedule to better suit its needs, the state agency can submit its own proposed retention schedules to DAS via the Records and Information Management System (RIMS) for approval by DAS, the Auditor of State, and the State Archivist.

The state's records program works in a similar fashion to local records commissions, except that applications and schedules are forwarded to the Ohio Historical Society and the Auditor of State

⁵⁰⁷ R.C. 149.40.

⁵⁰⁸ R.C. 149.38.

⁵⁰⁹ R.C. 149.42.

⁵¹⁰ R.C. 149.39.

⁵¹¹ R.C. 149.411.

⁵¹² R.C. 149.412.

⁵¹³ R.C. 149.41.

⁵¹⁴ R.C. 149.41.

⁵¹⁵ R.C. 149.331, .38, .39, .41, .411, .412, .42.

⁵¹⁶ R.C. 149.39.

⁵¹⁷ R.C. 149.31, .332, .333, .38, .39, .41, .41, .412, .42.

⁵¹⁸ R.C. 149.39.

⁵¹⁹ R.C. 149.332.

⁵²⁰ R.C. 149.33(A); Information about records management for state agencies is available at:

<http://das.ohio.gov/Divisions/GeneralServices/StatePrintingandMailServices/RecordsManagement/tabid/265/Default.aspx>.

⁵²¹ Instructions for how to adopt DAS general retention schedules are on page 20 of the RIMS User Manual, available at:

<http://www.das.ohio.gov/Divisions/GeneralServices/StatePrintingandMailServices/RecordsManagement/tabid/265/Default.aspx>.

⁵²² R.C. 149.331(C); General retention schedules (available for adoption by all state agencies) and individual state agency schedules are available at:

<http://apps.das.ohio.gov/rims/SelectMenu/Selection.asp>.

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

for review simultaneously following the approval of DAS.⁵²³ Again, the Ohio Historical Society focuses on identifying records with enduring historical value. The State Auditor decides whether to approve, reject, or modify applications and schedules based on the continuing administrative and fiscal value of the state records to the state or to its citizens.⁵²⁴

c. Records Programs for State-supported Colleges and Universities

State-supported institutions of higher education are unique, in that their records programs are established and administered by their respective boards of trustees rather than a separate records commission or the State's records program.⁵²⁵ Through their records programs, these state offices are charged with applying efficient and economical management methods to the creation, utilization, maintenance, retention, preservation, and disposition of records.⁵²⁶

2. Records Retention and Disposition

a. Retention Schedules

Records of a public office may be destroyed, but only if they are destroyed in compliance with a properly approved records retention schedule.⁵²⁷ In a 2008 decision, the Ohio Supreme Court emphasized that, "in cases in which public records, including e-mails, are properly disposed of in accordance with a duly adopted records-retention policy, there is no entitlement to those records under the Ohio Public Records Act."⁵²⁸ However, if the retention schedule does not address the particular type of record in question, the record must be kept until the schedule is properly amended to address that category of records. Also, if a public record is retained beyond its properly approved destruction date, it keeps its public record status until it is destroyed and is thus subject to public records requests.⁵²⁹

In crafting proposed records retention schedules, a public office must evaluate the length of time each type of record warrants retention for administrative, legal, or fiscal purposes after it has been received or created by the office.⁵³⁰ Consideration should also be given to the enduring historical value of each type of record, which will be evaluated by the Ohio Historical Society when that office conducts its review. Local records commissions may consult with the Ohio Historical Society during this process;⁵³¹ the state records program offers consulting services for state offices.⁵³²

b. Transient Records

Adoption of a schedule for transient records — that is, records containing information of short term usefulness — allows a public office to dispose of these records once they are no longer of administrative value.⁵³³ Examples of transient records include voice mail messages, telephone message slips, post-it notes, and superseded drafts.

⁵²³ R.C. 149.333.

⁵²⁴ R.C. 149.333.

⁵²⁵ R.C. 149.33(B).

⁵²⁶ R.C. 149.33.

⁵²⁷ R.C. 149.351; R.C. 121.211.

⁵²⁸ *State ex rel. Toledo Blade Co. v. Seneca County Bd. of Comm'rs*, 120 Ohio St.3d 372, 2008-Ohio-6253, ¶23.

⁵²⁹ *Keller v. City of Columbus*, 100 Ohio St.3d 192, 2003-Ohio-5599; *State ex rel. Dispatch Printing Co. v. City of Columbus*, 90 Ohio St.3d 39, 41, 2000-Ohio-8 (police department violated R.C. 149.43 when records were destroyed in contravention of City's retention schedule).

⁵³⁰ R.C. 149.34.

⁵³¹ R.C. 149.31(A) (providing that "[t]he archives administration shall be headed by a trained archivist designated by the Ohio Historical Society and shall make its services available to county, municipal, township, school district, library, and special taxing district records commissions upon request.").

⁵³² R.C. 149.331(D).

⁵³³ *State ex rel. Glasgow v. Jones*, 119 Ohio St.3d 391, 2008-Ohio-4788, ¶24, n.1.

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

c. Records Disposition

It is important to document the disposition of records after they have satisfied their approved retention periods. Local governments should file a Certificate of Records Disposal (RC-3) with the Ohio Historical Society at least fifteen business days prior to the destruction in order to allow the Historical Society to select records of enduring historical value. State agencies can document their records disposals on the RIMS system or in-house. It is important to be able to show which schedule the records were disposed under, the record series title, inclusive dates of the records, and the date of disposal.

3. Liability for Unauthorized Destruction, Damage, or Disposal of Records

All records are considered to be the property of the public office, and must be delivered by outgoing officials and employees to their successors in office.⁵³⁴ Improper removal, destruction, damage or other disposition of a record is a violation of R.C. 149.351(A).

a. Injunction and Civil Forfeiture

Ohio law allows “any person . . . aggrieved by”⁵³⁵ the unauthorized “removal, destruction, mutilation, transfer, or other damage to or disposition of a record,” or by the threat of such action, to file either or both of the following types of lawsuits:

- A civil action for an injunction to force the public office to comply with R.C. 149.251(A), as well as any reasonable attorney’s fees associated with the suit.⁵³⁶
- A civil action to recover a forfeiture of \$1,000 for each violation of R.C. 149.351(A), not to exceed a cumulative total of \$10,000 (regardless of the number of violations), as well as reasonable attorney’s fees associated with the suit, not to exceed the forfeiture amount recovered.⁵³⁷

A person is not “aggrieved” by a violation of R.C. 149.351(A) if clear and convincing evidence shows that the request for a record was contrived as a pretext to create liability under the section.⁵³⁸ If pretext is so proven, the court may order the requester to pay reasonable attorney fees to the defendant(s).⁵³⁹

b. Limits on Filing Action for Unauthorized Destruction, Damage, or Disposal

A person has five years from the date of the alleged violation or threatened violation to file the above actions,⁵⁴⁰ and has the burden of providing evidence that records were destroyed in violation of R.C. 149.351.⁵⁴¹ When any person has recovered a forfeiture in a civil action under R.C. 149.351(B)(2), no other person may recover a forfeiture for that same record, regardless of the number of persons “aggrieved,” or the number of civil actions commenced.⁵⁴² Determining the

⁵³⁴ R.C. 149.351(A).

⁵³⁵ *Rhodes v. City of New Philadelphia*, 129 Ohio St.3d 304, 2011-Ohio-3279, 851 N.E.2d 782; *Walker v. Ohio St. Univ. Bd. of Tr.*, No. 09AP-748, 2010-Ohio-373, ¶¶22-27 (10th Dist.) (determining that a person is “aggrieved by” a violation of R.C. 149.351(A) when, (1) the person has a legal right to disclosure of a record of a public office, and (2) the disposal of the record, not permitted by law, allegedly infringes the right); see also *State ex rel. Cincinnati Enquirer v. Allen*, No. C-040838, 2005-Ohio-4856, ¶15 (1st Dist.), appeal not allowed, 108 Ohio St.3d 1439, 2006-Ohio-421; *State ex rel. Sensel v. Leone*, 12th Dist. No. CA97-05-102 (Feb. 9, 1998), reversed on other grounds, 85 Ohio St.3d 152 (1999), Black’s Law Dictionary, 77 (9th ed. 2009).

⁵³⁶ R.C. 149.351(B)(1).

⁵³⁷ R.C. 149.351(B)(2).

⁵³⁸ R.C. 149.351(C); *Rhodes v. City of New Philadelphia*, 129 Ohio St.3d 304, 2011-Ohio-3279, 851 N.E.2d 782.

⁵³⁹ R.C. 149.351(C)(2).

⁵⁴⁰ R.C. 149.351(E).

⁵⁴¹ *Snodgrass v. City of Mayfield Heights*, No. 96043, 2008-Ohio-5095, ¶15 (8th Dist.); *State ex rel. Doe v. Register*, No. CA2008-08-081, 2009-Ohio-2448 (12th Dist.).

⁵⁴² R.C. 149.351(D).

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

number of “violations” involved is an ad hoc determination which may depend on the nature of the records involved.⁵⁴³

c. Attorney Fees

The aggrieved person may seek an award of reasonable attorney fees for either the injunctive action or an action for civil forfeiture.⁵⁴⁴ An award of attorney fees under R.C. 149.351 is discretionary.⁵⁴⁵

4. Availability of Records Retention Schedules

All public offices must maintain a copy of all current records retention schedules at a location readily available to the public.⁵⁴⁶

B. Records Management - Practical Pointers

1. Fundamentals

Don't be a Pack Rat

Every record, public or not, that is kept by a public office must be covered by a records retention schedule. Without an applicable schedule dictating how long a record must be kept and when it can be destroyed, a public office must keep that record forever. Apart from the inherent long-term storage problems and associated cost this creates for a public office, the office is also responsible for continuing to maintain the record in such a way that it can be made available at any time if it is responsive to a public records request. Creating and following schedules for all of its records allows a public office to dispose of records once they are no longer necessary or valuable.

Content – Not Medium – Determines How Long to Keep a Record

Deciding how long a record should be kept is based on the content of the record, not on the medium on which it exists. Not all paper documents are “records” for purposes of the Public Records Act; similarly, not all documents transmitted via e-mail are “records” that must be maintained and destroyed pursuant to a records retention schedule. Accordingly, in order to fulfill both its records management and public records responsibilities, a public office should categorize all of the items it keeps that are deemed to be records – regardless of the *form* in which they exist – based on content, and store them based on those content categories, or “records series,” for as long as the records have legal, administrative, fiscal, or historic value. (Note that storing e-mail records unsorted on a server does not satisfy records retention requirements, because the server does not allow for the varying disposal schedules of different categories of records.)

Practical Application

Creating and implementing a records management system might sound daunting. For most public offices, though, it is a matter of simple housekeeping. Many offices already have the scaffolding of existing records retention schedules in place, which may be augmented in the manner outlined below.

2. Managing Records in Five Easy Steps:

a. Conduct a Records Inventory

The purpose of an inventory is to identify and describe the types of records an office keeps. Existing records retention schedules are a good starting point for determining the types of records

⁵⁴³ *Kish v. City of Akron*, 109 Ohio St.3d 162, 2006-Ohio-1244, at ¶¶25-44; see also *Cwynar v. Jackson Twp. Bd. of Trs.* (5th Dist.), 178 Ohio App.3d 345, 2008-Ohio-5011.

⁵⁴⁴ R.C. 149.351(B)(1)-(2).

⁵⁴⁵ *Cwynar v. Jackson Twp. Bd. of Trs.*, 178 Ohio App.3d 345, 2008-Ohio-5011, ¶56 (5th Dist.).

⁵⁴⁶ R.C. 149.43(B)(2).

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

an office keeps, as well as identifying records that are no longer kept or new types of records for which schedules need to be created.

For larger offices, it is helpful to designate a staff member from each functional area of the office who knows the kinds of records their department creates and why, what the records document, and how and where they are kept.

b. Categorize Records by Record Series

Records should be grouped according to record series. A record series is a group of similar records that are related because they are created, received, or used for or result from the same purpose or activity. Record series descriptions should be broad enough to encompass all records of a particular type ("Itemized Phone Bills" rather than "FY07-FY08 Phone Bills" for instance), but not so broad that it fails to be instructive (such as "Finance Department e-mails") or leaves the contents open to interpretation or "shoehorning."

c. Decide How Long to Keep Each Records Series

Retention periods are determined by assessing four values for each category of records: administrative, legal, fiscal, and historical.

Administrative Value: A record maintains its administrative value as long as it is useful and relevant to the execution of the activities that caused the record to be created. Administrative value is determined by how long the record is needed by the office to carry out – that is, to "administer" – its duties. Every record created by government entities should have administrative value, which can vary from being transient (a notice of change in meeting location), to long-term (a policies and procedures manual).

Legal Value: A record has legal value if it documents or protects the rights or obligations of citizens or the agency that created it, provides for defense in litigation, or demonstrates compliance with laws, statutes, and regulations. Examples include contracts, real estate records, retention schedules, and licenses.

Fiscal Value: A record has fiscal value if it pertains to the receipt, transfer, payment, adjustment, or encumbrance of funds, or if it is required for an audit. Examples include payroll records and travel vouchers.

Historical Value: A record has historical value if it contains significant information about people, places, or events. The State Archives suggests that historical documents be retained permanently. Examples include board or commission meeting minutes and annual reports.

d. Dispose of Records on Schedule

Records retention schedules indicate how long particular record series must be kept and when and how the office can dispose of them. Records kept past their retention schedule are still subject to public records requests, and can be unwieldy and expensive to store. As a practical matter, it is helpful to designate a records manager or records custodian to assist in crafting retention schedules, monitoring when records are due for disposal, and ensuring proper completion of disposal forms.

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

e. Review Schedules Regularly and Revise, Delete, or Create New Ones as the Law and the Office's Operations Change

Keep track of new records that are created as a result of statutory and policy changes. Ohio law requires all records to be scheduled within one year after the date that they are created or received.⁵⁴⁷

C. In Summary: Practical Pointers for Public Offices

Practical Pointer #1: If you neglect to dispose of your records when your retention schedules say you can, they are fair game for a public records request.

Practical Pointer #2: If you don't have a schedule that says how long you have to keep a particular kind of record, you can never throw that record away. There could be legal consequences if you cannot produce those unscheduled records.

Practical Pointer #3: Medium or format of an item is not determinative of whether that item is a "record." Rather, whether an item is a record is determined by its content. In fact, the use and retention period are factors in determining the best storage media.

Practical Pointer #4: Every record of your office must be covered by a retention schedule, not just the public records.

Practical Pointer #5: Taking inventory will help you identify records that haven't been scheduled, locate unnecessary copies, and purge records that are being kept past their retention period.

Practical Pointer #6: Make sure you have a schedule for transient records that permits destruction of records that are temporary in nature – such as telephone messages, drafts, voice mail, and post-it notes – as soon as they are no longer of administrative value.

Practical Pointer #7: Designate a records manager/records custodian.

Practical Pointer #8: Keep track of new records that are created as a result of statutory/policy changes, because new records must be scheduled within one year after the date they are created or received.

Practical Pointer #9: Document the disposition of records.

D. Helpful Resources for Local Government Offices

Ohio Historical Society/State Archives – Local Government Records Program

The Local Government Records Program of the State Archives provides records-related advice and assistance to local governments in order to facilitate the identification and preservation of local government records with enduring historical value. Please direct inquiries and send forms to:

The Ohio Historical Society/State Archives
Local Government Records Program
800 E. 17th Avenue
Columbus, OH 43211
(614) 297-2553 (phone)
(614) 297.2546 (fax)
localrecs@ohiohistory.org

⁵⁴⁷ R.C. 149.34(C).

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

E. Helpful Resources for State Government Offices

1. Ohio Department of Administrative Services Records Management Program

The Ohio Department of Administrative Services' State Records Administration can provide records management advice and assistance to state agencies, as well as provide training seminars on request. Information available on their website includes:

- Access to the Records Information Management System (RIMS) retention schedule database;
- RIMS User Manual;
- General Retention Schedules; and
- Records Inventory and Analysis template.

For more information, contact DAS at 614-466-1105 or visit www.das.ohio.gov.

2. The Ohio Historical Society, State Archives

The State Archives can assist state agencies with the identification and preservation of records with enduring historical value.

For more information or to schedule a records appraisal, contact State Archives at 614-297-2536.

F. Helpful Resources for All Government Offices

Ohio Electronic Records Committee

Electronic records present unique challenges for archivists and records managers. As society shifts from traditional methods of recordkeeping to electronic recordkeeping, the issues surrounding the management of electronic records become more significant. Although the nature of electronic records is constantly evolving, these records are being produced at an ever-increasing rate. As these records multiply, the need for leadership and policy becomes more urgent.

The goal of the Ohio Electronic Records Committee (OhioERC) is to draft guidelines for the creation, maintenance, long term preservation of and access to electronic records created by Ohio's state government. Helpful documents available on the OERC's website include:

- Hybrid Microfilm Guidelines;
- Digital Document Imaging Guidelines;
- Electronic Records Management Guidelines;
- Electronic Records Policy;
- General Schedules for Electronic Records;
- Managing Electronic Mail; and
- Trustworthy Information Systems Handbook.

For more information and to learn about ongoing projects, visit the Ohio Electronic Records Committee website at <http://ohsweb.ohiohistory.org/ohioerc>.

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

G. Public Records Policy

A public office must create and adopt a policy for responding to public records requests, and the Ohio Attorney General's office has developed a model public records policy, which may serve as a guide.⁵⁴⁸ The public records policy must be distributed to the records manager, records custodian, or the employee who otherwise has custody of the records of the office, and that employee must acknowledge receipt. In addition, a poster describing the policy must be posted in the public office in a conspicuous location, and in all branch offices.⁵⁴⁹ The public records policy must be included in the office's policies and procedures manual, if one exists, and may be posted on the office's website.⁵⁵⁰ Compliance with these requirements will be audited by the Auditor of State in the course of a regular financial audit.⁵⁵¹

A public records policy may . . .

limit the number of records that the office will transmit by United States mail to a particular requester to ten per month, unless the requester certifies in writing that the requested records and/or the information those records contain will not be used or forwarded for commercial purposes. For purposes of this division, "commercial" shall be narrowly construed and does not include reporting or gathering of news, reporting or gathering of information to assist citizen oversight or understanding of the operation or activities of government, or nonprofit educational research.⁵⁵²

A public records policy may not . . .

- limit the number of public records made available to a single person;
- limit the number of records the public office will make available during a fixed period of time; or
- establish a fixed period of time before the public office will respond to a request for inspection or copying of public records (unless that period is less than eight hours).⁵⁵³

H. Required Public Records Training for Elected Officials

All local and statewide elected government officials⁵⁵⁴ or their designees⁵⁵⁵ must attend a three-hour public records training program during each term of elective office⁵⁵⁶ during which the official serves.⁵⁵⁷ The training must be developed and certified by the Ohio Attorney General's Office, and presented either by the Ohio Attorney General's Office or an approved entity with which the Attorney General's Office contracts.⁵⁵⁸ The Attorney General shall ensure that the training programs and seminars are accredited by the Commission on Continuing Legal Education established by the Supreme Court.⁵⁵⁹ Compliance

⁵⁴⁸ R.C. 149.43(E)(1); Attorney General's Model Policy available at: www.OhioAttorneyGeneral.gov/Sunshine.

⁵⁴⁹ R.C. 149.43(E)(2).

⁵⁵⁰ R.C. 149.43(E)(2).

⁵⁵¹ R.C. 109.43(G).

⁵⁵² R.C. 149.43(B)(7). In addition, a public office may adopt policies and procedures it will follow in transmitting copies by U.S. mail or other means of delivery or transmission, but adopting these policies and procedures is deemed to create an enforceable duty on the office to comply with them.

⁵⁵³ R.C. 149.43(E)(1).

⁵⁵⁴ R.C. 109.43(A)(2) (definition of "elected official"); NOTE: the definition excludes justices, judges or clerks of the Supreme Court of Ohio, courts of appeals, courts of common pleas, municipal courts, and county courts.

⁵⁵⁵ R.C. 109.43(A)(1) (providing that training may be received by an "appropriate" designee, R.C. 109.43(B) (no definition of "appropriate" in the statute), and may be the designee of the sole elected official in a public office, or of all the elected officials if the public office includes more than one elected official).

⁵⁵⁶ R.C. 109.43(B) (providing that training shall be three hours for every term of office for which the elected official was appointed or elected to the public office involved).

⁵⁵⁷ R.C. 109.43(E)(1); R.C. 109.43(B) (providing that this training is intended to enhance an elected official's knowledge of his or her duty to provide access to public records, and to provide guidance in developing and updating his or her office's public records policies); R.C. 149.43(E)(1) (providing that another express purpose of the training is "[t]o ensure that all employees of public offices are appropriately educated about a public office's obligations under division (B) of [the Public Records Act].").

⁵⁵⁸ R.C. 109.43(B)-(D) (providing that the Attorney General's Office may not charge a fee to attend the training programs it conducts, but outside contractors that provide the certified training may charge a registration fee that is based on the "actual and necessary" expenses associated with the training, as determined by the Attorney General's Office).

⁵⁵⁹ R.C. 109.43(B).

The Ohio Public Records Act

Chapter Five: Other Obligations of a Public Office

with the training provision will be audited by the Auditor of State, in the course of a regular financial audit.⁵⁶⁰

⁵⁶⁰ R.C. 109.43(G).

The Ohio Public Records Act

Chapter Six: Special Topics

VI. Chapter Six: Special Topics

A. CLEIRs: Confidential Law Enforcement Investigatory Records Exception⁵⁶¹

This exception is often mistaken as one that applies only to police investigations. In fact, the Confidential Law Enforcement Investigatory Records exception, commonly known as “CLEIRs,” applies to investigations of alleged violations of criminal, quasi-criminal, civil, and administrative law. It does not apply to most investigations conducted for purposes of public office employment matters, such as internal disciplinary investigations,⁵⁶² pre-employment questionnaires and polygraph tests,⁵⁶³ or to public records that later become the subject of a law enforcement investigation.⁵⁶⁴

1. CLEIRs Defined:

Under CLEIRs, a public office may withhold any records that both:

- (1) Pertain to a law enforcement matter of a criminal, quasi-criminal, civil, or administrative nature;⁵⁶⁵

and

- (2) If released would create a high probability of disclosing any of the following five types of information:

- Identity of an uncharged suspect;
- Identity of a source or witness to whom confidentiality was reasonably promised;
- Specific confidential investigatory techniques or procedures;
- Specific investigatory work product; or
- Information that would endanger the life or physical safety of law enforcement personnel, a crime victim, a witness, or a confidential information source.⁵⁶⁶

2. Determining whether the CLEIRs exception applies

Remember that the CLEIRs exception is a strict two-step test, and a record must first qualify as pertaining to a “law enforcement matter” under Step One before any of the exception categories in Step Two will apply to the record.⁵⁶⁷

Step One: Pertains to “A Law Enforcement Matter”

An investigation is only considered a “law enforcement matter” if it meets each prong of the following 3-part test:

(a) Has an Investigation Been Initiated Upon Specific Suspicion of Wrongdoing?⁵⁶⁸

⁵⁶¹ R.C. 149.43(A)(1)(h),(A)(2).

⁵⁶² *Mehta v. Ohio Univ.*, Ct. of Cl. No. 2006-06752, 2009-Ohio-4699, ¶¶36-38 (determining that a public university’s internal report of investigation of plagiarism was not excepted from disclosure under the Public Records Act).

⁵⁶³ *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 142, 1995-Ohio-248.

⁵⁶⁴ See, *State ex rel. Morgan v. City of New Lexington*, 112 Ohio St.3d 33, 42, 2006-Ohio-6365, ¶51 (records “made in the routine course of public employment” that related to but preceded a law enforcement investigation are not confidential law enforcement investigatory records); *State ex rel. Dillery v. Icsman*, 92 Ohio St.3d 312, 316, 2001-Ohio-193.

⁵⁶⁵ R.C. 149.43(A)(2).

⁵⁶⁶ R.C. 149.43(A)(2)(a)-(d).

⁵⁶⁷ *State ex rel. Cincinnati Enquirer v. Hamilton County*, 75 Ohio St.3d 374, 377, 1996-Ohio-214 (because 911 tapes are not part of an investigation, “it does not matter that release of the tapes might reveal the identity of an uncharged suspect or contain information which, if disclosed, would endanger the life or physical safety of a witness.”); *State ex rel. James v. Ohio State Univ.*, 70 Ohio St.3d 168, 170 (1994) (respondent attempted to apply CLEIRs Step Two “confidential informant” exception to evaluator’s notes in personnel records).

⁵⁶⁸ E.g., *State ex rel. Polovischak v. Mayfield*, 50 Ohio St.3d 51, 53 (1990).

The Ohio Public Records Act

Chapter Six: Special Topics

Investigation records must be generated in response to specific alleged misconduct, not as the incidental result of routine monitoring.⁵⁶⁹ However, “routine” investigations of the use of deadly force by officers, even if the initial facts indicate accident or self-defense, are sufficient to meet this requirement.⁵⁷⁰

(b) Does the Alleged Conduct Violate Criminal,⁵⁷¹ Quasi-criminal,⁵⁷² Civil, or Administrative Law?⁵⁷³

So long as the conduct is prohibited by statute or administrative rule, whether the punishment is criminal, quasi-criminal, civil, or administrative in nature is irrelevant.⁵⁷⁴ “Law enforcement matter of a criminal, quasi-criminal, civil, or administrative nature” refers directly to the enforcement of the law, and not to employment or personnel matters ancillary to law enforcement matters.⁵⁷⁵

Disciplinary investigations of alleged violations of internal office policies or procedures are not law enforcement matters,⁵⁷⁶ including disciplinary matters and personnel files of law enforcement officers.⁵⁷⁷

(c) Does the Public Office Have the Authority to Investigate or Enforce the Law Allegedly Violated?

If the office does not have legally mandated investigative⁵⁷⁸ or enforcement authority over the alleged violation of the law, then the records it holds are not a law enforcement matter for that office.⁵⁷⁹ For example, if an investigating law enforcement agency obtains a copy of an otherwise public record of another public office as part of an investigation, the original record kept by the other public office is not covered by the CLEIRs exception.⁵⁸⁰

⁵⁶⁹ *State ex rel. Polovischak v. Mayfield*, 50 Ohio St.3d 51, 53 (1990); *State ex rel. Ohio Patrolmen's Benevolent Ass'n v. City of Mentor*, 89 Ohio St.3d 440, 445, 2000-Ohio-214.

⁵⁷⁰ See *State ex rel. Nat'l Broadcasting Co. v. Cleveland*, 57 Ohio St.3d 77, 79-80 (1991); see also *State ex rel. Oriana House, Inc. v. Montgomery*, Nos. 04AP-492, 04AP-504, 2005-Ohio-3377, ¶77 (10th Dist.) (noting that the magistrate found that redacted portions of audit records were directed to specific misconduct and were not simply part of routine monitoring).

⁵⁷¹ *State ex rel. police Officers for Equal Rights v. Lashutka*, 72 Ohio St.3d 185, 187, 1995-Ohio-19.

⁵⁷² See *Goldberg v. Maloney*, 111 Ohio St.3d 211, 2006-Ohio-5485, ¶¶41-43 (providing bankruptcy as an example of a “quasi-criminal” matter); *State ex rel. Oriana House, Inc. v. Montgomery*, Nos. 04AP-492, 04AP-504, 2005-Ohio-3377, ¶ 76 (10th Dist.) (noting that the special audit by the Auditor of State clearly qualifies as both a “law enforcement matter of a [...] civil, or administrative nature” and a “law enforcement matter of a criminal [or] quasi-criminal” matter); *In re Fisher*, 39 Ohio St.2d 71, 75-76 (1974) (providing juvenile delinquency as an example of a “quasi-criminal” matter).

⁵⁷³ E.g., *State ex rel. Yant v. Conrad*, 74 Ohio St.3d 681, 684, 1996-Ohio-234; *State ex rel. Polovischak v. Mayfield*, 50 Ohio St.3d 51, 53 (1990) (noting that “[t]h issue is whether records compiled by the committee pertain to a criminal, quasi-criminal or administrative matter. Those categories encompass the kinds of anti-fraud and anti-corruption investigations undertaken by the committee. The records are compiled by the committee in order to investigate matter prohibited by state law and administrative rule.”); *State ex rel. McGee v. Ohio St. Bd. of Psychology*, 49 Ohio St.3d 59, 60 (1990) (noting that “[t]he reference in R.C. 149.43(A)(2) to four types of law enforcement matters – criminal, quasi-criminal, civil, and administrative – evidences a clear statutory intention to include investigative activities of state licensing boards.”); *State ex rel. Oriana House, Inc. v. Montgomery*, Nos. 04AP-492, 04AP-504, 2005-Ohio-3377, ¶76 (10th Dist.) (noting that the special audit by the Auditor of State clearly qualifies as both a “law enforcement matter of a [...] civil, or administrative nature” and a “law enforcement matter of a criminal [or] quasi-criminal” matter).

⁵⁷⁴ *State ex rel. Polovischak v. Mayfield*, 50 Ohio St.3d 31 (1990); *State ex rel. McGee v. Ohio State Bd. of Psychology*, 49 Ohio St.3d 59 (1990).

⁵⁷⁵ *State ex rel. Freedom Commc'n, Inc. v. Elida Cmty. Fire Co.*, 82 Ohio St.3d 578, 581, 1998-Ohio-411; *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 142, 1995-Ohio-248 (finding that polygraph test results, questionnaires, and all similar materials gathered in the course of a police department's hiring process, are not “law enforcement matters” for purposes of CLEIRs. “Law enforcement matters” refers “directly to the enforcement of the law, and not to employment or personnel matters ancillary to law enforcement matters.”).

⁵⁷⁶ *State ex rel. Morgan v. City of New Lexington*, 112 Ohio St.3d 33, 2006-Ohio-6365, ¶49.

⁵⁷⁷ *State ex rel. McGowan v. Cuyahoga Metro. Hous. Auth.*, 78 Ohio St.3d 518, 519, 1997-Ohio-191; *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 142, 1995-Ohio-248 (finding that the personal records of police officers reflecting the discipline of police officers are not confidential law enforcement investigatory records excepted from disclosure).

⁵⁷⁸ *State ex rel. Oriana House, Inc. v. Montgomery*, Nos. 04AP-492, 04AP-504, 2005-Ohio-3377, ¶76 (10th Dist.).

⁵⁷⁹ *State ex rel. Strothers v. Wertheim*, 80 Ohio St.3d 155, 158, 1997-Ohio-349 (determining that records of alleged child abuse do not pertain to a law enforcement matter in the hands of county ombudsman office that has no legally mandated enforcement or investigative authority).

⁵⁸⁰ *State ex rel. Morgan v. City of New Lexington*, 112 Ohio St.3d 33, 2006-Ohio-6365, ¶51 (finding that “records made in the routine course of public employment before” an investigation began were not confidential law enforcement records); *State ex rel. Dillery v. Icsman*, 92 Ohio St.3d 312, 316, 2001-Ohio-193 (finding that a records request of city's public works superintendent for specified street repair records were “unquestionably public records” and “[t]he mere fact that these records might have subsequently become relevant to Dillery's criminal cases did not transform them into records exempt from disclosure.”); *State ex rel. Cincinnati Enquirer v. Hamilton County*, 75 Ohio St.3d 374, 378, 1996-Ohio-214 (find that a public

The Ohio Public Records Act

Chapter Six: Special Topics

Step Two: High Probability of Disclosing Certain Information

If an investigative record does pertain to a “law enforcement matter”, the CLEIRs exception applies if and only to the extent that release of the record would create a high probability of disclosing at least one of the following five types of information.⁵⁸¹

(a) Identity of an Uncharged Suspect in Connection with the Investigated Conduct

An “uncharged suspect” is a person who at some point in the investigating agency’s investigation was believed to have committed a crime or offense,⁵⁸² but who has not been arrested⁵⁸³ or charged⁵⁸⁴ for the offense to which the investigative record pertains. The purposes of this exception include: (1) protecting the rights of individuals to be free from unwarranted adverse publicity; and (2) protecting law enforcement investigations from being compromised.⁵⁸⁵

Only the particular information that has a high probability of revealing the identity of an uncharged suspect can be redacted from otherwise non-exempt records prior to the records’ release.⁵⁸⁶

Where the contents of a particular record in an investigatory file are so “inextricably intertwined” with the suspect’s identity that redacting will fail to protect the person’s identity in connection with the investigated conduct, that entire record may be withheld.⁵⁸⁷ However, the application of this exception to some records in an investigative file does not automatically create a blanket exception covering all other records in an investigative file, and the public office must still release any investigative records that do not individually have a high probability of revealing the uncharged suspect’s identity.⁵⁸⁸ **Note:** use of any exception must be conformed to the requirement that an explanation, including legal authority, must be provided in any response that denies access to records.⁵⁸⁹

record that “subsequently came into the possession and/or control of a prosecutor, other law enforcement officials, or event he grand jury has no significance” because “[o]nce clothed with the public records cloak, the records cannot be defrocked of their status.”).

⁵⁸¹ R.C. 149(A)(2); *State ex rel. Multimedia v. Snowden*, 72 Ohio St.3d 141, 1995-Ohio-248.

⁵⁸² *State ex rel. Musial v. City of N. Olmsted*, 106 Ohio St.3d 459, 2005-Ohio-5521, ¶23 (providing that a “suspect” is a “person believed to have committed a crime or offense.”).

⁵⁸³ *State ex rel. Outlet Comm’n v. Lancaster Police Dep’t*, 38 Ohio St.3d 324, 328 (1998) (stating that “it is neither necessary nor controlling to engage in a query as to whether or not a person who has been arrested or issued a citation for minor criminal violations and traffic violations [...] has been formally charged. Arrest records and intoxilyzer records which contain the names of persons who have been formally charged with an offense, as well as those who have been arrested and/or issued citations but who have not been formally charged, are not confidential. Law enforcement investigatory records with the exception of R.C. 149.43(A)(2)(a).”) (overruled on other grounds).

⁵⁸⁴ *State ex rel. Musial v. City of N. Olmsted*, 106 Ohio St.3d 459, 2005-Ohio-5521, ¶¶23-24 (providing that a “charge” is a “formal accusation of an offense as a preliminary step to prosecution” and that a formal accusation of an offense requires a charging instrument, i.e., an indictment, information, or criminal complaint); see also *Crim. R. 7*; *Black’s Law Dictionary* 249 (8th ed. 2004); *State ex rel. Master v. City of Cleveland*, 75 Ohio St.3d 23, 30, 1996-Ohio-228 (“*Master I*”); *State ex rel. Moreland v. City of Dayton*, 67 Ohio St.3d 129, 130 (1993).

⁵⁸⁵ *State ex rel. Ohio Patrolmen’s Benevolent Ass’n v. City of Mentor*, 89 Ohio St.3d 440, 448, 2000-Ohio-214 (holding that the protected identities of uncharged suspects were not inextricably intertwined with all of the remaining records so as to exempt the totality of the investigative records); *State ex rel. Master v. City of Cleveland*, 75 Ohio St.3d 23, 30, 1996-Ohio-228 (“*Master I*”) (providing that “when a government body asserts that public records are excepted from disclosure and such assertion is challenged, the court must make an individualized scrutiny of the records in question” and “[i]f the ‘court finds that these records contain excepted information, this information must be redacted and any remaining information must be released.”) citing *State ex rel. Nat’l Broad. Co. v. City of Cleveland*, 38 Ohio St.3d 79, 85 (1998); *State ex rel. White v. Watson*, No. 86737, 2006-Ohio-5234, ¶14 (8th Dist.) (providing that “[t]he government has the duty to disclose public records, including the parts of a record which do not come within an exemption” and therefore, “if only part of a record is exempt, the government may redact the exempt part and release the rest.”).

⁵⁸⁶ *State ex rel. Master v. City of Cleveland*, 75 Ohio St.3d 23, 30, 1996-Ohio-228 (“*Master I*”) (providing that “when a government body asserts that public records are excepted from disclosure and such assertion is challenged, the court must make an individualized scrutiny of the records in question” and “[i]f the ‘court finds that these records contain excepted information, this information must be redacted and any remaining information must be released.”) citing *State ex rel. Nat’l Broad. Co. v. City of Cleveland*, 38 Ohio St.3d 79, 85 (1998); *State ex rel. White v. Watson*, No. 86737, 2006-Ohio-5234, ¶14 (8th Dist.) (providing that “[t]he government has the duty to disclose public records, including the parts of a record which do not come within an exemption” and therefore, “if only part of a record is exempt, the government may redact the exempt part and release the rest.”).

⁵⁸⁷ See *State ex rel. Ohio Patrolmen’s Benevolent Ass’n v. City of Mentor*, 89 Ohio St.3d 440, 448, 2000-Ohio-214 (holding that the protected identities of uncharged suspects were not inextricably intertwined with all of the remaining records so as to exempt the totality of the investigative records); *State ex rel. Master v. City of Cleveland*, 75 Ohio St.3d 23, 30, 1996-Ohio-228 (“*Master I*”) (providing that “when a government body asserts that public records are excepted from disclosure and such assertion is challenged, the court must make an individualized scrutiny of the records in question” and “[i]f the ‘court finds that these records contain excepted information, this information must be redacted and any remaining information must be released.”) citing *State ex rel. Nat’l Broad. Co. v. City of Cleveland*, 38 Ohio St.3d 79, 85 (1998); *State ex rel. White v. Watson*, No. 86737, 2006-Ohio-5234, ¶14 (8th Dist.) (providing that “[t]he government has the duty to disclose public records, including the parts of a record which do not come within an exemption” and therefore, “if only part of a record is exempt, the government may redact the exempt part and release the rest.”).

⁵⁸⁸ *State ex rel. Rocker v. Guemsey County Sheriff’s Office*, 126 Ohio St.3d 224, 2010-Ohio-3288, ¶11-15.

⁵⁸⁹ R.C. 149.43(B)(3); *State ex rel. Doe v. Smith*, 123 Ohio St. 3d 44, 2009-Ohio-4149, ¶¶ 6, 9, 38, 43 (Supreme Court found that an explanation including legal authority must be provided even where that explanation reveals the otherwise deniable existence of sealed records. The response, “no information available,” violated R.C. 149.43(B)(3)).

The Ohio Public Records Act

Chapter Six: Special Topics

The uncharged suspect exception applies even if:

- time has passed since the investigation was closed;⁵⁹⁰
- the suspect has been accurately identified in media coverage;⁵⁹¹ or
- the uncharged suspect is the person requesting the information.⁵⁹²

(b) Identity of a Confidential Source

For purposes of the CLEIRs exception, “confidential sources” are those who have been “reasonably promised confidentiality.”⁵⁹³ A promise of confidentiality is considered reasonable if it was made on the basis of the law enforcement investigator’s individualized determination that the promise is necessary to obtain the information.⁵⁹⁴ Where possible, it is advisable - though not required - that the investigator document the specific reasons why promising confidentiality was necessary to further the investigation.⁵⁹⁵ Promises of confidentiality contained in policy statements or given as a matter of course during routine administrative procedures are not “reasonable” promises of confidentiality for purposes of the CLEIRs exception.⁵⁹⁶

This exception exists only to protect the identity of the information source, not the information he or she provides.⁵⁹⁷ However, where the contents of a particular record in an investigatory file are so inextricably intertwined with the confidential source’s identity that redacting will fail to protect the person’s identity in connection with the investigated conduct, that entire record may be withheld.⁵⁹⁸

(c) Specific Confidential Investigatory Techniques or Procedures

Specific confidential investigatory techniques or procedures,⁵⁹⁹ including sophisticated scientific investigatory techniques or procedures such as forensic laboratory tests and their results, may be redacted pursuant to this exception.⁶⁰⁰ One purpose of the exception is to avoid compromising the effectiveness of confidential investigative techniques.⁶⁰¹ Routine investigative techniques are not covered under the exception.⁶⁰²

(d) Investigative Work Product

Statutory Definition: Information, including notes, working papers, memoranda, or similar materials, assembled by law enforcement officials in connection with a probable or pending

⁵⁹⁰ *State ex rel. Musial v. City of N. Olmstead*, 106 Ohio St.3d 459, 2005-Ohio-5521, ¶¶23-24.

⁵⁹¹ *State ex rel. Rucker v. Guernsey County Sheriff’s Office*, 126 Ohio St.3d 224, 2010-Ohio-3288, ¶10; *State ex rel. Ohio Patrolmen’s Benevolent Ass’n v. City of Mentor*, 89 Ohio St.3d 440, 447, 2000-Ohio-214.

⁵⁹² *State ex rel. Musial v. City of N. Olmstead*, 106 Ohio St.3d 459, 2005-Ohio-5521, ¶¶17-23.

⁵⁹³ *State ex rel. Yant v. Conrad*, 74 Ohio St.3d 681, 682, 1996-Ohio-234.

⁵⁹⁴ *State ex rel. Toledo Blade Co. v. Telb*, Lucas C.P., 50 Ohio Misc.2d 1, 9 (Feb. 8, 1990).

⁵⁹⁵ *State ex rel. Toledo Blade Co. v. Telb*, Lucas C.P., 50 Ohio Misc.2d 1, 9 (Feb. 8, 1990); see also *State ex rel. Martin v. City of Cleveland*, 67 Ohio St.3d 155, 156-57, 1993-Ohio-192 (finding that, to trigger an exception, a promise of confidentiality or a threat to physical safety need not be within the “four corners” of a document).

⁵⁹⁶ *State ex rel. Toledo Blade Co. v. Telb*, Lucas C.P., 50 Ohio Misc.2d 1, 9 (Feb. 8, 1990).

⁵⁹⁷ *State ex rel. Toledo Blade Co. v. Telb*, Lucas C.P., 50 Ohio Misc.2d 1, 9 (Feb. 8, 1990).

⁵⁹⁸ *State ex rel. Beacon Journal Publ’g Co. v. Kent State Univ.*, 68 Ohio St.3d 40, 44, 1993-Ohio-146 (overruled on other grounds); *State ex rel. Strothers v. McFaul*, 122 Ohio App.3d 327, 332 (8th Dist. 1997).

⁵⁹⁹ R.C. 149.43(A)(2)(c); *State ex rel. Walker v. Balraj*, 8th Dist. No. 77967 (Aug. 2, 2000).

⁶⁰⁰ See *State ex rel. Dayton Newspapers, Inc. v. Rauch*, 12 Ohio St.3d 100, 100-101 (1984) (finding that an autopsy report may be exempt as a specific investigatory technique or work product); but see, R.C. 313.10 (providing that final autopsy reports are specifically declared public records); *State ex rel. Lawhorn v. White*, 8th App. No. 63290 (Mar. 7, 1994); *State ex rel. Williams v. City of Cleveland*, 8th App. No. 59571 (Jan. 24, 1991); *State ex rel. Jester v. City of Cleveland*, 8th Dist. No. 56438 (Jan. 17, 1991); *State ex rel. Apanovitch v. City of Cleveland*, 8th Dist. No. 58867 (Feb. 6, 1991). The three preceding cases were affirmed in *State ex rel. Williams v. City of Cleveland*, 64 Ohio St.3d 544, 1992-Ohio-115.

⁶⁰¹ *State ex rel. Broom v. Cleveland*, 8th Dist. No. 59571 (Aug. 27, 1992) (noting that where “the records mention confidential investigatory techniques, the effectiveness of which could be compromised by disclosure” and “[t]o insure the continued effectiveness of these techniques, this court orders references to the techniques redacted” because “the information obtained from these techniques, if not otherwise protected, is ordered disclosed when such may be done without compromising the confidential technique.”).

⁶⁰² *State ex rel. Beacon Journal v. Univ. of Akron*, 64 Ohio St.2d 392, 397 (1980).

The Ohio Public Records Act

Chapter Six: Special Topics

criminal proceeding is work product under R.C. 149.43(A)(2)(c).⁶⁰³ These materials may be protected even when they appear in a law enforcement office's files other than the investigative file.⁶⁰⁴ "It is difficult to conceive of anything in a prosecutor's file, in a pending criminal matter, that would not be either material compiled in anticipation of a specific criminal proceeding or the personal trial preparation of the prosecutor."⁶⁰⁵ However, there are some limits to the items in an investigative file covered by this exception.⁶⁰⁶

Time Limits on Investigatory Work Product Exception: Once a law enforcement matter has commenced, the investigative work product exception applies until the matter has concluded.⁶⁰⁷ A law enforcement matter is concluded only when all potential actions, trials, and post-trial proceedings in the matter have ended. Thus, the investigatory work product exception remains available as long as any opportunity exists for direct appeal or post-conviction relief,⁶⁰⁸ including habeas corpus proceedings.⁶⁰⁹ Even if no suspect has been identified, "once it is evident that a crime has occurred, investigative materials developed are necessarily compiled in anticipation of litigation and so fall squarely within the *Steckman* definition of work product."⁶¹⁰ However, the work product exception is not merely an "ongoing investigation" exception. The investigating agency must be able to show that work product is being assembled in connection with a pending or highly probable criminal proceeding, not merely the possibility of future criminal proceedings.⁶¹¹

Where a criminal defendant who is the subject of the records agrees not to pursue appeal or post-conviction relief, the case is considered concluded, even if the time period for appeal or post-conviction relief has not expired.⁶¹²

Not Waived by Criminal Discovery: The work product exception is not waived when a criminal defendant is provided discovery materials as required by law.⁶¹³

(e) Information that Would Endanger Life or Physical Safety if Released

Information that, if released, would endanger the life or physical safety of law enforcement personnel,⁶¹⁴ a crime victim, a witness, or a confidential informant may be redacted before public

⁶⁰³ *State ex rel. Beacon Journal Publ'g Co. v. Maurer*, 91 Ohio St.3d 54, 56-57, 2001-Ohio-282 citing *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420 (1994).

⁶⁰⁴ *State ex rel. Mahajan v. State Medical Bd.*, 127 Ohio St.3d 497, 2010-Ohio-5995, ¶¶51-52 (investigative work product incidentally contained in chief enforcement attorney's general personnel file).

⁶⁰⁵ *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420, 431-32 (1994) (expanding the previous definition of "investigative work product" expressly and dramatically, which had previously limited the term to only those materials that would reveal the investigator's "deliberative and subjective analysis" of a case).

⁶⁰⁶ *State ex rel. Ohio Patrolmen's Benevolent Ass'n v. City of Mentor*, 89 Ohio St.3d 440, 448, 2000-Ohio-214 (finding that certain records, e.g., copies of newspaper articles and statutes, are unquestionably nonexempt and do not become exempt simply because they are placed in an investigative or prosecutorial file); *State ex rel. WLWT-TV5 v. Leis*, 77 Ohio St.3d 357, 361, 1997-Ohio-273 (providing that "[a]n examination [...] reveals the following nonexempt records: The [...] indictment, copies of various Revised Code Provisions, newspaper articles, a blank charitable organization registration statement form, the Brotherhood's Yearbook and Buyer's Guide, the transcript of the [...] plea hearing, a videotape of television news reports, and a campaign committee finance report filed with the board of elections.").

⁶⁰⁷ *State ex rel. Steckman v. Jackson*, 70 Ohio St.3d 420 (1994).

⁶⁰⁸ *State ex rel. WLWT-TV5 v. Leis*, 77 Ohio St.3d 357, 1997-Ohio-273.

⁶⁰⁹ *Perry v. Onunwor*, 8th App. No. 78398 (Dec. 7, 2000) (providing that "possibilities for further proceedings and trials [include] federal habeas corpus proceedings").

⁶¹⁰ *State ex rel. Leonard v. White*, 75 Ohio St.3d 516, 518, 1996-Ohio-204.

⁶¹¹ *State ex rel. Ohio Patrolmen's Benevolent Ass'n v. City of Mentor*, 89 Ohio St.3d 440, 446, 2000-Ohio-214.

⁶¹² *State ex rel. Cleveland Police Patrolmen's Ass'n v. City of Cleveland*, 84 Ohio St.3d 310, 311-12, 1999-Ohio-352 (providing that when a defendant signed an affidavit agreeing not to pursue appeal or post-conviction relief, trial preparation and investigatory work product exceptions were inapplicable).

⁶¹³ *State ex rel. WHIO-TV-7 v. Lowe*, 77 Ohio St.3d 350, 1997-Ohio-271.

⁶¹⁴ *State ex rel. Cleveland Police Patrolmen's Ass'n v. City of Cleveland*, 8th App. No. 71346, 122 Ohio App.3d 696, 699 (8th Dist. 1997) (finding that a "Strike Plan" and related records prepared in connection with the possible strike by teachers were not records because their release could endanger the lives of police personnel).

The Ohio Public Records Act

Chapter Six: Special Topics

release of a record.⁶¹⁵ The danger must be self-evident; bare allegations or assumed conclusions that a person's physical safety is threatened are not sufficient reasons to redact information.⁶¹⁶ Alleging that disclosing the information would infringe on a person's privacy does not justify a denial of release under this exception.⁶¹⁷

Note: Non-expiring Step Two exceptions: When a law enforcement matter has concluded, only the work product exception expires. The courts have expressly or impliedly found that investigatory records which fall under the uncharged suspect,⁶¹⁸ confidential source or witness,⁶¹⁹ confidential investigatory technique,⁶²⁰ and information threatening physical safety⁶²¹ exceptions apply despite the passage of time.

Note: Law Enforcement Records not Covered by the CLEIRs Exception: As noted above, personnel and other administrative records not pertaining to a law enforcement matter would not be covered by the CLEIRs exception. In addition, the courts have specifically ruled that the following records are not covered:

Offense and Incident Reports: Offense-and-incident reports are form reports in which the law enforcement officer completing the form enters information in the spaces provided.⁶²² Police offense or incident reports initiate investigations, but are not considered part of the investigation, and are therefore not a "law enforcement matter" covered by the CLEIRs exception.⁶²³ Therefore, none of the information explained in Step Two above can be redacted from an initial incident report.⁶²⁴ However, if an offense or incident report contains information that is otherwise exempt from disclosure under state or federal law, the exempt information may be redacted.⁶²⁵

911 Records: Audio records of 911 calls are not considered to pertain to a "law enforcement matter," or constitute part of an investigation, for the purposes of the CLEIRs exception.⁶²⁶ Further, the courts have determined that a caller has no reasonable expectation of privacy in matters communicated in a 911 call, and since there is no basis to find a constitutional right of privacy in such calls, even Social Security Numbers may not be redacted.⁶²⁷ As with other public records, a requester is entitled to access either the audio record, or a paper transcript.⁶²⁸ However, information concerning telephone numbers, addresses, or names obtained from a 911 database maintained

⁶¹⁵ R.C. 149.43(A)(2)(d); see *State ex rel. Martin v. City of Cleveland*, 67 Ohio St.3d 155, 156, 1993-Ohio-192 (finding that a document does not need to specify within the four corners the promise of confidentiality or threat to physical safety).

⁶¹⁶ See e.g., *State ex rel. Johnson v. City of Cleveland*, 65 Ohio St.3d 331, 333-34 (1992) (overruled on other grounds).

⁶¹⁷ See e.g., *State ex rel. Johnson v. City of Cleveland*, 65 Ohio St.3d 331, 333-334 (1992).

⁶¹⁸ R.C. 149.43(A)(2)(d); see *State ex rel. Martin v. City of Cleveland*, 67 Ohio St.3d 155, 156, 1993-Ohio-192 (finding that a document does not need to specify within the four corners the promise of confidentiality or threat to physical safety).

⁶¹⁹ *State ex rel. Polovischak v. Mayfield*, 50 Ohio St.3d 51, 54 (1990) (providing that "[o]ne purpose of the exemption in R.C. 149.43(A)(2) is to protect a confidential informant" and that "[t]his purpose would be subverted if a recorded (in which the informant's identity is disclosed) were deemed subject to disclosure simply because a period of time had elapsed with no enforcement action") (parentheses original).

⁶²⁰ *State ex rel. Broom v. Cleveland*, 8th Dist. No. 59571 (Aug. 27, 1992).

⁶²¹ *State ex rel. Martin v. City of Cleveland*, 67 Ohio St.3d 155, 1993-Ohio-192.

⁶²² *State ex rel. Lanham v. Smith*, 112 Ohio St.3d 527, 2007-Ohio-609, ¶13 ("See, e.g., *State ex rel. Beacon Journal Publishing Co. v. Maurer* (2001), 91 Ohio St.3d 54, 2001 Ohio 282, 741 N.E.2d 511 (referring to an "Ohio Uniform Incident Form").").

⁶²³ *State ex rel. Lanham v. Smith*, 112 Ohio St.3d 527, 2007-Ohio-609, ¶13; *State ex rel. Beacon Journal Publ'g Co. v. City of Akron*, 104 Ohio St.3d 339, 2004-Ohio-6557, ¶55; *State ex rel. Beacon Journal Publ'g Co. v. Maurer*, 91 Ohio St.3d 54, 57, 2001-Ohio-282 (explaining its ruling by noting that it ruled the way it did "despite the risk that the report may disclose the identity of an uncharged suspect.").

⁶²⁴ *State ex rel. Beacon Journal Publ'g Co. v. Maurer*, 91 Ohio St.3d 54, 57, 2001-Ohio-282.

⁶²⁵ *State ex rel. Lanham v. Smith*, 112 Ohio St.3d 527, 2007-Ohio-609, ¶13; *State ex rel. Beacon Journal Publ'g Co. v. City of Akron*, 104 Ohio St.3d 339, 2004-Ohio-6557, ¶55 (explaining that "in *Maurer*, we did not adopt a per se rule that all police offense and incident reports are subject to disclosure notwithstanding the applicability of any exemption.").

⁶²⁶ *State ex rel. Dispatch Printing Co. v. Morrow County Prosecutor's Office*, 10 Ohio St.3d 172, 2005-Ohio-685.

⁶²⁷ *State ex rel. Cincinnati Enquirer v. Hamilton County*, 75 Ohio St.3d 374, 377, 1996-Ohio-214 (holding that 911 tapes at issue had to be released immediately).

⁶²⁸ *State ex rel. Dispatch Printing Co. v. Morrow County Prosecutor's Office*, 10 Ohio St.3d 172, 2005-Ohio-685, ¶5.

The Ohio Public Records Act

Chapter Six: Special Topics

pursuant to R.C. 4931.40 through 4931.51 may not be disclosed or used for any purpose other than as permitted by those statutes.⁶²⁹

Note: Exceptions other than CLEIRs may apply to documents within a law enforcement investigative file, such as Social Security Numbers or LEADS computerized criminal history documents,⁶³⁰ and information, data, and statistics gathered or disseminated through the Ohio Law Enforcement Gateway (OHLEG).⁶³¹

B. *Employment Records*⁶³²

Public employee personnel records are generally regarded as public records.⁶³³ However, if any item contained in a personnel file or other employment records⁶³⁴ is not a “record” of the office, or is subject to an exception, it may be withheld. We recommend that Human Resource officers prepare a list of information and records in the office’s personnel files that are subject to withholding, including the explanation and legal authority related to each item. The office can then use this list for prompt and consistent responses to public records requests. A sample list can be found at the end of this chapter.

1. *Non-Records*

To the extent that any item contained in a personnel file is not a “record,” *i.e.*, does not serve to document the organization, operations, etc., of the public office, it is not a public record and need not be disclosed.⁶³⁵ Based on this reasoning, the Ohio Supreme Court has found that in most instances the home addresses of public employees kept by their employers solely for administrative convenience are not “records” of the office.⁶³⁶ Although Ohio case law is silent on other specific non-record personnel items, a public office may want to evaluate emergency telephone numbers, employee banking information, insurance beneficiary designations, and other items maintained as employment records which may not serve to document the activities of the office. Non-record items may be redacted from materials which are otherwise records.

2. *Names and Dates of Birth of Public Officials and Employees*

“Each public office or person responsible for public records shall maintain a database or a list that includes the name and date of birth of all public officials and employees elected to or employed by that public office. The database or list is a public record and shall be made available upon a request made pursuant to section 149.43 of the Revised Code.”⁶³⁷

⁶²⁹ R.C. 4931.49(F); R.C. 4931.99(E) (providing that information from a database that serves public safety answering point of 911 system may not be disclosed).

⁶³⁰ O.A.C. 4501.2-10-06(B).

⁶³¹ R.C. 149.57(D)(1)(b).

⁶³² The following categories may not include all exceptions (or inclusions) which could apply to every public office’s personnel records.

⁶³³ 2007 Ohio Op. Att’y Gen. No. 026; *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 143, 1995-Ohio-248; *State ex rel. Ohio Patrolmen’s Benevolent Ass’n v. Mentor*, 89 Ohio St.3d 440, 444, 2000-Ohio-214 (addressing police personnel records).

⁶³⁴ The term “personnel file” has no single definition in public records law. See *State ex rel. Morgan v. City of New Lexington*, 112 Ohio St.3d 33, 2006-Ohio-6365, ¶57 (inferring that “records that are the functional equivalent of personnel files exist and are in the custody of the city” where a respondent claimed that no personnel files designated by the respondent existed); *Cwynar v. Jackson Twp. Bd. of Trs.*, 178 Ohio App.3d 345, 2008-Ohio-5011, ¶31 (5th Dist.) (finding that, where the appellant requested only the complete personnel file and not the records relating to an individual’s employment, that “[i]t is the responsibility of the person making the public records request to identify the records with reasonable clarity.”).

⁶³⁵ *State ex rel. McCleary v. Roberts*, 88 Ohio St.3d 365, 367, 2000-Ohio-345; *State ex rel. Fant v. Enright*, 66 Ohio St.3d 186, 188 (1993) (stating that “[t]o the extent that any item contained in a personnel file is not a ‘record,’ *i.e.*, does not serve to document the organization, etc., of the public office, it is not a public record and need not be disclosed.”).

⁶³⁶ *State ex rel. Dispatch Printing Co. v. Johnson*, 106 Ohio St.3d 160, 200-Ohio-4384, ¶39 (explaining that an employee’s home address may constitute a “record” when it documents an office policy or practice, as when the employee’s work address is also the employee’s home address).

⁶³⁷ R.C. 149.434.

The Ohio Public Records Act

Chapter Six: Special Topics

3. Resumes and Application Materials

There is no public records exception which generally protects resumes and application materials obtained by public offices in the hiring process.⁶³⁸ The Ohio Supreme Court has found that the public has “an unquestioned public interest in the qualifications of potential applicants for positions of authority in public employment.”⁶³⁹ For example, when a city board of education used a private search firm to help hire a new treasurer, it was required to disclose the names and resumes of the interviewees.⁶⁴⁰ The fact that a public office has promised confidentiality to applicants is irrelevant.⁶⁴¹ A public office’s obligation to turn over application materials and resumes extends to records in the sole possession of private search firms used in the hiring process.⁶⁴² As with any other category of record, if an exception for home address, Social Security Number, or other specific item applies, it may be used to redact only the protected information.

Application Materials Not “Kept By” a Public Office: Application materials may not be public records if they are not “kept by”⁶⁴³ the office at the time of the request. In *State ex rel. Cincinnati Enquirer v. Cincinnati Board of Education*, the school board engaged a private search firm to assist in its search for a new superintendent. During the interview process, the school board members reviewed and then returned all application materials and resumes submitted by the candidates. The Enquirer made a public records request for any resumes, documents, etc., related to the superintendent search. Because no copies of the materials had been provided to the board at any time outside the interview setting and had never been “kept”, the court denied the writ of mandamus.⁶⁴⁴ Keep in mind that this case is limited to a narrow set of facts, including compliance with records retention schedules, in returning such materials.

4. Background Investigations

Background investigations are not subject to any general public records exception,⁶⁴⁵ although specific statutes may except defined background investigation materials kept by specific public offices.⁶⁴⁶

However, criminal history “rap sheets” obtained from the federal National Crime Information Center system (NCIC) or through the state Law Enforcement Automated Data System (LEADS) are subject to a number of statutory exceptions.⁶⁴⁷

⁶³⁸ *State ex rel. Consumer News Servs. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311, ¶41; *State ex rel. Gannett v. Shirey*, 78 Ohio St.3d 400, 403, 1997-Ohio-206.

⁶³⁹ *State ex rel. Consumer News Servs. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311, ¶53 (including that opponents argued that disclosing these materials would prevent the best candidates from applying); *but see State ex rel. The Plain Dealer Publishing Co. v. Cleveland*, 75 Ohio St.3d 31, 36, 1996-Ohio-379 (providing that “it is not evident that disclosure of resumes of applicants for public offices like police chief necessarily prevents the best qualified candidates from applying.”).

⁶⁴⁰ *State ex rel. Consumer News Servs. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311.

⁶⁴¹ *State ex rel. Consumer News Servs. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311, ¶46; *State ex rel. Gannett Satellite Info. Network v. Shirey*, 78 Ohio St.3d 400, 403, 1997-Ohio-206.

⁶⁴² *State ex rel. Gannett Satellite Info. Network v. Shirey*, 78 Ohio St.3d 400, 403, 1997-Ohio-206.

⁶⁴³ For a discussion on “kept by” see Chapter One: D. “Public Record” – “What ‘Kept By’ Means.”

⁶⁴⁴ *State ex rel. Cincinnati Enquirer v. Cincinnati Bd. of Educ.*, 99 Ohio St.3d, 2003-Ohio-2260, ¶14.

⁶⁴⁵ *State ex rel. Ohio Patrolmen’s Benevolent Ass’n v. City of Mentor*, 89 Ohio St.3d 440, 445, 2000-Ohio-214, citing *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 142-45, 1995-Ohio-248 (addressing all personnel, background, and investigation reports for police recruit class); *Dinkins v. Ohio Div. of State Highway Patrol*, 116 F.R.D. 270, 272 (N.D. Ohio 1987).

⁶⁴⁶ See e.g., R.C. 113.041(E) (providing for criminal history checks of employees of the state treasurer); R.C. 109.5721(E) (providing that information of arrest or conviction received by a public office from BCI&I is retained in the applicant fingerprint database); R.C. 2151.86(E) (addressing the results of criminal history checks of children’s day care employees); R.C. 3319.39(D) (addressing the results of criminal history check of teachers). Note that statutes may also require dissemination of notice of an employee’s or volunteer’s conviction. See e.g., R.C. 109.576 (providing for notice of a volunteer’s conviction).

⁶⁴⁷ R.C. 109.57(D), (H); OAC 4501:2-10-06(B); 42 U.S.C. § 3789g; 28 C.F.R. § 20.33(a)(3); *In the Matter of: C.C.*, No. 2008-G-2838, 2008-Ohio-6776, ¶¶8-10 (11th Dist.) (providing that there are three different analyses of the interplay between Juv. R. 37 (juvenile court records), OAC 4501:2-10-06(B) (LEADS records) and BMV statutes); *Patrolman X v. Toledo*, C.P. Lucas, 132 Ohio App.3d 381, 389 (Apr. 22, 1996); *State ex rel. Nat’l Broadcasting Co. v. Cleveland*, 82 Ohio App.3d 202, 206-7 (8th Dist. 1992); *Ingraham v. Ribar*, 80 Ohio App.3d 29, 33-34 (9th Dist. 1992); 1994 Ohio Op Att’y Gen. No. 046.

The Ohio Public Records Act

Chapter Six: Special Topics

5. Evaluations and Disciplinary Records

Employee evaluations are not subject to any general public records exception.⁶⁴⁸ Likewise, records of disciplinary actions involving an employee are not excepted.⁶⁴⁹ Specifically, the CLEIRs exception does not apply to routine office discipline or personnel matters,⁶⁵⁰ even when such matters are the subject of an internal investigation within a law enforcement agency.⁶⁵¹

6. Physical Fitness, Psychiatric, and Polygraph Examinations

As used in the Ohio Public Records Act, the term “medical records” is limited to records generated and maintained in the process of medical treatment (see “Medical Records” below). Accordingly, records of examinations performed for the purpose of determining fitness for hiring or for continued employment, including physical fitness,⁶⁵² psychiatric,⁶⁵³ and psychological⁶⁵⁴ examinations, are not excepted from disclosure as “medical records.” Similarly, polygraph, or “lie detector,” examinations are not “medical records,” nor do they fall under the CLEIRs exception when performed in connection with hiring.⁶⁵⁵ Note, though, that a separate exception does apply to “medical information” pertaining to those professionals covered under R.C. 149.43(A)(7)(c).

While fitness for employment records do not fit within the definition of “medical records,” they may nonetheless be excepted from disclosure under the so-called “catch all” provision of the Public Records Act as “records the release of which is prohibited by state or federal law.”⁶⁵⁶ Specifically, the federal Americans with Disabilities Act (ADA) and its implementing regulations⁶⁵⁷ permit employers to require employees and applicants to whom they have offered employment to undergo medical examination and/or inquiry into their ability to perform job-related functions.⁶⁵⁸ Information regarding medical condition or history must be collected and kept on separate forms and in separate medical files, and must be treated as confidential, except as otherwise provided by the ADA. As non-public records, the examinations may constitute “confidential personal information” under Ohio’s Personal Information Systems Act.⁶⁵⁹

7. Medical Records

“Medical records” are not public records,⁶⁶⁰ and a public office may withhold any medical records in a personnel file. As noted above, however, only those records that meet the definition of “medical records,” *i.e.*, that are generated and maintained in the process of medical treatment,⁶⁶¹ may be

⁶⁴⁸ *State ex rel. Medina County Gazette v. City of Brunswick*, 109 Ohio App.3d 661, 664 (9th Dist. 1996).

⁶⁴⁹ *State ex rel. Morgan v. City of New Lexington*, 112 Ohio St.3d 33, 2006-Ohio-6365, ¶49.

⁶⁵⁰ *State ex rel. Freedom Commc’n, Inc. v. Elida Cmty. Fire Co.*, 82 Ohio St.3d 578, 581-82, 1998-Ohio-411 (finding that an investigation of an alleged sexual assault conduct internally as a personnel matter is not a law enforcement matter).

⁶⁵¹ *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 142, 1995-Ohio-248 (determining that personnel records of police officers reflecting the discipline of police officers are nonconfidential law enforcement investigatory records excepted from disclosure).

⁶⁵² *State ex rel. Ohio Patrolmen’s Benevolent Ass’n v. Lucas County Sheriff’s Office*, No. L-06-1108, 2007-Ohio-101, ¶16 (7th Dist.) (finding that a “fitness for duty evaluation” did not constitute “medical records”).

⁶⁵³ *State of Ohio v. Hall*, 141 Ohio App.3d 561, 568, 2001-Ohio-4059 (4th Dist.) (finding that psychiatric reports compiled solely to assist the court with “competency to stand trial determination” were not medical records).

⁶⁵⁴ *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 143, 1995-Ohio-248 (finding that a police psychologist report obtained to assist the police hiring process is not a medical record).

⁶⁵⁵ *State ex rel. Multimedia, Inc. v. Snowden*, 72 Ohio St.3d 141, 143, 1995-Ohio-248 citing *State ex rel. Lorain Journal v. City of Lorain*, 87 Ohio App.3d 112 (9th Dist. 1993).

⁶⁵⁶ R.C. 149.43(A)(1)(v).

⁶⁵⁷ 42 U.S.C. § 12112; 29 C.F.R. §§ 1630.14(b)(1), (c)(1).

⁶⁵⁸ 29 CFR 1630.14(c); See also *State ex rel. Mahajan v. State Med. Bd. of Ohio*, 127 Ohio St.3d 497, 2010-Ohio-5995, ¶44, 47 (employer’s questioning of court reporter and opposing counsel was properly redacted as inquiry into whether employee was able to perform job-related functions, as pertinent ADA provision does not limit the confidential nature of such inquiries to questions directed to employees or medical personnel).

⁶⁵⁹ R.C. 1347.15(A)(1).

⁶⁶⁰ R.C. 149.43(A)(1)(a), (A)(3).

⁶⁶¹ R.C. 149.43(A)(3) (extends to “any document [...] that pertains to the medical history, diagnosis, prognosis, or medical condition of a patient and that is generated and maintained in the process of medical treatment.”); *State ex rel. Strothers v. Wertheim*, 80 Ohio St.3d 155, 158, 1997-Ohio-349

The Ohio Public Records Act

Chapter Six: Special Topics

withheld under this exception. Note that the federal Health Insurance Portability and Accountability Act (HIPAA),⁶⁶² does not apply to records in employer personnel files, but that the federal Family and Medical Leave Act (FMLA),⁶⁶³ or the Americans With Disabilities Act (ADA)⁶⁶⁴ may apply to medical-related information in personnel files.

8. School Records

Education records, which include but are not limited to school transcripts, attendance records, and discipline records, that are directly related to a student and maintained by the educational institution, as well as personally identifiable information from education records, are generally protected from disclosure by the school itself through the federal Family Educational Rights and Privacy Act (FERPA). However, when a student or former student directly provides such records to a public office they are not protected by FERPA⁶⁶⁵ and are considered public records.

9. Social Security Numbers and Taxpayer Records

Social Security Numbers (SSNs) should be redacted before the disclosure of public records.⁶⁶⁶ The Ohio Supreme Court has held that although the Federal Privacy Act (5 U.S.C. §552a) does not expressly prohibit release of one's SSN, the Act does create an expectation of privacy as to the use and disclosure of the SSN. Ohio statutes or administrative code may provide other exceptions for SSNs for specific employees⁶⁶⁷ or in particular locations,⁶⁶⁸ and/or upon request.⁶⁶⁹

Information obtained from municipal tax returns is confidential.⁶⁷⁰ One Attorney General Opinion found that W-2 federal tax forms prepared and maintained by a township as an employer are public records. However, W-2 forms filed as part of a municipal income tax return are confidential.⁶⁷¹ W-4 forms are confidential pursuant to 26 U.S.C. 6103(b)(2)(A) as "return information," which includes "data with respect to the determination of the existence of liability (or the amount thereof) of any person for any tax."

With respect to Ohio income tax records, any information gained as the result of returns, investigations, hearings, or verifications required or authorized by R.C. Chapter 5747 is confidential.

⁶⁷²

10. Residential and Familial Information of Listed Safety Officers

As detailed elsewhere in this book, the residential and familial information⁶⁷³ of certain listed public employees may be withheld from disclosure.⁶⁷⁴

(emphasizing that both parts of this conjunctive definition must be met in order to fall under the medical records exception: "a record must pertain to a medical diagnosis and be generated and maintained in the process of medical treatment.").

⁶⁶² See 45 C.F.R. §§ 160 *et seq.*; 45 C.F.R. §§ 164 *et seq.*

⁶⁶³ See 29 U.S.C. §§ 2601 *et seq.*

⁶⁶⁴ See 42 U.S.C. §§ 12101 *et seq.*

⁶⁶⁵ 20 U.S.C. § 1232g.

⁶⁶⁶ *State ex rel. Beacon Journal Publ'g Co. v. Akron*, 70 Ohio St.3d 605, 612, 1994-Ohio-6 (noting that there is a "high potential for fraud and victimization caused by the unchecked release of city employee SSNs"); see also Chapter Three: G. "Exceptions created by other Laws, 5. Social Security Numbers."

⁶⁶⁷ See e.g., R.C. 149.43(A)(1)(p), (7)(c) (protecting residential and familial information of certain covered professionals); see also R.C. 149.45(D)(1).

⁶⁶⁸ R.C. 149.45(B)(1) (providing that no public office or person responsible for a public office's public records shall make available to the general public on the internet any document that contains an individual's SSN without otherwise redacting, encrypting, or truncating the SSN).

⁶⁶⁹ R.C. 149.45(C)(1) (providing that an individual any request that a public office or a person responsible for a public office's public records redact personal information of that individual from any record made available to the general public on the internet).

⁶⁷⁰ R.C. 718.13; see also *Reno v. City of Centerville*, No. 20078, 2004-Ohio-781 (2nd Dist.).

⁶⁷¹ 1992 Ohio Op. Att'y Gen. No. 005.

⁶⁷² R.C. 5747.18(C).

⁶⁷³ R.C. 149.43(A)(7).

⁶⁷⁴ R.C. 149.43(A)(1)(p).

The Ohio Public Records Act

Chapter Six: Special Topics

11. Bargaining Agreement Provisions

Courts have held that collective bargaining agreements concerning the confidentiality of records cannot prevail over the Public Records Act. For example, a union may not legally bar the production of available public records through a provision in a collective bargaining agreement.⁶⁷⁵

12. Statutes Specific to a Particular Agency's Employees

Statutes protect particular information or records concerning specific public offices, or particular employees⁶⁷⁶ within one or more agencies.⁶⁷⁷

⁶⁷⁵ *State ex rel. Dispatch Printing Co. v. City of Columbus*, 90 Ohio St.3d 39, 40-43, 2000-Ohio-8 (determining that the FOP could not legally bar the production of available public records through a records disposition provision in a collective bargaining agreement); *State ex rel. Dispatch Printing Co. v. Wells*, 18 Ohio St.3d 382, 384 (1995).

⁶⁷⁶ E.g., R.C. 149.43(A)(7) (Covered Professionals' Residential and Familial Information); R.C. 149.43(A)(7)(g) (photograph of a peace officer who works undercover or plainclothes assignments).

⁶⁷⁷ E.g., R.C. 2151.142 (providing for confidentiality of residential address of public children services agency or private child placing agency personnel).

The Ohio Public Records Act

Chapter Six: Special Topics

Personnel Files

Items from personnel files that are subject to release with appropriate redaction

- Payroll records • Timesheets • Employment application forms • Resumes
- Training course certificates • Position descriptions • Performance evaluations
- Leave conversion forms • Letters of support or complaint
- Forms documenting receipt of office policies, directives, etc.
- Forms documenting hiring, promotions, job classification changes, separation, etc.
- Background checks, other than LEADS throughput, NCIC and CCH
- Disciplinary investigation/action records, unless exempt from disclosure by law

Items from personnel files that may or must be withheld

- Social Security Numbers (based on the federal Privacy Act: 5 USC §552a)
- Public employee home addresses, generally (as non-record)
- Residential and familial information of a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or BCI&I investigator, other than residence address of prosecutor (See O.R.C. 149.43 (A)(1)(p))
- Charitable deductions and employment benefit deductions such as health insurance (as non-records)
- Beneficiary information (as non-record)
- Federal tax returns and “return information” filed under the jurisdiction of the IRS (26 USC §6103)
- Personal history information of state retirement contributors (R.C. 145.27(A); R.C. 742.41(A); R.C. 3307.20(A); R.C. 3309.22; R.C. 5505.04(C))
- Taxpayer records maintained by Ohio Dept. of Taxation and by municipal corporations (RC 5703.21; RC 718.13)
- “Medical records” that are generated and maintained in the process of medical treatment (RC 149.43(A)(1)(a) and (A)(3))
- LEADS, NCIC or CCH criminal record information (42 USC §3789g; 28 CFR §20.21, §20.33(a)(3); ORC 109.57(D) & (E); OAC 109:05-1-01; OAC 4501:2-10-06)
- Records of open internal EEO investigations (discretionarily exempt as Confidential Law Enforcement Investigatory Records under RC 149.43(A)(1)(h) if conducted pursuant to OAC Rule 123:1-49)

The Ohio Public Records Act

Chapter Six: Special Topics

C. Residential and Familial Information of Covered Professions that are not Public Records⁶⁷⁸

Residential and Familial Information Defined:⁶⁷⁹ The “residential and familial information” of peace officers,⁶⁸⁰ parole officers, probation officers, bailiffs, prosecuting attorneys, assistant prosecuting attorneys,⁶⁸¹ correctional employees,⁶⁸² youth services employees,⁶⁸³ firefighters,⁶⁸⁴ or emergency medical technicians (EMTs),⁶⁸⁵ and investigators of the Bureau of Criminal Identification and Investigation is excepted from mandatory disclosure under the Ohio Public Records Act.⁶⁸⁶ “Residential and familial information” means any information that discloses any of the following about individuals in the listed employment categories (see following chart):

Information That Is Not Public Record

(*Peace Officer, Parole Officer, Probation Officer, Bailiff, Prosecuting Attorney, Assistant Prosecuting Attorney, Correctional Employee, Youth Services Employee, Firefighter, EMT or investigator of the Bureau of Criminal Identification and Investigation⁶⁸⁷)

Residential	<ul style="list-style-type: none">• Address of the covered employee’s actual personal residence, except for state or political subdivision; residential phone number, and emergency phone number⁶⁸⁸• Residential address, residential phone number, and emergency phone number of the spouse, former spouse, or child of a covered employee⁶⁸⁹
Medical	<ul style="list-style-type: none">• Any information of a covered employee that is compiled from referral to or participation in an employee assistance program⁶⁹⁰• Any medical information of a covered employee⁶⁹¹
Employment	<ul style="list-style-type: none">• The name of any beneficiary of employment benefits, of a covered employee, including, but not limited to, life insurance benefits⁶⁹²

⁶⁷⁸ Individuals in these covered professions can also request to have certain information redacted, or prohibit its disclosure. For additional discussion, see Chapter Three: F. “Exceptions Affecting Personal Privacy – 2. Personal Information Listed Online.”

⁶⁷⁹ For purposes of this section, “covered professions” is the term used to describe all of the persons covered under the residential and familial exception (i.e. peace officer, firefighter, etc.).

⁶⁸⁰ R.C. 149.43(A)(7); For purposes of this statute, “peace officer” has the same meaning as in R.C. 109.71 and also includes the superintendent and troopers of the state highway patrol; it does not include the sheriff of a county or a supervisory employee who, in the absence of the sheriff, is authorized to stand in for, exercise the authority of, and perform the duties of the sheriff, R.C. 149.43(A)(7)(g).

⁶⁸¹ *State ex rel. Bardwell v. Rocky River Police Dept.*, No. 91022, 2009-Ohio-727, ¶¶31-46 (8th Dist.) (providing that the home address of an elected law director who at times serves as a prosecutor is not a public record, pursuant to R.C. 149.43(A)(1)(p) in conjunction with (7)(a)).

⁶⁸² R.C. 149.43(A)(7)(g) (providing that “[a]s used in divisions (A)(7) and (B)(5) of this section, ‘correctional employee’ means any employee of the department of rehabilitation and correction who in the course of performing the employee’s job duties has or has had contact with inmates and persons under supervision.”).

⁶⁸³ R.C. 149.43(A)(7)(g) (providing that “[a]s used in divisions (A)(7) and (B)(5) of this section, ‘youth services employee’ means any employee of the department of youth services who in the course of performing the employee’s job duties has or has had contact with children committed to the custody of the department of youth services.”).

⁶⁸⁴ R.C. 149.43(A)(7)(g) (providing that “[a]s used in divisions (A)(7) and (B)(9) of this section, ‘firefighter’ means any regular, paid or volunteer, member of a lawfully constituted fire department of a municipal corporation, township, fire district, or village.”).

⁶⁸⁵ R.C. 149.43(A)(7)(g): “[a]s used in divisions (A)(7) and (B)(9) of this section, ‘EMT’ means EMTs-basic, EMTs-I, and paramedic that provide emergency medical services for a public emergency medical service organization. ‘Emergency medical service organization,’ ‘EMT-basic,’ ‘EMT-I,’ and ‘paramedic’ have the same meanings as in section 4765.01 of the Revised Code.”

⁶⁸⁶ R.C. 149.43(A)(1)(p), (A)(7).

⁶⁸⁷ R.C. 2151.142(B), (C) (providing that, in addition to the “covered professions” listed above, that certain residential addresses of employees of a public children services agency or private child placing agency and that employee’s family members are exempt from disclosure).

⁶⁸⁸ R.C. 149.43(A)(7)(a), and (c). Because prosecuting attorneys are elected officials, the actual personal residential address of elected prosecuting attorneys is not excepted from disclosure (some published versions of Chapter 149 incorrectly include prosecuting attorneys in R.C. 149.43(A)(7)(a)).

⁶⁸⁹ R.C. 149.43(A)(7)(f).

⁶⁹⁰ R.C. 149.43(A)(7)(b).

⁶⁹¹ R.C. 149.43(A)(7)(c).

The Ohio Public Records Act

Chapter Six: Special Topics

- The identity and amount of any charitable or employment benefit deduction of a covered employee⁶⁹³
- A photograph of a peace officer who holds a position that may include undercover or plain clothes positions or assignments⁶⁹⁴

Personal

The information below, which is not a public record, applies to both a covered employee and spouse, former spouse, or children

- Social Security Number⁶⁹⁵
- Account numbers of bank accounts and debit, charge, and credit cards⁶⁹⁶

The information below, which is not a public record, applies to only a covered employee's spouse, former spouse, or children

- Name, residential address, name of employer, address of employer⁶⁹⁷

⁶⁹² R.C. 149.43(A)(7)(d).

⁶⁹³ R.C. 149.43(A)(7)(e).

⁶⁹⁴ R.C. 149.43(A)(7)(g); *State ex rel. Plain Dealer Publ'g Co. v. City of Cleveland*, 106 Ohio St.3d 70, 2005-Ohio-3807, ¶¶25-57 (police officer photographs were exempt from disclosure under the Public Records Act because they constituted "peace officer residential and familial information").

⁶⁹⁵ R.C. 149.43(A)(7)(f).

⁶⁹⁶ R.C. 149.43(A)(7)(f).

⁶⁹⁷ R.C. 149.43(A)(7)(f).

The Ohio Public Records Act

Chapter Six: Special Topics

D. Court Records

Although records kept by the courts of Ohio meet the definition of public records under the Ohio Public Records Act), most court records are subject to additional rules concerning access.

1. Courts' Supervisory Power Over Their Own Records

Ohio courts⁶⁹⁸ are subject to the Rules of Superintendence for the Courts of Ohio,⁶⁹⁹ adopted by the Supreme Court of Ohio. The Rules of Superintendence establish rights and duties regarding court case documents and administrative documents, starting with the statement that “[c]ourt records are presumed open to public access.” Sup. R. 45(A). While similar to the Ohio Public Records Act, the Rules of Superintendence contain some additional or different provisions, including language:

- Allowing courts to adopt a policy limiting the number of records they will release per month unless the requestor certifies that there is no intended commercial use. Sup. R. 45(B)(3).
- For Internet records, allowing courts to announce that a large attachment or exhibit was not scanned but is available by direct access. Sup. R. 45(C)(1).
- Establishing definitions of “court record,” “case document,” “administrative document,” “case file,” and other terms. Sup. R. 44(A) through (M).
- A process for the sealing of part or all of any case document, including a process for any person to request access to a case document or information that has been granted limited public access. Sup. R. 45(F).
- Requiring that documents filed with the court omit or redact personal identifiers that might contribute to identity theft. The personal identifiers would instead be submitted on a separate standard form submitted only to the court, clerk of courts and parties. Sup. R. 45(D).⁷⁰⁰

(this is a partial list – see Sup. Rules 44-47 for all provisions.)

The provisions of Rules 44 through 47 of the Rules of Superintendence apply to all court administrative documents, but only apply to court case documents in actions commenced on or after the effective date of the rule.⁷⁰¹ The Rules of Superintendence for the Courts of Ohio are currently available online at:

<http://www.sconet.state.oh.us/LegalResources/Rules/superintendence/Superintendence.pdf>.

2. Rules of Court Procedure

Rules of Procedure, which are also adopted through the Ohio Supreme Court, can create exceptions to public record disclosure.⁷⁰² Examples include certain records related to grand jury proceedings,⁷⁰³ and most juvenile court records.⁷⁰⁴

3. Sealing Statutes

Where court records have been properly expunged or sealed, they are not available for public disclosure.⁷⁰⁵ However, when a responsive record is sealed, the public office must provide the

⁶⁹⁸ Sup. R. 1(B) (defining county courts, municipal courts, courts of common pleas, and courts of appeals).

⁶⁹⁹ Rules of Superintendence for the Courts of Ohio are cited as “Sup. R. n.”

⁷⁰⁰ Effective September 1, 2011, the Ohio Supreme Court adopted a new probate form to comply with Sup. R. 45(D).

⁷⁰¹ Sup. R. 47(A); Sup. R. 99; *State ex rel. Striker v. Smith*, 129 Ohio St.3d 168, 2011-Ohio-2878, fn. 2.

⁷⁰² *State ex rel. Beacon Journal v. Waters*, 67 Ohio St.3d 321, 323, 1993-Ohio-77.

⁷⁰³ Ohio R. Crim. Pro. 6(E); *State ex rel. Beacon Journal v. Waters*, 67 Ohio St.3d 321, 323-25, 1993-Ohio-77.

⁷⁰⁴ Ohio R. Juv. Pro. 37(B).

⁷⁰⁵ R.C. 2953.31, et seq. (conviction of first-time offenders); R.C. 2953.51, et seq. (findings of not guilty, or dismissal); *State ex rel. Cincinnati Enquirer v. Winkler*, 101 Ohio St.3d 382, 2004-Ohio-1581, ¶¶12-13 (“*Winkler III*”) (affirming the trial court’s sealing order per R.C. 2953.52); *Dream Fields, LLC v. Bogart*, 175 Ohio App.3d 165, 2008-Ohio-152, ¶3 (1st Dist.) (providing that “[u]nless a court record contains information that is excluded from being a

The Ohio Public Records Act

Chapter Six: Special Topics

explanation for withholding, including the legal authority under which the record was sealed.⁷⁰⁶ Even absent statutory authority, trial courts have the inherent authority to seal court records in unusual and exceptional circumstances.⁷⁰⁷ When exercising this authority, however, courts should balance the individual's privacy interest against the government's legitimate need to provide public access to records of criminal proceedings.⁷⁰⁸

4. Non-Records

As with any public office, courts are not obligated to provide documents that are not "records" of the court. Examples include a judge's handwritten notes,⁷⁰⁹ completed juror questionnaires,⁷¹⁰ Social Security Numbers in certain court records,⁷¹¹ and unsolicited letters sent to a judge.⁷¹²

5. General Court Records Retention

See Sup. R. 26 governing Court Records Management and Retention, and the following Rules setting records retention schedules for each type of court, Sup. R. 26.01 through Sup. R. 26.05.

Other Case Law Prior to Rules of Superintendence

Constitutional Right of Access: Based on constitutional principles, and separate from the public records statute, Ohio common law grants the public a presumptive right to inspect and copy court records.⁷¹³ Both the United States and the Ohio Constitutions create a qualified right⁷¹⁴ of public access to court proceedings that have historically been open to the public and in which the public's access plays a significantly positive role.⁷¹⁵ This qualified right includes access to the live proceedings, as well as to the records of the proceedings.⁷¹⁶

Even where proceedings are not historically public, the Ohio Supreme Court has determined that "any restriction shielding court records from public scrutiny should be narrowly tailored to serve the competing interests of protecting the individual's privacy without unduly burdening the public's right of access."⁷¹⁷ This high standard exists because the purpose of this common-law right "is to promote understanding of the legal system and to assure public confidence in the courts."⁷¹⁸ But,

public record under R.C. 149.43, it shall not be sealed and shall be available for public inspection. And the party wishing to seal the record has the duty to show that a statutory exclusion applies [...] just because the parties have agreed that they want the records sealed is not enough to justify the sealing.").

⁷⁰⁶ *State ex rel. Doe v. Smith*, 123 Ohio St. 3d 44, 2009-Ohio-4149, ¶¶ 6, 9, 38, 43 (response, "There is no information available," was a violation of R.C. 149.43(B)(3) requirement to provide a sufficient explanation, with legal authority, for the denial).

⁷⁰⁷ *Pepper Pike v. Doe*, 66 Ohio St.2d 374 (1981); but see *State ex rel. Highlander v. Rudduck*, 103 Ohio St.3d 370, 2004-Ohio-4952, ¶1 (finding that divorce records are not properly sealed when the order results from "unwritten and informal court policy").

⁷⁰⁸ *Pepper Pike v. Doe*, 66 Ohio St.3d 374 (1981), paragraph two of the syllabus.

⁷⁰⁹ *State ex rel. Steffen v. Kraft*, 67 Ohio St.3d 439, 429-41, 1993-Ohio-32 (noting that "[a] trial judge's personal handwritten notes made during the course of a trial are not public records.").

⁷¹⁰ *State ex rel. Beacon Journal Publ'g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117, ¶25 (providing that the personal information of jurors used only to verify identification, not to determine competency to serve on the jury, such as SSNs, telephone numbers, and driver's license numbers may be redacted).

⁷¹¹ *State ex rel. Montgomery County Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662, ¶18 (finding that SSNs in court records do not "shed light on any government activity").

⁷¹² *State ex rel. Beacon Journal Publ'g Co. v. Whitmore*, 83 Ohio St.3d 61, 62-64, 1998-Ohio-180 (finding that where a judge read unsolicited letters but did not rely on them in sentencing, the letters did not serve to document any activity of the public office and were not "records").

⁷¹³ *State ex rel. Beacon Journal Publ'g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117; *State ex rel. Cincinnati Enquirer v. Winkler*, 101 Ohio St. 3d 382, 2004-Ohio-1581, ¶¶2-7 ("Winkler III") (citations omitted); *State ex rel. Scripps Howard Broadcasting Co. v. Cuyahoga County Ct. of Common Pleas*, 73 Ohio St.3d 19, 22 (1995).

⁷¹⁴ *State ex rel. Cincinnati Enquirer v. Winkler*, 101 Ohio St.3d 382, 2004-Ohio-1581, ¶9 ("Winkler III") (providing that "[t]he right, however, is not absolute.").

⁷¹⁵ *State ex rel. Scripps Howard Broadcasting Co. v. Cuyahoga County Court of Common Pleas*, 73 Ohio St.3d 19, 20 (1995), citing *In re. T.R.*, 52 Ohio St.3d 6 (1990), at paragraph two of the syllabus; *Press-Enterprise Co. v. Superior Ct.*, 478 U.S. 1 (1986) ("Press-Enterprise II").

⁷¹⁶ *State ex rel. Cincinnati Enquirer v. Winkler*, 101 Ohio St.3d 382, 2004-Ohio-1581 ("Winkler III"); *State ex rel. Scripps Howard Broadcasting Co. v. Cuyahoga County Court of Common Pleas*, 73 Ohio St.3d 19, 21 (1995) (citations omitted).

⁷¹⁷ *State ex rel. Cincinnati Enquirer v. Winkler*, 149 Ohio App.3d 350, 354, 2002-Ohio-4803 (1st Dist.) ("Winkler I") citing *State ex rel. Scripps Howard Broadcasting Co. v. Cuyahoga County Court of Common Pleas*, 73 Ohio St.3d 19, 21 (1995).

⁷¹⁸ *State ex rel. Cincinnati Enquirer v. Winkler*, 149 Ohio App.3d 350, 354, 2002-Ohio-4803 (1st Dist.) ("Winkler I").

The Ohio Public Records Act

Chapter Six: Special Topics

the constitutional right of public access is not absolute, and courts have traditionally exercised “supervisory power over their own records and files.”⁷¹⁹

The Ohio Public Records Act applies to court records.⁷²⁰ Once an otherwise non-public document is filed with the court (such as pretrial discovery material), that document becomes a public record when it becomes part of the court record.⁷²¹

However, in circumstances where the release of the court records would prejudice the rights of the parties in an ongoing criminal or civil proceeding, a narrow exception to public access exists.⁷²² Under such circumstances, the court may impose a protective order prohibiting release of the records.⁷²³

Constitutional Access and Statutory Access Compared: The Ohio Supreme Court has distinguished between *public records* access and *constitutional* access to jurors’ names, home addresses and other personal information in their responses to written juror questionnaires.⁷²⁴ While such information is not a “public record,”⁷²⁵ it is presumed to be subject to public disclosure based on constitutional principles.⁷²⁶ The Court explained that the personal information of these private citizens is not “public record” because it does nothing to “shed light” on the operations of the court.⁷²⁷ However, there is a constitutional presumption that this information will be publicly accessible in criminal proceedings.⁷²⁸ As a result, the jurors’ personal information will be publicly accessible unless there is an “overriding interest based on findings that closure is essential to preserve higher values and is narrowly tailored to serve that interest.”⁷²⁹

Nevertheless, the Ohio Supreme Court also concluded, in a unanimous decision, that Social Security Numbers contained in criminal case files are appropriately redacted before public disclosure.⁷³⁰ According to the Court, permitting the court clerk to redact SSNs before disclosing court records “does not contravene the purpose of the Public Records Act, which is ‘to expose government activity to public scrutiny.’ Revealing individuals’ Social Security Numbers that are contained in criminal records does not shed light on any government activity.”⁷³¹

⁷¹⁹ *State ex rel. Cincinnati Enquirer v. Winkler*, 149 Ohio App.3d 350, 354-55, 2002-Ohio-4803 (1st Dist.) (“Winkler I”).

⁷²⁰ *State ex rel. Cincinnati Enquirer v. Winkler*, 101 Ohio St.3d 382, 2004-Ohio-1581, ¶5 (“Winkler III”) (providing that “it is apparent that court records fall within the broad definition of ‘public record.’”).

⁷²¹ *State ex rel. Cincinnati Enquirer v. Dinkelacker*, 144 Ohio App.3d 725, 730 (1st Dist. 2001).

⁷²² *State ex rel. Vindicator Printing Co. v. Watkins*, 66 Ohio St.3d 129, 137-39 (1993) (prohibiting disclosure of pretrial court records prejudicing rights of criminal defendant) (overruled on other grounds); *but see State ex rel. Highlander v. Rudduck*, 103 Ohio St.3d 370, 2004-Ohio-4952, ¶¶9-22 (finding that a pending appeal from a court order unsealing divorce records does not preclude a writ of mandamus claim).

⁷²³ *State ex rel. Cincinnati Enquirer v. Dinkelacker*, 144 Ohio App.3d 725, 730 (1st Dist. 2001). (finding that a trial judge was required to determine whether the release of records would jeopardize the defendant’s right to a fair trial).

⁷²⁴ *State ex rel. Beacon Journal Publ’g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117.

⁷²⁵ *State ex rel. Beacon Journal Publ’g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117, ¶1 syllabus (finding that juror names, addresses, and questionnaire responses are not “public records” because the information does not shed light on the court’s operations).

⁷²⁶ *State ex rel. Beacon Journal Publ’g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117, ¶2 syllabus (determining that the First Amendment qualified right of access extends to juror names, addresses, and questionnaire response).

⁷²⁷ *State ex rel. Beacon Journal Publ’g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117 citing *State ex rel. McCleary v. Roberts*, 88 Ohio St.3d 365, 2000-Ohio-345; *see also State ex rel. Montgomery County Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662, ¶18 (determining that SSNs in court records do not “shed light on any governmental activity”).

⁷²⁸ *State ex rel. Beacon Journal Publ’g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117.

⁷²⁹ *State ex rel. Beacon Journal Publ’g Co. v. Bond*, 98 Ohio St.3d 146, 2002-Ohio-7117, ¶2 syllabus quoting *Press-Enterprise Co. v. Superior Court* (1984), 464 U.S. 501, 510 (internal citations omitted); *see also* 2004 Ohio Op. Att’y Gen. No. 045 (restricting public access to information in a criminal case file may be accomplished only where concealment “is essential to preserve higher values and is narrowly tailored to serve an overriding interest”).

⁷³⁰ *State ex rel. Montgomery County Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662.

⁷³¹ *State ex rel. Montgomery County Pub. Defender v. Siroki*, 108 Ohio St.3d 207, 2006-Ohio-662.

The Ohio Public Records Act

Chapter Six: Special Topics

E. HIPAA & HITECH

Regulations implementing the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) became fully effective in April 2003. Among the regulations written to implement HIPAA was the “Privacy Rule,” which is a collection of federal regulations seeking to maintain the confidentiality of individually identifiable health information.⁷³² For some public offices, the Privacy Rule and HITECH⁷³³ affect the manner in which they respond to public records requests.

1. HIPAA Definitions

The Privacy Rule protects all individually identifiable health information, which is called “protected health information” or “PHI.”⁷³⁴ PHI is information that could reasonably lead to the identification of an individual, either by itself or in combination with other reasonably available information.⁷³⁵ The HIPAA regulations apply to the three “covered entities”⁷³⁶ listed below:

- a. **Healthcare provider:** Generally, a “healthcare provider” is any entity providing mental or health services that electronically transmits individually identifiable health information for any financial or administrative purpose subject to HIPAA.
- b. **A health plan:** A “health plan” is an individual or group plan that provides or pays the cost of medical care, such as an HMO.
- c. **Healthcare clearinghouse:** A “healthcare clearinghouse” is any entity that processes health information from one format into another for particular purposes, such as a billing service.

Legal counsel should be consulted if there is uncertainty about whether or not a particular public office is a “covered entity” or “business associate” of a covered entity for purposes of HIPAA.

2. HIPAA Does Not Apply Where Ohio Public Records Act Requires Release

The Privacy Rule permits a covered entity to use and disclose protected health information as required by other law, including state law.⁷³⁷ Thus, where state public records law mandates that a covered entity disclose protected health information, the covered entity is permitted by the Privacy Rule to make the disclosure, provided the disclosure complies with and is limited to the relevant requirements of the public records law.⁷³⁸ For this purpose, note that the Ohio Public Records Act only mandates disclosure when no other exception applies.

So, where public records law only permits, and does not mandate, the disclosure of protected health information - where exceptions or other qualifications apply to exempt the protected health information from the state law's disclosure requirement - then such disclosures are not “required by law” and would not fall within the Privacy Rule. For example, if state public records law includes an exception that affords a state agency discretion not to disclose medical⁷³⁹ or other information, the disclosure of such records is not required by the public records law, and therefore the Privacy Rule would cover those records.⁷⁴⁰ In such cases, a covered entity only would be able to make the disclosure if permitted by another provision of the Privacy Rule. In a 2006 case where no other public records exception applied to the subject records, the Ohio Supreme Court held: “[a] review of HIPAA reveals a “required by law” exception to the prohibition against disclosure of protected health information. With respect to this position, Section 164.512(a)(1), Title 45, C.F.R., provides, “A

⁷³² 45 C.F.R. §§ 160 *et seq.*; 45 C.F.R. §§ 164 *et seq.*

⁷³³ Health Information Technology Economic Clinical Health Act, Public Law No. 111-5, Division A, Title XIII, Subtitle D (2009).

⁷³⁴ 45 C.F.R. § 160.103.

⁷³⁵ 45 C.F.R. § 160.103.

⁷³⁶ 45 C.F.R. § 160.103.

⁷³⁷ 45 C.F.R. § 164.512(a).

⁷³⁸ 65 F.R. § 82485; see <http://www.hhs.gov/hipaafaq/permitted/require/506.html>.

⁷³⁹ E.g. R.C. 149.43(A)(1)(a) (providing for an exception for state “medical records”).

⁷⁴⁰ 45 C.F.R. § 164.512(a).

The Ohio Public Records Act

Chapter Six: Special Topics

covered entity may * * * disclose protected health information to the extent that such * * * disclosure is *required by law* * * *.” (Emphasis added). And the Ohio Public Records Act requires disclosure of records unless the disclosure or release is prohibited by federal law. R.C. 149.43(A (1)(v)).⁷⁴¹ The Court found the interaction of the federal and state law somewhat circular, but resolved it in favor of disclosure under the Ohio Public Records Act.⁷⁴²

Based on the “required by law” exception described above, the remaining applications of HIPAA, below, are either HIPAA’s own exceptions to its application, or are conditioned on the existence of another non-HIPAA exception before HIPAA will apply to the subject records.

3. PHI in Personnel Files

HIPAA privacy restrictions do not affect the release of PHI in employment records held by a covered entity in its sole role as an employer.⁷⁴³ When handling a public records request, a covered entity need not necessarily redact PHI from the personnel file or obtain the employee’s authorization before releasing the records. However, other state and/or federal catch-all exceptions requiring redaction of the same information may still apply.⁷⁴⁴

4. PHI in Law Enforcement Investigations

Basically, where the PHI is necessary to further a legitimate law enforcement purpose, a covered entity may release PHI to law enforcement officials without the patient’s prior authorization.⁷⁴⁵

Specifically, the situations in which such release is permissible are as follows: (1) where state or federal law requires the release, including a valid court order, warrant, or subpoena; (2) to identify or locate a suspect, fugitive, material witness, or missing person; (3) when a crime victim is unable to consent, the PHI is needed to determine whether a crime has been committed, the PHI will not be used against the victim, the investigation will be materially and adversely affected by waiting for the victim to consent, and the covered entity determines, in its professional judgment, that release will serve the victim’s best interests; (4) when a crime is suspected in a person’s death; (5) where the PHI constitutes evidence of a crime that occurred on the covered entity’s premises; (6) in an emergency if necessary to alert law enforcement to the commission of a crime, the location of the crime or the victims, and the identity, description, or location of the alleged perpetrator.⁷⁴⁶

5. PHI in Dispatch Calls

A covered entity, such as an EMS organization, may disclose PHI where disclosure is necessary to prevent or lessen a serious and imminent threat to the safety and health of an individual or the public and disclosure is made to persons reasonably able to prevent or lessen the threat, including the target of the threat if appropriate.⁷⁴⁷ For example, police and EMS calls that disclose a patient’s medical condition in order to dispatch appropriate medical or emergency assistance do not violate HIPAA’s Privacy Rule.⁷⁴⁸

⁷⁴¹ *State ex rel. Cincinnati Enquirer v. Daniels*, 108 Ohio St.3d 518, 2006-Ohio-1215, ¶25.

⁷⁴² *State ex rel. Cincinnati Enquirer v. Daniels*, 108 Ohio St.3d 518, 2006-Ohio-1215, ¶¶26, 34.

⁷⁴³ 45 C.F.R. § 160.103.

⁷⁴⁴ See Chapter Three: E. “Exceptions Enumerated in the Public Records Act – (v) ‘Records the release of which is prohibited by state or federal law.’”

⁷⁴⁵ 45 C.F.R. § 164.512(f).

⁷⁴⁶ 45 C.F.R. § 164.512(f).

⁷⁴⁷ 45 C.F.R. § 164.512(j).

⁷⁴⁸ 45 C.F.R. § 164.512(j).

The Ohio Public Records Act

Chapter Six: Special Topics

6. PHI Disclosure for Health Care Operations

A covered entity may disclose PHI for the purpose of performing its health care operations such as treatment of patients or collection of payments.⁷⁴⁹ But a covered entity must restrict the scope of any and all disclosures to the minimum necessary to accomplish the intended purpose.⁷⁵⁰

7. PHI in Directory Information

A covered entity may release directory information to members of the public who call and identify the patient by name, but the individual must be given the opportunity to restrict or opt out of such directory disclosures prior to the disclosure or use.⁷⁵¹ "Directory information" includes a medical patient's full name, location in the medical facility, and a description of the patient's general condition that does not communicate specific information.⁷⁵²

In an emergency situation, when patients are unable to object to disclosure of their directory information or it is not practicable to offer the patient the opportunity to do so, the covered entity may disclose directory information if it determines that disclosure is in the patient's best interest.⁷⁵³ Any such disclosure must be consistent with the patient's known preferences, and the patient must be given the opportunity to opt-out of the disclosure as soon as practicable.⁷⁵⁴

Additional Resources:

The HITECH Act of 2009, effective on February 17, 2010, materially affects privacy and security of PHI. A number of resources are available on the Internet about HITECH legislation. See www.hhs.gov/ocr/privacy/hippa/administrative/enforcementrule/hitechenforcementifr.html and www.hipaasurvivalguide.com.

⁷⁴⁹ 45 C.F.R. § 164.506; *but see* 45 C.F.R. § 164.508(a)(2),(3) (providing for uses and disclosures of psychotherapy notes and PHI for marketing purposes may require prior authorization from the subject of the PPHI).

⁷⁵⁰ 45 C.F.R. § 164.502(b).

⁷⁵¹ 45 C.F.R. § 164.510(a)(2).

⁷⁵² 45 C.F.R. § 164.510(a)(1).

⁷⁵³ 45 C.F.R. § 164.510(a)(3); *see also* 45 C.F.R. § 164.510(a)(1).

⁷⁵⁴ 45 C.F.R. § 164.510(a)(3); *see also* 45 C.F.R. § 164.510(a)(1).

The Ohio Open Meetings Act

Overview of the Ohio Open Meetings Act

The Ohio Open Meetings Act requires public bodies in Ohio to take official action and conduct all deliberations upon official business only in open meetings where the public may attend and observe. Public bodies must provide advance notice to the public indicating when and where each meeting will take place, and in the case of special meetings, the specific topics that the public body will discuss. The public body must take full and accurate minutes of all meetings and make these meeting minutes available to the public, except in the case of permissible executive sessions.

Executive sessions are closed-door sessions convened by a public body, after a roll call vote, and attended by only the members of the public body and persons they invite. A public body may hold an executive session only for a few specific purposes, detailed below in Chapter III. Further, no vote or other decisions on the matter(s) discussed may take place during the executive session.

If any person believes that a public body has violated the Ohio Open Meetings Act, that person may file an injunctive action in the common pleas court to compel the public body to obey the Act. If an injunction is issued, the public body must correct its actions and pay court costs, a fine of \$500, and reasonable attorney fees that are subject to possible reduction by the court. If the court does not issue an injunction, and the court finds that the lawsuit was frivolous, it may order the person who filed the suit to pay the public body's court costs and reasonable attorney fees. Any action taken by a public body while that body is in violation of the Ohio Open Meetings Act is invalid. A member of a public body who violates an injunction imposed for a violation of the Ohio Open Meetings Act may be subject to removal from office.

Like the Ohio Public Records Act, the Ohio Open Meetings Act is intended to be read broadly in favor of openness. However, while they share an underlying intent and may both apply in a given set of circumstances, the terms and definitions of the two laws are not interchangeable: the Ohio Public Records Act applies to the records of public offices; the Ohio Open Meetings Act addresses meetings of public bodies.⁷⁵⁵

A Note about Case Law

When the Ohio Supreme Court issues a decision interpreting laws passed by the General Assembly, that decision becomes part of a body of case law that all lower Ohio courts must follow. Ohio Supreme Court decisions involving the Ohio Public Records Act are plentiful, because a person aggrieved by an alleged violation of that law may initiate a legal action at any level of the judicial system, and often will choose to file directly with the Ohio Supreme Court. By contrast, an aggrieved person in an action to enforce the Ohio Open Meetings Act must initiate that action in a county court of common pleas. While the losing party often appeals the common pleas court's decision, these cases rarely reach the Ohio Supreme Court. Consequently, the bulk of case law on this topic comes from courts of appeals, whose opinions are binding on lower courts within their district, and instructive to other courts in determining how to interpret the Ohio Open Meetings Act.

⁷⁵⁵ “[The Ohio Supreme Court has] never expressly held that once an entity qualifies as a public body for purposes of R.C. 121.22, it is also a public office for purposes of R.C. 149.011(A) and 149.43 so as to make all of its nonexempt records subject to disclosure. In fact, R.C. 121.22 suggests otherwise because it contains separate definitions for ‘public body,’ R.C. 121.22(B)(1), and ‘public office,’ R.C. 121.22(B)(4), which provides that ‘[p]ublic office’ has the same meaning as in section 149.011 of the Revised Code.’ Had the General Assembly intended that a ‘public body’ for purposes of R.C. 121.22 be considered a ‘public office’ for purposes of R.C. 149.011(A) and 149.43, it would have so provided.” *State ex rel. ACLU of Ohio v. Cuyahoga County Bd. of Comm’rs*, 128 Ohio St.3d 256, 264, 2011-Ohio-625, ¶38.

The Ohio Open Meetings Act

Chapter One: “Public Body” and “Meeting” Defined

I. Chapter One: “Public Body” and “Meeting” Defined

Only a “public body” is required to comply with the Ohio Open Meetings Act and conduct its business in open “meetings.” The Ohio Open Meetings Act defines a “meeting” as any prearranged gathering of a public body by a majority of its members to discuss public business.⁷⁵⁶

A. “Public Body”

1. Statutory Definition –R.C. 121.22 (B)(1)

The Ohio Open Meetings Act defines a “public body” as:

- a. Any board, commission, committee, council, or similar decision-making body of a state agency, institution, or authority, and any legislative authority or board, commission, committee, council, agency, authority, or similar decision-making body of any county, township, municipal corporation, school district, or other political subdivision or local public institution;⁷⁵⁷
- b. Any committee or subcommittee thereof;⁷⁵⁸ or
- c. A court of jurisdiction of a sanitary district organized wholly for the purpose of providing a water supply for domestic, municipal, and public use when meeting for the purpose of the appointment, removal, or reappointment of a member of the board of directors of such a district or for any other matter related to such a district other than litigation involving the district.⁷⁵⁹

2. Identifying Public Bodies

The term “public body” applies to many different decision-making bodies at the state and local level. Where it is unclear, Ohio courts have applied several factors in determining what constitutes a “public body” for purposes of the Ohio Open Meetings Act, including:

- a. The manner in which the entity was created;⁷⁶⁰
- b. The name or official title of the entity;⁷⁶¹
- c. The membership composition of the entity;⁷⁶²
- d. Whether the entity engages in decision-making;⁷⁶³ and

⁷⁵⁶ R.C. 121.22(B)(2).

⁷⁵⁷ R.C. 121.22(B)(1)(a).

⁷⁵⁸ R.C. 121.22(B)(1)(b); *State ex rel. Long v. Council for Cardington*, 92 Ohio St.3d 54, 58-59, 2001-Ohio-130 (providing that “R.C. 121.22(B)(1)(b) includes any committee or subcommittee of a legislative authority of a political subdivision, e.g., a village council, as a ‘public body’ for purposes of the Sunshine Law, so that the council’s personnel and finance committees constitute public bodies in that context.”).

⁷⁵⁹ R.C. 121.22(B)(1)(c). NOTE: R.C. 121.22(G) prohibits executive sessions for public bodies defined in R.C. 121.22(B)(1)(c).

⁷⁶⁰ *Beacon Journal Publ’g Co. v. Akron*, 3 Ohio St.2d 191 (1965) (boards and commissions created by law (e.g., ordinance or statute) are controlled by the provisions of that enactment in the conduct of their meetings; however, those created by executive order of individual officials are not.); *Wheeling Corp. v. Columbus & Ohio River R.R. Co.*, 147 Ohio App.3d 460, 472, 2001-Ohio-8751 (10th Dist.) (noting that the fact that the Selection Committee was established by the committee without formal action is immaterial and that the Open Meetings Act is not intended to allow a public body to informally establish committees that are not subject to the law). Compare *State ex rel. ACLU of Ohio v. Cuyahoga County Bd. of Comm’rs.*, 128 Ohio St.3d 256, 2011-Ohio-625 (groups formed by private entities to provide community input, to which no government duties or authority have been delegated, were found not to be “public bodies”).

⁷⁶¹ *Wheeling Corp. v. Columbus & Ohio River R.R. Co.*, 147 Ohio App.3d 460, 472, 2001-Ohio-8751 (10th Dist.) (determining that a Selection Committee was a “public body” and noting that it was relevant that the entity was called a “committee,” a term included in the definition of a “public body” in R.C. 121.22); *Stegall v. Joint Twp. Dist. Mem’l Hosp.* 20 Ohio App.3d 100, 103 (3d Dist. 1985) (considering it pertinent whether an entity is one of those listed in R.C. 121.22(B)(1)).

⁷⁶² *Wheeling Corp. v. Columbus & Ohio River R.R. Co.*, 147 Ohio App.3d 460, 472, 2001-Ohio-8751 (10th Dist.) (finding it relevant that a majority of the Selection Committee’s members were commissioners of the commission itself).

⁷⁶³ *Thomas v. White*, 85 Ohio App.3d 410, 412 (9th Dist. 1992) (determining that tasks such as making recommendations and advising involve decision-making); *Cincinnati Enquirer v. Cincinnati*, 145 Ohio App.3d 335, 339 (1st Dist. 2001) (determining whether an urban design review board, a group of architectural consultants for the city, had ultimate authority to decide matters was not controlling; as the board actually made decisions in the

The Ohio Open Meetings Act

Chapter One: “Public Body” and “Meeting” Defined

- e. Whom the entity advises or to whom it reports.⁷⁶⁴

3. Close-up - Applying the Definition of “Public Body”

While there is limited Ohio Supreme Court case law interpreting the Ohio Open Meetings Act, decisions from Ohio courts of appeals are instructive in determining how to apply the Act's provisions. Using the above factors, the following types of entities have been found to be public bodies:

- A selection committee established on a temporary basis by a state agency for the purpose of evaluating responses to a request for proposals and making a recommendation to a commission.⁷⁶⁵
- An urban design review board that provided advice and recommendations to a city manager and city council about land development.⁷⁶⁶
- A board of hospital governors of a joint township district hospital.⁷⁶⁷
- A citizens' advisory committee of a county children services board.⁷⁶⁸
- A board of directors of a county agricultural society.⁷⁶⁹

Courts have found that the Ohio Open Meetings Act does not apply to individual public officials (as opposed to public bodies) or to meetings held by individual officials.⁷⁷⁰ Moreover, if an individual public official creates a group solely pursuant to his or her executive authority or as a delegation of that authority, the Ohio Open Meetings Act probably does not apply to the group's gatherings.⁷⁷¹

However, at least one court has determined that a selection committee whose members were appointed by the chair of a public body, not by formal action of the body, is nevertheless itself a public body and subject to the Open Meetings Act.⁷⁷²

process of formulating its advice); *Wheeling Corp. v. Columbus & Ohio River R.R. Co.*, 147 Ohio App.3d 460, 472, 2001-Ohio-8751 (10th Dist.) (determining that, in its role of reviewing and evaluating proposals and making a recommendation to the Ohio Rail Development Commission, the Selection Committee made decisions).

⁷⁶⁴ *Cincinnati Enquirer v. Cincinnati*, 145 Ohio App.3d 335, 339 (1st Dist. 2001) (finding that an urban design review board advised not only the city manager, but also the city council, a public body).

⁷⁶⁵ *Wheeling Corp. v. Columbus & Ohio River R.R. Co.*, 147 Ohio App.3d 460, 472, 2001-Ohio-8751 (10th Dist.) (finding it relevant that the group was called a “committee,” a term included in the definition of a “public body” in R.C. 121.22, and that a majority of the Selection Committee's members were commissioners of the commission itself; in its role of reviewing and evaluating proposals and making a recommendation to the Ohio Rail Development Commission (a public body), the Selection Committee made decisions; the fact that the Selection Committee was established by the committee without formal action is immaterial).

⁷⁶⁶ *Cincinnati Enquirer v. Cincinnati*, 145 Ohio App.3d 335, 339 (1st Dist. 2001) (determining that whether an urban design review board, a group of architectural consultants for the city, had ultimate authority to decide matters was not controlling, as the board actually made decisions in the process of formulating its advice; the board advised not only the city manager, but also the city council, a public body).

⁷⁶⁷ *Stegall v. Joint Twp. Dist. Mem'l Hosp.*, 20 Ohio App.3d 100, 102-103 (3d Dist. 1985) (finding that the Board of Governors of a joint township hospital fell within the definition of “public body” because definition includes “boards”; further, the board made decisions essential to the construction and equipping of a general hospital and the board was of a “township” or of a “local public institution” because it existed by virtue of authority granted by the legislature for the creation of joint township hospital facilities).

⁷⁶⁸ *Thomas v. White*, 85 Ohio App.3d 410, 412 (9th Dist. 1992); The subject matter of the committee's operations is the public business, and each of its duties involves decisions as to what will be done. Moreover, the committee by law elects a chairman who serves as an ex officio voting member of the children services board, which involves decision-making.

⁷⁶⁹ 1992 Ohio Op. Att'y Gen. No. 078 (opining that the board of directors of a county agricultural society is a public body subject to the open meetings requirements of R.C. 121.22); see also *Greene County Agric. Soc'y v. Liming*, 89 Ohio St.3d 551, 2000-Ohio-486 (2000), at syllabus (deeming a county agricultural society to be a political subdivision pursuant to R.C. 2744.01(F)).

⁷⁷⁰ *Smith v. City of Cleveland*, 94 Ohio App.3d 780, 784-85 (8th Dist. 1994) (finding that a city safety director is not a public body, and may conduct disciplinary hearings without complying with the Open Meeting Act).

⁷⁷¹ *Beacon Journal Publ'g Co. v. Akron*, 3 Ohio St.2d 191 (1965) (finding that boards, commissions, committees, etc., created by executive order of the mayor and chief administrator without the advice and consent of city council were not subject to the Open Meetings Act); *eFunds v. Ohio Dept. of Job & Family Serv.*, Franklin C.P. No. 05CVH09-10276 (Mar. 6, 2006) (finding that an “evaluation committee” of government employees created under the authority of a state agency administrator is not a public body); 1994 Ohio Op. Att'y Gen. No. 096 (opining that when a committee of private citizens and various public officers or employees is established solely pursuant to the executive authority of a general health district for the purpose of providing advice pertaining to the administration of a grant, and establishment of the committee is not required or authorized by the grant or board action, such a committee is not a public body for purposes of R.C. 121.22(B)(1) and is not subject to the requirements of the open meetings law).

⁷⁷² *Wheeling Corp. v. Columbus & Ohio River R.R. Co.*, 147 Ohio App.3d 460, 472, 2001-Ohio-8741 (10th Dist.) (noting that the Chairman of the Rail Commission appointed members to the Selection Committee).

The Ohio Open Meetings Act

Chapter One: “Public Body” and “Meeting” Defined

4. When the Open Meetings Act Applies to Private Bodies

Some otherwise private bodies are considered “public bodies” for purposes of the Open Meetings Act when they are organized pursuant to state statute and are statutorily authorized to receive and expend government funds for a governmental purpose.⁷⁷³ For example, an Equal Opportunity Planning Association was found to be a public body within the meaning of the Act based on: (1) its designation by the Ohio Department of Development as a community action organization pursuant to statute;⁷⁷⁴ (2) its responsibility for spending substantial sums of public funds in the operation of programs for the state welfare; and (3) its obligation to comply with state statutory provisions in order to keep its status as a community action organization.⁷⁷⁵

B. Entities to Which the Open Meetings Act Does Not Apply

1. Public Bodies/ Officials that are NEVER Subject to the Open Meetings Act:⁷⁷⁶

- The Ohio General Assembly;⁷⁷⁷
- Grand juries;⁷⁷⁸
- An audit conference conducted by the State Auditor or independent certified public accountants with officials of the public office that is the subject of the audit;⁷⁷⁹
- The Organized Crime Investigations Commission;⁷⁸⁰
- Child fatality review boards;⁷⁸¹
- The board of directors of JobsOhio Corp., or any committee thereof, and the board of directors of any subsidiary of JobsOhio Corp., or any committee thereof;⁷⁸² and
- An audit conference conducted by the audit staff of the Department of Job and Family Services with officials of the public office that is the subject of that audit under Section 5101.37 of the Revised Code.⁷⁸³

2. Public Bodies that are SOMETIMES Subject to the Open Meetings Act:

a. Public Bodies Meeting for Particular Purposes

Some otherwise public bodies are not subject to the Ohio Open Meetings Act when they meet for particular purposes. Those are:

⁷⁷³ *State ex rel. Toledo Blade Co. v. Econ. Opportunity Planning Ass'n*, 61 Ohio Misc.2d 63 (C.P. Lucas 1990); see also *Stegall v. Joint Twp. Dist. Mem'l Hosp.*, 20 Ohio App.3d 100 (3d Dist. 1985).

⁷⁷⁴ R.C. 122.69.

⁷⁷⁵ *State ex rel. Toledo Blade Co. v. Econ. Opportunity Planning Ass'n*, 61 Ohio Misc.2d 631, 640-41 (C.P. Lucas 1990) (finding that the association is a public body subject to the Open Meetings Act, and noting that “[t]he language of the statute and its role in the organization of public affairs in Ohio make clear that this language is to be given a broad interpretation to ensure that the official business of the state is conducted openly” and that “[c]onsistent with that critical objective, a governmental decision-making body cannot assign its decisions to a nominally private body in order to shield those decisions from public scrutiny.”).

⁷⁷⁶ R.C. 121.22(D).

⁷⁷⁷ While the General Assembly as a whole is not governed by the Open Meetings Act, legislative committees are required to follow the guidelines set forth in the General Assembly’s own open meetings law (R.C. 101.15), which requires committee meetings to be open to the public and that minutes of those meetings be made available for public inspection. Like the Open Meetings Act, the legislature’s open meetings law includes some exceptions. For example, the law does not apply to meetings of the Joint Legislative Ethics Committee other than those meetings specified in the law (R.C. 101.15(F)(1)) or to meetings of a political party caucus (R.C. 101.15(F)(2)).

⁷⁷⁸ R.C. 121.22(D)(1).

⁷⁷⁹ R.C. 121.22(D)(2).

⁷⁸⁰ R.C. 121.22(D)(4).

⁷⁸¹ R.C. 121.22(D)(5).

⁷⁸² R.C. 121.22(D)(11).

⁷⁸³ R.C. 121.22(D)(12).

The Ohio Open Meetings Act

Chapter One: “Public Body” and “Meeting” Defined

- The Adult Parole Authority, when its hearings are conducted at a correctional institution for the sole purpose of interviewing inmates to determine pardon or parole;⁷⁸⁴
- The State Medical Board,⁷⁸⁵ the State Board of Nursing,⁷⁸⁶ the State Board of Pharmacy,⁷⁸⁷ and the State Chiropractic Board,⁷⁸⁸ when determining whether to suspend a certificate without a prior hearing;⁷⁸⁹ and
- Emergency Response Commission’s executive committee, when meeting to determine whether to issue an enforcement order or to decide whether to litigate.⁷⁹⁰

b. Public Bodies Handling Particular Business

Other public bodies otherwise subject to the Ohio Open Meetings Act may close their meetings by unanimous vote of the members present in order to handle particular business.⁷⁹¹ Those public bodies are:

- The Controlling Board;
- Development Financing Advisory Council;
- Industrial Technology and Enterprise Advisory Council;
- Tax Credit Authority;
- Community improvement corporations;⁷⁹² and
- Minority Development Financing Advisory Board.⁷⁹³

These public bodies may vote to close their meetings in order to protect the interest of applicants or the possible investment of public funds⁷⁹⁴ when considering “whether to grant assistance for purposes of community or economic development,” in order to evaluate:

- Marketing plans;
- Specific business strategies;
- Production techniques and trade secrets;
- Financial projections; and
- Personal financial statements, including tax records or other similar information not open to public inspection.⁷⁹⁵

C. “Meeting”

1. Definition

The Ohio Open Meetings Act applies to members of a public body when they are taking official action, conducting deliberations, or discussing the public’s business, which they must do in the

⁷⁸⁴ R.C. 121.22(D)(3).

⁷⁸⁵ R.C. 4730.25(G); R.C. 4731.22(G).

⁷⁸⁶ R.C. 4723.281(B).

⁷⁸⁷ R.C. 4729.16(D).

⁷⁸⁸ R.C. 4734.37.

⁷⁸⁹ R.C. 121.22(D)(6)-(9).

⁷⁹⁰ R.C. 121.22(D)(10).

⁷⁹¹ R.C. 121.22(E).

⁷⁹² R.C. 1724.11(B)(1) (community improvement corporation board or any committee or subcommittee when meeting to consider information that is not a public record may, by unanimous vote of all members present, close the meeting and discuss only that information).

⁷⁹³ R.C. 121.22(E).

⁷⁹⁴ R.C. 121.22(E).

⁷⁹⁵ R.C. 121.22(E)(1)-(5).

The Ohio Open Meetings Act

Chapter One: “Public Body” and “Meeting” Defined

context of an open meeting.⁷⁹⁶ The Act defines a “meeting” as: (1) a prearranged gathering of (2) a majority of the members of a public body (3) for the purpose of discussing public business.⁷⁹⁷

a. Prearranged

The Open Meetings Act addresses prearranged discussions,⁷⁹⁸ but does not prohibit impromptu encounters between members of public bodies, such as hallway discussions. One court has found that an unsolicited and unexpected e-mail sent from one board member to other board members is clearly not a prearranged meeting,⁷⁹⁹ nor is a spontaneous one-on-one telephone conversation between two board members.⁸⁰⁰

b. Majority of Members

For there to be a “meeting” as defined under the Open Meetings Act, “a majority of a public body’s members must come together.”⁸⁰¹ The term “majority” applies not only to the whole body, but also to a committee or subcommittee of that body.⁸⁰² For instance, if a council is comprised of seven members, four would constitute a majority for purposes of this requirement. However, if the council appoints a three-member finance committee, two of those members would constitute a majority of the finance committee. In other words, the finance committee is a “public body” in and of itself, and must also comply with the Ohio Open Meetings Act in all respects.⁸⁰³

1) Attending in Person

A member of a public body must be present in person at a meeting in order to be considered present, vote, or be counted as part of a quorum,⁸⁰⁴ unless a specific law permits otherwise.⁸⁰⁵ In the absence of statutory authority, public bodies may not meet via electronic or telephonic conferencing.⁸⁰⁶

2) “Round-robin” or “Serial” Meetings

Some courts have concluded that one-on-one conversations between individual members of a public body, either in person or by telephone, do not violate the Ohio Open Meetings Act.⁸⁰⁷ However, conducting back-to-back discussions of the same public business with less than a majority of members participating in each discussion is viewed

⁷⁹⁶ R.C. 121.22(A), (C).

⁷⁹⁷ R.C. 121.22(B)(2).

⁷⁹⁸ *State ex rel. Cincinnati Post v. City of Cincinnati*, 76 Ohio St.3d 540, 544, 1996-Ohio-372 (holding that the back-to-back, prearranged discussions of city council members constitutes a “majority,” but clarifying that the statute does not prohibit impromptu meetings between council members or prearranged member-to-member discussion, but concerns itself only with situations where a majority meets).

⁷⁹⁹ *Haverkos v. Nw. Local Sch. Dist. Bd. of Educ.*, 1st Dist. NOS. C-040578, C-040589, 2005-Ohio-3489, at ¶7 (July 8, 2005).

⁸⁰⁰ *Haverkos v. Nw. Local Sch. Dist. Bd. of Educ.*, 1st Dist. NOS. C-040578, C-040589, 2005-Ohio-3489, at ¶7 (July 8, 2005).

⁸⁰¹ *Berner v. Woods*, No. 07CA009132, 2007-Ohio-6207, ¶17 (9th Dist.); *Tyler v. Vill. of Batavia*, No. CA2010-01-002, 2010-Ohio-4078, ¶18 (12th Dist.) (No “meeting” occurred when only two of five Commission members attended a previously scheduled session.)

⁸⁰² *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 2001-Ohio-130.

⁸⁰³ *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 2001-Ohio-130.

⁸⁰⁴ 121.22(C)

⁸⁰⁵ For example, the General Assembly has specifically authorized the Ohio Board of Regents to meet via videoconferencing. R.C. 3333.02.

⁸⁰⁶ See *Haverkos v. Nw. Local Sch. Dist. Bd. of Educ.*, 1st Dist. NOS. C-040578, C-040589, 2005-Ohio-3489, ¶9 (July 8, 2005) (noting that during a 2002 revision of the open meetings law, the legislature did not amend the statute to include “electronic communication” in the definition of a “meeting.” According to the court, this omission indicates the legislature’s intent not to include email exchanges as potential “meetings”).

⁸⁰⁷ *Haverkos v. Nw. Local Sch. Dist. Bd. of Educ.*, 1st Dist. NOS. C-040578, C-040589, 2005-Ohio-3489, at ¶9 (July 8, 2005) (finding that a spontaneous telephone call from one board member to another to discuss election politics, not school board business, did not violate the Open Meetings Act); *Maser v. City of Canton*, 62 Ohio App.2d 174, 178 (5th Dist. 1978) (agreeing that a legislature did not intend to prohibit one committee member from calling another to discuss public business). However, see *State ex rel. Consumer News Servs. v. Worthington City Bd. of Educ.*, 97 Ohio St.3d 58, 2002-Ohio-5311, ¶43, citing to *Floyd v. Rock Hill Local School Bd of Edn.*, 4th Dist. No. 1862 (Feb. 10, 1988) (“The sunshine law does not permit deliberations concerning the employment of a public employee to be conducted during one-on-one conversations. Such deliberations, if not held in public, must be held during an executive session at a regular or special meeting”).

The Ohio Open Meetings Act

Chapter One: “Public Body” and “Meeting” Defined

as a single meeting attended by a majority of the members. Such “round-robin” or “serial” meetings violate the Ohio Open Meetings Act.⁸⁰⁸

c. *Discussing Public Business*

With narrow exceptions, the Ohio Open Meetings Act requires the members of a public body to discuss and deliberate on official business only in open meetings.⁸⁰⁹ In this context, “discussion” is the exchange of words, comments, or ideas by the members of a public body;⁸¹⁰ “deliberation” means the act of weighing and examining reasons for and against a choice.⁸¹¹ One court has described “deliberation” as a thorough discussion of all factors involved, a careful weighing of positive and negative factors, and a cautious consideration of the ramifications of the proposal, while gradually arriving at decision.⁸¹² Another court described the term as involving “a decisional analysis, i.e., an exchange of views on the facts in an attempt to reach a decision.”⁸¹³

In evaluating whether particular gatherings of public officials constituted “meetings,” several courts of appeals have opined that the Open Meetings Act “is intended to apply to situations where there has been actual formal action taken; to wit, formal *deliberation* concerning the public business.”⁸¹⁴ Under this analysis, those courts have determined that gatherings strictly of an investigative and information-seeking nature that do not involve actual discussion or deliberation of public business are not “meetings” for purposes of the Ohio Open Meetings Act.⁸¹⁵ More importantly, the Ohio Supreme Court has not ruled as to whether “investigative and informational” gatherings are or are not “meetings.” Consequently, a public body should seek guidance from its legal counsel before undertaking this kind of private gathering as other than a regular or special meeting.

Gatherings Deemed Not to be Discussions or Deliberations

Not all of Ohio’s courts of appeals draw a distinction between “discussions” or “deliberations” that must take place in public meetings, and other exchanges between a majority of members at a prearranged gathering that do not constitute “meetings” subject to the Open Meetings Act. Those courts that do recognize such non-meeting gatherings have found that the Open Meetings Act does not apply to the following situations:

- Question-and-answer sessions between board members and others who were not public officials, unless a majority of the board members also entertain a discussion of public business with one another;⁸¹⁶
- Conversations between employees of a public body;⁸¹⁷

⁸⁰⁸ See generally, *State ex rel. Cincinnati Post v. City of Cincinnati*, 76 Ohio St.3d 540, 542, 1996-Ohio-372 (determining that back-to-back meetings of members of a public body, in which less than a majority attend each meeting but the same item of public business is discussed, cannot be used to circumvent the clear intent of the law).

⁸⁰⁹ R.C. 121.22(A); R.C. 121.22(B)(2).

⁸¹⁰ *Devere v. Miami Univ. Bd. of Trs.*, 12th Dist. No. CA85-05-065, (June 10, 1986).

⁸¹¹ *Springfield Local Sch. Dist. Bd. of Educ. v. Ohio Ass’n of Pub. Sch. Employees*, 106 Ohio App.3d 855, 864 (9th Dist. 1998).

⁸¹² *Theile v. Harris*, 1st Dist. No. C-860103, (June 11, 1986).

⁸¹³ *Piekutowski v. South Cent. Ohio Educ. Serv. Ctr. Governing Bd.*, 161 Ohio App.3d 372, 379, 2005-Ohio-2868 (4th Dist.).

⁸¹⁴ *Holeski v. Lawrence*, 85 Ohio App.3d 824 (11th Dist. 1993).

⁸¹⁵ *Holeski v. Lawrence*, 85 Ohio App.3d 824, 829 (11th Dist. 1993) (finding that where the majority of members of a public body meet at a prearranged gathering in a “ministerial, fact-gathering capacity,” the third characteristic of a meeting is not satisfied – i.e., there are no discussions or deliberations occurring in which case, no open meeting is required); *Theile v. Harris*, 1st Dist. No. C-860103 (June 11, 1986) (finding that a prearranged discussion between prosecutor and majority of board was not violation where conducted for investigative and information-seeking purposes); *Piekutowski v. S. Cent. Ohio Educ. Serv. Ctr. Governing Bd.*, 161 Ohio App.3d 372, 379, 2005-Ohio-2868, ¶¶14-18 (4th Dist.) (finding that it is permissible for a board to gather information on proposed school district in private, but it cannot deliberate privately in the absence of specifically authorized purposes).

⁸¹⁶ *Cincinnati Enquirer v. Cincinnati Bd. of Educ.*, 192 Ohio App.3d 566 (1st Dist. 2011) (in the absence of deliberations or discussions by board members during a nonpublic information-gathering and investigative session with legal counsel, the session was not a “meeting” as defined by the Open Meetings Act, and thus was not required to be held in public); *Holeski v. Lawrence*, 85 Ohio App.3d 824, 830 (11th Dist. 1993) (noting that “[t]he Sunshine Law is instead intended to prohibit the majority of a board from meeting and discussing public business with one another.”).

The Ohio Open Meetings Act

Chapter One: “Public Body” and “Meeting” Defined

- A presentation to a public body by its legal counsel when the public body receives legal advice;⁸¹⁸ or
- A press conference.⁸¹⁹

2. *Close-up: Applying the Definition of “Meeting”*

If a gathering meets all three elements of this definition, a court will consider it a “meeting” for the purposes of the Ohio Open Meetings Act, regardless of whether the public body initiated the gathering itself, or whether it was initiated by another entity. Further, if majorities of multiple public bodies attend one large meeting, a court may construe that gathering of each public body’s majority of members to be separate “meetings” of each public body.⁸²⁰

a. *Work Sessions*

A “meeting” by any other name is still a meeting. “Work sessions” or “workshops” are “meetings” when a public body discusses public business among a majority of the members of a public body at a prearranged time.⁸²¹ Just as with any other meeting, the public body must open these work sessions to the public, properly notify the public, and maintain meeting minutes.⁸²²

b. *Quasi-judicial Proceedings*

Public bodies whose responsibilities include adjudicative duties, such as boards of tax appeals and state professional licensing boards, are considered “quasi-judicial.”⁸²³ The Ohio Supreme Court has determined that public bodies conducting quasi-judicial hearings, “like all judicial bodies, [require] privacy to deliberate, i.e., to evaluate and resolve the disputes.”⁸²⁴ Quasi-judicial proceedings and the deliberations of public bodies when acting in their quasi-judicial capacities are not “meetings,” and are not subject to the Open Meetings Act.⁸²⁵ Accordingly, when a public body is acting in its quasi-judicial capacity, the public body does not have to vote publicly to adjourn for deliberations or to take action following those deliberations.⁸²⁶

c. *County Political Party Central Committees*

The convening of a county political party central committee for the purpose of conducting purely internal party affairs, unrelated to the committee’s duties of making appointments to vacated public offices, is not a “meeting” as defined by R.C. 121.22(B)(2). Thus, R.C. 121.22 does not apply to such a gathering.⁸²⁷

⁸¹⁷ *Kandell v. City Council of Kent*, 11th Dist. No. 90-P-2255 (Aug. 2, 1991); *State ex rel. Bd. of Educ. for Fairview Park Sch. Dist. v. Bd. of Educ. for Rocky River Sch. Dist.*, 40 Ohio St.3d 136, 140 (1988) (determining that an employee’s discussions with a superintendent did not amount to secret deliberations within the meaning of R.C. 121.22(H)).

⁸¹⁸ *Cincinnati Enquirer v. Cincinnati Bd. of Educ.*, 192 Ohio App.3d 566 (1st Dist. 2011); *Theile v. Harris*, 1st Dist. No. C-860103, (June 11, 1986).

⁸¹⁹ *Holeski v. Lawrence*, 85 Ohio App.3d 824 (11th Dist. 1993).

⁸²⁰ *State ex rel. Fairfield Leader v. Ricketts*, 56 Ohio St.3d 97 (1990).

⁸²¹ *State ex rel. Singh v. Schoenfeld*, 10th Dist. No. 92AP-188, 92AP-193 (May 4, 1993).

⁸²² *State ex rel. Fairfield Leader v. Ricketts*, 56 Ohio St.3d 97 (1990).

⁸²³ See *TBC Westlake v. Hamilton County Bd. of Revision*, 81 Ohio St.3d 58, 62, 1998-Ohio-445 (quoting *Rossford Exempted Vill. Sch. Dist. v. State Bd. of Educ.*, 45 Ohio St.3d 356, 359 (1989) (stating that “the ‘most common test is to determine whether the function under consideration involves the exercise of discretion and requires notice and hearing,’ all elements being required to constitute a quasi-judicial act.”).

⁸²⁴ *TBC Westlake v. Hamilton County Bd. of Revision*, 81 Ohio St.3d 58, 62, 1998-Ohio-445.

⁸²⁵ *TBC Westlake v. Hamilton County Bd. of Revision*, 81 Ohio St.3d 58, 62, 1998-Ohio-445 (“[T]he Sunshine Law does not apply to adjudications of disputes in quasi-judicial proceedings, such as the [Board of Tax Appeals]”); *State ex rel. Ross v. Crawford County Bd. of Elections*, 125 Ohio St.3d 438, 445, 2010-Ohio-2167 See also *Walker v. Muskingum Watershed Conservancy Dist.*, 5th Dist., No. 2007 AP 01 0005, 2008-Ohio-4060; *Angerman v. State Med. Bd. of Ohio*, 70 Ohio App.3d 346, 352 (10th Dist. 1990).

⁸²⁶ *State ex rel. Ross v. Crawford County Bd. of Elections*, 125 Ohio St.3d 438, 445, 2010-Ohio-2167 (finding that because R.C. 121.22 did not apply to the elections board’s quasi-judicial proceeding, the board neither abused its discretion nor clearly disregarded the Open Meetings Act by failing to publicly vote on whether to adjourn the public hearing to deliberate and by failing to publicly vote on the matters at issue following deliberations).

⁸²⁷ 1980 Ohio Op. Att’y Gen. No. 083.

The Ohio Open Meetings Act

Chapter One: “Public Body” and “Meeting” Defined

d. Collective Bargaining

Collective bargaining meetings between public employers and employee organizations are private, and are not subject to the Ohio Open Meetings Act.⁸²⁸

⁸²⁸ R.C. 4117.21; see also *Springfield Local Sch. Dist. Bd. of Educ. v. Ohio Ass’n of Pub. Sch. Employees*, 106 Ohio App.3d 855, 869 (9th Dist. 1995) (R.C. 4117.21 manifests a legislative interest in protecting the privacy of the collective bargaining process); *Back v. Madison Local Sch. Dist. Bd. of Educ.* 12th Dist., No. CA 2007-03-066, 2007-Ohio-4218, ¶¶6-10 (School board’s consideration of a proposed collective bargaining agreement with the school district’s teachers was properly held in a closed session because the meeting was not an executive session but was a “collective bargaining meeting,” which, under R.C. 4117.21, was exempt from the open meeting requirements of R.C. 121.22).

The Ohio Open Meetings Act

Chapter Two: Duties of a Public Body

II. Chapter Two: Duties of a Public Body

The Ohio Open Meetings Act requires public bodies to provide: (A) openness; (B) notice; and (C) minutes.

A. Openness

The Open Meetings Act declares that all meetings of a public body be public meetings open to the public at all times.⁸²⁹ The General Assembly mandates that the Act be liberally construed to require that public officials take official action and “conduct all deliberations upon official business only in open meetings unless the subject matter is specifically excepted by law.”⁸³⁰

1. Where Meetings May be Held

A public body must conduct its meetings in a venue that is open to the public.⁸³¹ Although the Ohio Open Meetings Act does not specifically address where a public body must hold meetings, some authority suggests that a public body must hold meetings in a public meeting place⁸³² that is within the geographical jurisdiction of the public body.⁸³³ Clearly, a meeting is not “open” where the public body has locked the doors to the meeting facility.⁸³⁴

Where space in the facility is too limited to accommodate all interested members of the public, closed circuit television may be an acceptable alternative.⁸³⁵ Federal law requires that a meeting place be accessible to individuals with disabilities; however, violation of this requirement has no ramifications under the Ohio Open Meetings Act.⁸³⁶

2. Method of Voting

Unless a particular statute requires a specified method of voting, the public cannot insist on a particular form of voting. The body may use its own discretion in determining the method it will use, such as voice vote, show of hands, or roll call.⁸³⁷ The Open Meetings Act only defines a method of voting and requires a vote by roll call when a public body is adjourning into executive session.⁸³⁸ The Act does not specifically address the use of secret ballots; however, the Ohio Attorney General has opined that a public body may not vote in an open meeting by secret ballot.⁸³⁹ The Open Meetings Act declares that its provisions shall be liberally construed to require public officials to take official action and conduct all deliberations only in open meetings unless the subject matter is officially excepted by law. Voting by secret ballot contradicts the openness requirement by hiding the decision-making process from public view.

3. Right to Hear, but Not to be Heard or to Disrupt

Implicit in the concept of openness is the ability of the public to attend and observe the business the public body discusses at a meeting. A court found that members of a public body who whispered

⁸²⁹ R.C. 121.22(C).

⁸³⁰ R.C. 121.22(A).

⁸³¹ R.C. 121.22(C). *State ex rel. Randles v. Hill*, 66 Ohio St.3d 32, 35 (1993) (locking the doors to the meeting hall, whether or not intentional, is not an excuse for failing to comply with the requirement that meetings be held open to the public.)

⁸³² *Crist v. True*, 39 Ohio App.2d 11 (12th Dist. 1972); 1992 Ohio Op. Att’y Gen. No. 032.

⁸³³ 1944 Ohio Op. Att’y Gen. No. 7038; 1992 Ohio Op. Att’y Gen. No. 032.

⁸³⁴ *Specht v. Finnegan*, 149 Ohio App.3d 201, 2002-Ohio-4660 (6th Dist.).

⁸³⁵ *Wyse v. Rupp*, 6th Dist. No. F-94-19 (Sept. 15, 1995) (finding that the Ohio Turnpike Commission dealt with the large crowd in a reasonable and impartial manner).

⁸³⁶ 42 U.S.C. § 12101 (Americans with Disabilities Act of 1990, P.L. §§ 201-02).

⁸³⁷ But see *State ex rel. Roberts v. Snyder*, 149 Ohio St. 333, 335 (1948) (finding that council was without authority to adopt a conflicting rule where enabling law limited council president’s vote to solely in the event of a tie).

⁸³⁸ R.C. 121.22(G).

⁸³⁹ 2011 Ohio Op. Att’y Gen. No. 038 (opining that secret ballot voting by a public body is antagonistic to the ability of the citizenry to observe the workings of their government and to hold their government representatives accountable)..

The Ohio Open Meetings Act

Chapter Two: Duties of a Public Body

audibly and passed documents among themselves constructively closed their meeting by intentionally preventing the audience from hearing or knowing the business the body discussed.⁸⁴⁰ Openness requires that a person be permitted to attend and observe a public meeting. However, the Open Meetings Act does not bestow upon attendees the right to be heard at that meeting.⁸⁴¹ Further, a disruptive person waives his or her right to attend and the body may remove that person from the meeting.⁸⁴²

4. Audio and Video Recording

A public body cannot prohibit the public from audio or video recording of a public meeting,⁸⁴³ but a public body may establish reasonable rules regulating the use of recording equipment, such as requiring equipment to be silent, unobtrusive, self-contained, and self-powered to limit interference with the ability of others to hear, see, and participate in the meeting.⁸⁴⁴

5. Executive Sessions

Executive sessions (discussed below in Chapter III), are an exception to the openness requirement; however, public bodies may not vote or take official action in an executive session.⁸⁴⁵

B. Notice

Every public body must establish, by rule, a reasonable method for notifying the public in advance of its meetings.⁸⁴⁶ The requirements for proper notice vary depending upon the type of meeting a public body is conducting.

1. Types of Meetings and Notice Requirements

a. Regular Meetings

“Regular meetings” are those held at prescheduled intervals,⁸⁴⁷ such as monthly or annual meetings. A public body must establish, by rule, a reasonable method that allows the public to determine the time and place of regular meetings.⁸⁴⁸

⁸⁴⁰ *Manogg v. Stickle*, 5th Dist. No. 98CA00102 (Apr. 8, 1998).

⁸⁴¹ *Wyse v. Rupp*, 6th Dist. No. F-94-19, (Sept. 15, 1995); *Cnty. Concerned Citizens v. Union Twp. Bd. of Zoning Appeals*, 12th App. No. CA91-01-009, (Dec. 2, 1991), *aff'd*, 66 Ohio St.3d 452 (1993); *Black v. Mecca Twp. Bd. of Trs.*, 91 Ohio App.3d 351, 356 (11th Dist. 1993) (finding that R.C. 121.22 does not require that a public body provide the public with an opportunity to comment at its meetings, but if public participation is permitted, it is subject to the protections of the First and Fourteenth Amendments); *Forman v. Blaser*, 3rd Dist. No. 13-87-12 (Aug. 8, 1988) (determining that R.C. 121.22 guarantees the right to observe a meeting, but not necessarily the right to be heard); 1992 Ohio Op. Att’y Gen. No. 032; *see also* 2007 Ohio Op. Att’y Gen. No. 019.

⁸⁴² *Forman v. Blaser*, 3rd Dist. No. 13-87-12 (Aug. 8, 1988) (stating that “[w]hen an audience becomes so uncontrollable that the public body cannot deliberate, it would seem that the audience waives its right to, or is estopped from claiming a right under the Sunshine Law to continue to observe the proceedings.”); *see also Jones v. Heyman*, 888 F.2d 1328, 1333 (11th Cir. 1989) (finding no violation of 1st and 14th Amendments where disruptive person was removed from a public meeting).

⁸⁴³ *McVey v. Carthage Twp. Trs.*, 4th Dist., No. 04CA44, 2005-Ohio-2869, ¶¶14-15 (determining that trustees violated R.C. 121.22 by banning videotaping).

⁸⁴⁴ *Kline v. Davis*, 4th Dist. Nos. 00CA32, 00CA39, 01CA13, 2001-Ohio-2625 (blanket prohibition on recording a public meeting not justified); 1988 Ohio Op. Att’y Gen. No. 087 (opining that trustees have authority to adopt reasonable rules for use of recording equipment at their meetings). *See also Mahajan v. State Med. Bd. of Ohio*, No. 11AP-421, 11AP-422, 2011-Ohio-6728 (10th Dist.) (where rule allowed board to designate reasonable location for placement of recording equipment, requiring appellant’s court reporter to move to the back of the room was reasonable, given the need to transact board business.)

⁸⁴⁵ R.C. 121.22(A); *Mansfield City Council v. Richland City Council AFL-CIO*, 5th Dist. No. 03CA55 (Dec. 24, 2003) (finding that reaching a consensus to take no action on a pending matter, as reflected by members’ comments, is impermissible during an executive session).

⁸⁴⁶ R.C. 121.22(F).

⁸⁴⁷ *State ex rel. Fairfield Leader v. Ricketts*, 56 Ohio St.3d 97 (1990); 1988 Ohio Op. Att’y Gen. No. 029.

⁸⁴⁸ R.C. 121.22(F). *See also Wyse v. Rupp*, 6th Dist. No. F-94-19 (Sept. 15, 1995) (finding that a public body must specifically identify the time at which a public meeting will commence).

The Ohio Open Meetings Act

Chapter Two: Duties of a Public Body

b. Special Meetings

A “special meeting” is any meeting other than a regular meeting.⁸⁴⁹ A public body must establish, by rule, a reasonable method that allows the public to determine the time, place, and purpose of special meetings.⁸⁵⁰

- Public bodies must provide at least 24 hours advance notification of special meetings to all media outlets that have requested such notification.⁸⁵¹
- When a public body holds a special meeting to discuss particular issues, the statement of the meeting’s purpose must specifically indicate those issues, and the public body may only discuss those issues at that meeting.⁸⁵² When a special meeting is simply a rescheduled “regular” meeting occurring at a different time, the statement of the meeting’s purpose may be for “general purposes.”⁸⁵³ Discussing matters not disclosed in the purpose statement of a special meeting, either in open session or executive session of the special meeting is a violation of the Open Meetings Act.⁸⁵⁴

c. Emergency Meetings

An emergency meeting is a special meeting that a public body convenes when a situation requires immediate official action.⁸⁵⁵ When a public body schedules an emergency meeting, the public body must immediately notify all media outlets that have specifically requested such notice of the time, place, and purpose of the emergency meeting.⁸⁵⁶ The purpose statement must comport with the specificity requirements discussed above.

2. Rules Requirement

The Ohio Open Meetings Act specifically requires public bodies to adopt rules establishing methods for notification.⁸⁵⁷ Those rules must include a provision for any person, upon request and payment of a reasonable fee, to obtain reasonable advance notification of all meetings at which any specific type of public business is to be discussed. The statute suggests that provisions for advance notification may include mailing the agenda of meetings to all subscribers on a mailing list or mailing notices in self-addressed, stamped envelopes provided by the person requesting notice.⁸⁵⁸

⁸⁴⁹ *State ex rel. Fairfield Leader v. Ricketts*, 56 Ohio St.3d 97, 100 (1990) (stating that “[t]he council either meets in a regular session or it does not, and any session that is not regular is special.”); 1988 Ohio Op. Att’y Gen. No. 029 (opining that “[w]hile the term ‘special meeting’ is not defined in R.C. 121.22, its use in context indicates that reference to all meetings other than ‘regular’ meetings was intended.”).

⁸⁵⁰ R.C. 121.22(F). See also *Doran v. Northmont Bd. of Educ.*, 147 Ohio App.3d 268, 272-73, 2002-Ohio-386 (2nd Dist.) (“*Doran I*”) (finding that a board violated R.C. 121.22(F) by failing to establish, by rule, method to provide reasonable notice to the public of time, place, and purpose of special meetings); *Stiller v. Columbiana Exempt Vill. Sch. Dist. Bd. of Educ.*, 74 Ohio St.3d 113, 119-120 (1995) (policy adopted pursuant to R.C. 121.22(F) that required notice of “specific or general purposes” of special meeting was not violated when general notice was given that nonrenewal of contract would be discussed, even though ancillary matters were also discussed).

⁸⁵¹ R.C. 121.22(F); 1988 Ohio Op. Att’y Gen. No. 029.

⁸⁵² *Jones v. Brookfield Twp. Trs.*, 11th Dist. No. 92-T-4692 (June 30, 1995).

⁸⁵³ *Jones v. Brookfield Twp. Trs.*, 11th Dist. No. 92-T-4692 (June 30, 1995); see also *Satterfield v. Adams County Ohio Valley Sch. Dist.*, 4th Dist. No. 95CA611 (Nov. 6, 1996) (finding that although specific agenda items may be listed, use of agenda term “personnel” is sufficient for notice of special meeting).

⁸⁵⁴ *Hoops v. Jerusalem Twp. Bd. of Trs.*, 6th Dist. No. L-97-1240 (Apr. 10, 1998) (determining that business transacted at special meetings exceeded scope of published purpose and thus violated R.C. 121.22(F)).

⁸⁵⁵ Compare *Neuvirth v. Bds. of Trs. of Bainbridge Twp.*, 11th Dist. No. 919 (June 29, 1981) (determining that the subject matter of “emergency meeting” was not an emergency just because the Trustees postponed discussion until the last minute).

⁸⁵⁶ R.C. 121.22(F).

⁸⁵⁷ R.C. 121.22(F).

⁸⁵⁸ These requirements notwithstanding, many courts have found that actions taken by a public body are not invalid simply because the body failed to adopt notice rules. These courts reason that the purpose of the law’s invalidation section (R.C. 121.22(H)) is to invalidate actions taken where insufficient notice of the meeting was provided. See *Doran v. Northmont Bd. of Educ.*, 147 Ohio App.3d 268, 271, 2002-Ohio-386 (2nd Dist.) (“*Doran I*”); *Hoops v. Jerusalem Twp. Bd. of Trs.*, 6th Dist. No. L-97-1240 (Apr. 10, 1998); *Barber v. Twinsburg Twp.*, 73 Ohio App.3d 587 (9th Dist. 1992).

The Ohio Open Meetings Act

Chapter Two: Duties of a Public Body

3. Notice by Publication

Many public bodies routinely notify their local media of all regular, special, and emergency meetings, whether by rule or simply by practice. If the media misprints the meeting information, a court will not likely hold the public body responsible for violating the notice requirement so long as it transmitted accurate information to the media as required by its rule.⁸⁵⁹ Notice must be consistent and “actually reach the public” to satisfy the statute.⁸⁶⁰

C. Minutes

1. Content of Minutes

A public body must keep full and accurate minutes of its meetings.⁸⁶¹ Those minutes are not required to be a verbatim transcript of the proceedings, but must include enough facts and information to permit the public to understand and appreciate the rationale behind the public body’s decisions.⁸⁶² Because executive sessions are not open to the public, the meeting minutes need to reflect only the general subject matter of the executive session via the motion to convene the session for a permissible purpose or purposes.⁸⁶³ Including details of members’ pre-vote discussion following an executive session may prove helpful, though. At least one court has found that the lack of pre-vote comments reflected by the minutes supported the trial court’s conclusion that the body’s discussion of the pros and cons of the matter at issue must have improperly occurred during executive session.⁸⁶⁴

2. Making Minutes Available

A public body must promptly prepare, file, and make available its minutes for public inspection.⁸⁶⁵ The final version of the official minutes approved by members of the public body is a public record. Note that a draft version of the meeting minutes that the public body circulates for approval is also a public record under the Ohio Public Records Act.⁸⁶⁶

3. Medium on Which Minutes are Kept

Because neither the Ohio Open Meetings Act nor the Ohio Public Records Act addresses the medium on which a public body must keep the official meeting minutes, a public body may make this determination itself. Some public bodies document that choice by adopting a formal rule or by passing a resolution or motion at a meeting.⁸⁶⁷ Many public bodies make a contemporaneous audio recording of the meeting to use as back-up in preparing written official minutes. The Ohio Attorney

⁸⁵⁹ *Black v. Mecca Twp. Bd. of Trs.*, 91 Ohio App.3d 351 (11th Dist. 1993).

⁸⁶⁰ *Doran v. Northmont Bd. of Educ.*, 147 Ohio App.3d 268, 272, 2002-Ohio-386 (2nd Dist.) (“*Doran I*”) (concluding that where publication of the notice is at the newspaper’s discretion, such notice is not “reasonable notice” to the public).

⁸⁶¹ *White v. Clinton County Bd. of Comm’rs*, 76 Ohio St.3d 416, 420 (1996) (stating that “[k]eeping full minutes allows members of the public who are unable to attend the meetings in person to obtain complete and accurate information about the decision-making process of their government [...] Accurate minutes can reflect the difficult decision-making process involved, and hopefully bring the public to a better understanding of why unpopular decisions are sometimes necessary”).

⁸⁶² See generally *State ex rel. Citizens for Open, Responsive & Accountable Gov’t v. Register*, 116 Ohio St.3d 88, 2007-Ohio-5542 (2007) (construing R.C. 121.22, 149.43, and 507.04 together, a township fiscal officer has a duty to maintain full and accurate minutes and records of the proceedings as well as the accounts and transactions of the board of township trustees); *White v. Clinton County Bd. of Comm’rs*, 76 Ohio St.3d 416, 423 (1996) (determining that the minutes of board of county commissioners meetings are required to include more than a record of roll call votes); *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 2001-Ohio-130.

⁸⁶³ R.C. 121.22(C).

⁸⁶⁴ *Piekutowski v. South Cent. Ohio Educ. Serv. Ctr. Governing Bd.*, 161 Ohio App.3d 372, 380, 2005-Ohio-2868 (4th Dist.).

⁸⁶⁵ R.C. 121.22(C); see also *White v. Clinton County Bd. of Comm’rs*, 76 Ohio St.3d 416 (1996); *State ex rel. Fairfield Leader v. Ricketts*, 56 Ohio St.3d 97 (1990) (finding that because the members of a public body had met as a majority group, R.C. 121.22 applied, and minutes of the meeting were therefore necessary); *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 57, 2001-Ohio-130 (finding that audiotapes that are later erased do not meet requirement to maintain).

⁸⁶⁶ *State ex rel. Doe v. Register*, 12th Dist. No. CA2008-08-081, 2009-Ohio-2448, ¶28.

⁸⁶⁷ In *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 57, 2001-Ohio-130, the Ohio Supreme Court found council’s contention that audiotapes complied with Open Meetings Act requirements to be meritless because they were not treated as official minutes, e.g. council approved written minutes, did not tape all meetings, and voted to erase tapes after written minutes had been approved.

The Ohio Open Meetings Act

Chapter Two: Duties of a Public Body

General has opined that such a recording constitutes a public record that the public body must make available for inspection upon request.⁸⁶⁸

D. Modified Duties of Public Bodies Under Special Circumstances

1. Declared Emergency

During a declared emergency, R.C. 5502.24(B) provides a limited exception to fulfilling the requirements of the open meetings law. If, due to a declared emergency, it becomes “imprudent, inexpedient, or impossible to conduct the affairs of local government” at the regular or usual place, the governing body may meet at an alternate site previously designated (by ordinance, resolution, or other manner) as the emergency location of government.⁸⁶⁹ Further, the public body may exercise its powers and functions in the light of the exigencies of the emergency without regard to or compliance with time-consuming procedures and formalities of the Ohio Open Meetings Act. Even in an emergency, however, there is no exception to the “in person” meeting requirement of R.C. 121.22(C) and does not permit the public body to meet by teleconference.⁸⁷⁰

2. Municipal Charters

The Ohio Open Meetings Act applies to public bodies at both the state and local government level. However, because the Ohio Constitution permits “home rule” (self-government), municipalities may adopt a charter under which their local governments operate.⁸⁷¹ A charter municipality has the right to determine by charter the manner in which their meetings will be held.⁸⁷² Charter provisions take precedence over the Ohio Open Meetings Act where the two conflict.⁸⁷³ If a municipal charter includes specific guidelines regarding the conduct of meetings, the municipality must abide by those guidelines.⁸⁷⁴ In addition, if a charter expressly requires that all meetings of the public bodies must be open, the municipality may not adopt ordinances that permit executive session.⁸⁷⁵

⁸⁶⁸ 2008 Ohio Op. Att’y Gen. No. 019 (opining that an audio tape recording of a meeting that is created for the purpose of taking notes to create an accurate record of the meeting is a public record for purposes of R.C. 149.43. The audio tape recording must be made available for public inspection and copying, and retained in accordance with the terms of the records retention schedule for such a record).

⁸⁶⁹ R.C. 5502.24(B).

⁸⁷⁰ 2009 Op. Att’y Gen. No. 034; R.C. 5502.24(B).

⁸⁷¹ Ohio Const., Art. XVIII, §§ 3, 7; see also *State ex rel. Inskeep v. Staten*, 74 Ohio St.3d 676, 1996-Ohio-236; *State ex rel. Fenley v. Kyger*, 72 Ohio St.3d 164 (1995); *State ex rel. Lightfield v. Vill. of Indian Hill*, 69 Ohio St. 3d 441 (1994); *State ex rel. Fairfield Leader v. Ricketts*, 56 Ohio St.3d 97 (1990); *State ex rel. Craft v. Schisler*, 40 Ohio St.3d 149 (1988); *Fox v. City of Lakewood*, 39 Ohio St.3d 19 (1988).

⁸⁷² *State ex rel. Plain Dealer Publ’g Co. v. Barnes*, 38 Ohio St.3d 165, 168 (1988) (finding it unnecessary to decide the applicability of the Ohio Open Meetings Act because the charter language expressly provided for open meetings and encompassed the meeting at issue); *Hills & Dales, Inc. v. Wooster*, 4 Ohio App.3d 240, 242-43 (9th Dist. 1982) (find that a charter municipality, in the exercise of its sovereign powers of local self-government as established by the Ohio Constitution need not adhere to the strictures of R.C. 121.22, and noting that “[w]e find nothing in the Wooster Charter which mandates that all meetings of the city council and/or the city planning commission must be open to the public”).

⁸⁷³ *State ex rel. Lightfield v. Indian Hill*, 69 Ohio St.3d 441, 442 (1994) (determining that “[i]n matters of local self-government, if a portion of a municipal charter expressly conflicts with parallel state law, the charter provisions will prevail”).

⁸⁷⁴ *State ex rel. Bond v. Montgomery*, 63 Ohio App.3d 728 (1st Dist. 1989); *Johnson v. Kindig*, 9th Dist. No. 00CA0095 (Aug. 15, 2001) (finding that where charter explicitly states all council meetings shall be public and the council must also explicitly state exception for executive session).

⁸⁷⁵ *State ex rel. Inskeep v. Staten*, 74 Ohio St.3d 676, 1996-Ohio-236; *State ex rel. Plain Dealer Publ’g Co. v. Barnes*, 38 Ohio St.3d 165 (1988); *State ex rel. Gannett Satellite Info. Network v. Cincinnati City Council*, 137 Ohio App.3d 589, 592 (1st Dist. 2001) (determining that when a city charter mandates all meetings be open, rules of council cannot supersede this mandate).

The Ohio Open Meetings Act

Chapter Three: Executive Session

III. Chapter Three: Executive Session

A. General Principles

An “executive session” is a conference between members of a public body from which the public is excluded.⁸⁷⁶ The public body, however, may invite anyone it chooses to attend an executive session.⁸⁷⁷ The Ohio Open Meetings Act strictly limits the use of executive sessions and places several limitations on their use. First, the Ohio Open Meetings Act limits the matters that a public body may discuss in executive session.⁸⁷⁸ Second, the Ohio Open Meetings Act requires that a public body follow a specific procedure to adjourn into an executive session.⁸⁷⁹ Finally, a public body may not take any formal action in an executive session;⁸⁸⁰ any formal action taken in an executive session is invalid.⁸⁸¹

A public body may only discuss matters specifically identified in R.C. 121.22(G) in executive session, and may only hold executive sessions at regular and special meetings.⁸⁸² One court has held that a public body may discuss other, related issues if they have a direct bearing on the permitted matter(s).⁸⁸³ If a public body is challenged in court over the nature of discussions or deliberations held in executive session, the burden of proof lies with the public body to establish that one of the statutory exceptions permitted the executive session.⁸⁸⁴

The Ohio Open Meetings Act does not prohibit the public body or one of its members from disclosing the information discussed in executive session.⁸⁸⁵ However, other provisions of law may prohibit such disclosure.⁸⁸⁶

Note: The privacy afforded by the Ohio Open Meetings Act to executive session discussions does not impart confidentiality on any documents that a public body may discuss in executive session. If a document is a “public record” and is not otherwise exempt under one of the exceptions to the Ohio Public Records Act, the record will still be subject to public disclosure notwithstanding the appropriateness of confidential discussions about it in executive session. For instance, if a public body

⁸⁷⁶ *Weisel v. Palmyra Twp. Bd. of Zoning Appeals*, 11th Dist. No. 90-P-2193 (July 19, 1991); *Davidson v. Sheffield-Sheffield Lake Bd. of Educ.*, 9th Dist., No. 89-CA004624 (May 23, 1990).

⁸⁷⁷ *Chudner v. Cleveland City Sch. Dist.*, 8th Dist., No. 68572 (Aug. 10, 1995) (finding that inviting select individuals to attend an executive session is not a violation as long as no formal action of the public body will occur); *Weisel v. Palmyra Twp. Bd. of Zoning Appeals*, 11th Dist., No. 90-P-2193 (July 19, 1991); *Davidson v. Sheffield-Sheffield Lake Bd. of Educ.*, 9th Dist. No. 89-CA004624 (May 23, 1990).

⁸⁷⁸ R.C. 121.22(G)(1)-(7), (J).

⁸⁷⁹ R.C. 121.22(G)(1), (7) (requiring roll call vote and specificity in motion); see also *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 59, 2001-Ohio-130 (finding that respondents violated R.C. 121.22(G)(1) by using general terms like “personnel” and “personnel and finances” instead of one or more of the specified statutory purposes listed in division (G)(1)); *Wheeling Corp. v. Columbus & Ohio River R.R. Co.*, 147 Ohio App.3d 460, 473, 2001-Ohio-8751 (10th Dist.) (determining that a majority of a quorum of the public body must determine, by roll call vote, to hold executive session); *Wright v. Mt. Vernon City Council*, 5th Dist. No. 97-CA-7 (Oct. 23, 1997) (determining that a public body must strictly comply with both the substantive and procedural limitations of R.C. 121.22(G)); *Jones v. Brookfield Twp. Trs.*, 11th Dist. No. 92-T-4692 (June 30, 1995) (stating that “[p]olice personnel matters” does not constitute substantial compliance because it does not refer to any of the specific purposes listed in R.C. 149.43(G)(1)); *Vermillion Teachers’ Ass’n. v. Vermillion Local Sch. Dist. Bd. of Educ.*, 98 Ohio App.3d 524, 531-32 (6th Dist. 1994) (determining that a board violated 121.22(G) when it went into executive session to discuss a stated permissible topic but proceeded to discuss another, non-permissible topic); 1988 Ohio Op. Att’y Gen. No. 029.

⁸⁸⁰ R.C. 121.22(H).

⁸⁸¹ R.C. 121.22(H); *Mathews v. E. Local Sch. Dist.*, 4th Dist. No. 00CA647, 2001-Ohio-2372 (finding that a board was permitted to discuss employee grievance in executive session, but was required to take formal action by voting in an open meeting); *State ex rel. Kinsley v. Berea Bd. of Educ.*, 64 Ohio App. 3d 659, 664 (8th Dist. 1990) (determining that once a conclusion is reached regarding pending or imminent litigation, the conclusion is to be made public, even though the deliberations leading to the conclusion were private).

⁸⁸² R.C. 121.22(G).

⁸⁸³ *Chudner v. Cleveland City Sch. Dist.*, 8th Dist., No. 68572 (Aug. 10, 1995) (determining that issues discussed in executive session each had a direct bearing on topic that was permissible subject of executive session discussion).

⁸⁸⁴ *State ex rel. Bond v. City of Montgomery*, 63 Ohio App.3d 728 (1st Dist. 1989).

⁸⁸⁵ But compare R.C. 121.22(G)(2) (providing that “no member of a public body shall use [executive session under property exception] as a subterfuge for providing covert information to prospective buyers or sellers.”).

⁸⁸⁶ See e.g., R.C. 102.03(B) (providing that a public official must not disclose or use any information acquired in course of official duties that is confidential because of statutory provisions, or that has been clearly designated as confidential).

The Ohio Open Meetings Act

Chapter Three: Executive Session

properly discusses pending litigation in executive session, a settlement agreement negotiated during that executive session and reduced to writing may be subject to public disclosure.⁸⁸⁷

B. Permissible Discussion Topics

There are very limited topics that the members of a public body may consider in executive session:

1. Certain Personnel Matters⁸⁸⁸

A public body may adjourn into executive session:

- To consider the appointment, employment, dismissal, discipline, promotion, demotion, or compensation of a public employee or official; and
 - To consider the investigation of charges or complaints against a public employee, official, licensee, or regulated individual,⁸⁸⁹ unless the employee, official, licensee, or regulated individual requests a public hearing;⁸⁹⁰
- but**
- A public body may not hold an executive session to consider the discipline of an elected official for conduct related to the performance of the official's duties or to consider that person's removal from office.

A motion to adjourn into executive session must specify which of the particular personnel matter(s) listed in the statute the movant proposes to discuss. A motion "to discuss personnel matters" is not sufficiently specific and does not comply with the statute.⁸⁹¹

Appellate courts disagree on whether a public body must limit its discussion of personnel in an executive session to a specific individual, or may include broader discussion of employee matters. At least two appellate courts have held that the language of the Ohio Open Meetings Act clearly limits discussion in executive session to consideration of a specific employee's employment, dismissal, etc.⁸⁹² These decisions are based on the premise that the plain language in the Act requires that "all meetings of any public body are declared to be open to the public at all times,"⁸⁹³ thus, any exceptions to openness are to be drawn narrowly. A separate appellate court, however, looked to a different

⁸⁸⁷ *State ex rel. Findlay Publ'g Co. v. Hancock County Bd. of Comm'rs*, 80 Ohio St.3d 134, 138 (1997) (quoting *State ex rel. Kinsley v. Berea Bd. of Educ.*, 64 Ohio App.3d 659, 664 (8th Dist. 1990) (stating that "[s]ince a settlement agreement contains the result of the bargaining process rather than revealing the details of the negotiations which led to the result, R.C. 121.22(G)(3), which exempts from public view only the conferences themselves, would not exempt a settlement agreement from disclosure.").

⁸⁸⁸ R.C. 121.22(G)(1).

⁸⁸⁹ R.C. 121.22(B)(3) (defining "regulated individual" as (a) a student in a state or local public educational institution or (b) a person who is, voluntarily or involuntarily, an inmate, patient, or resident of a state or local institution because of criminal behavior, mental illness or retardation, disease, disability, age, or other condition requiring custodial care).

⁸⁹⁰ See *Brownfield v. Bd. of Educ.*, 4th Dist. No. 89 CA 26 (Aug. 28, 1990) (providing that upon request, a teacher was entitled to have deliberations regarding his dismissal in open meetings). NOTE: This exception does not grant a substantive right to a public hearing. Such a right must exist elsewhere in Ohio or federal law before a person may demand a public hearing under this exception. See *Davidson v. Sheffield-Sheffield Lake Bd. of Educ.*, 9th Dist. No. 89-CA004624 (May 23, 1990) (citing *Matheny v. Bd. of Educ.*, 62 Ohio St.2d 362, 368 (1980) (providing that "the term 'public hearing' in subdivision (G)(1) of this statute refers only to the hearings elsewhere provided by law"); *State ex rel. Harris v. Indus. Comm'n of Ohio*, 10th Dist. No. 95APE07-891 (Dec. 14, 1995).

⁸⁹¹ R.C. 121.22(G)(1),(7) (requiring roll call vote and specificity in motion); *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 59, 2001-Ohio-130 (finding that respondents violated R.C. 121.22(G)(1) by using general terms like "personnel" and "personnel and finances" instead of one of more of the specified statutory purposes listed in division (G)(1)); *Jones v. Brookfield Twp. Trs.*, 11th Dist. No. 92-T-4692 (June 30, 1995) (stating that "[p]olice personnel matters" does not constitute substantial compliance because it does not refer to any of the specific purposes listed in R.C. 149.43(G)(1)), 1988 Ohio Atty. Gen. Ops. No. 88-029, 2-120 to 2-121, fn. 1.

⁸⁹² *Gannett Satellite Info. Network v. Chillicothe City Sch. Dist.*, 41 Ohio App.3d 218 (4th Dist. 1988); *Davidson v. Sheffield-Sheffield Lake Bd. of Educ.*, 9th Dist. No. 89-CA004624 (May 23, 1990) (rejecting the argument that an executive session was illegally held for a dual, unauthorized purpose when it was held to discuss termination of a specific employee's employment due to budgetary considerations).

⁸⁹³ RC 121.22(C).

The Ohio Open Meetings Act

Chapter Three: Executive Session

provision in the same statute that permits the public body to exclude the name of any person to be considered during the executive session as allowing general personnel discussions.⁸⁹⁴

2. Purchase or Sale of Property

A public body may adjourn into executive session to consider the purchase of property of any sort--real, personal, tangible, or intangible.⁸⁹⁵ A public body may also adjourn into executive session to consider the sale of real or personal property by competitive bid if disclosure of the information would result in a competitive advantage to the person whose personal, private interest is adverse to the general public interest.⁸⁹⁶ No member of a public body may use this exception as subterfuge to provide covert information to prospective buyers or sellers.⁸⁹⁷

3. Pending or Imminent Court Action

A public body may adjourn into executive session with the public body's attorney to discuss a pending or imminent court action.⁸⁹⁸ Court action is "pending" if a lawsuit has been commenced or is "imminent" if it is on the point of happening.⁸⁹⁹ A public body may not use this exception to adjourn into executive session for discussions with a board member who also happens to be an attorney. The attorney should be the duly appointed counsel for the public body.⁹⁰⁰ Nor is a general discussion of legal matters sufficient basis for invoking this provision.⁹⁰¹

4. Collective Bargaining Matters

A public body may adjourn into executive session to prepare for, conduct, or review a collective bargaining strategy.⁹⁰²

5. Matters Required to be Kept Confidential

A public body may adjourn into executive session to discuss matters that federal law, federal rules, or state statutes require the public body to keep confidential.⁹⁰³

⁸⁹⁴ *Wright v. Mt. Vernon City Council*, 5th Dist. No. 97-CA-7 (Oct. 23, 1997) (finding that it was permissible for public body to discuss merit raises for exempt city employees in executive session without referring to individuals in particular positions).

⁸⁹⁵ R.C. 121.22(G)(2); see also 1988 Ohio Op. Att'y Gen. No. 003.

⁸⁹⁶ R.C. 121.22(G)(2); see also 1988 Ohio Op. Att'y Gen. No. 003.

⁸⁹⁷ R.C. 121.22(G)(2).

⁸⁹⁸ R.C. 121.22(G)(3).

⁸⁹⁹ *State ex rel. Cincinnati Enquirer v. Hamilton County Comm'r's*, No. C-010605, 2002-Ohio-2038 (1st Dist.) (determining that "imminent" is satisfied when a public body has moved beyond mere investigation and assumed an aggressive litigative posture manifested by the decision to commit government resources to the prospective litigation); *State ex rel. Bond v. City of Montgomery*, 63 Ohio App.3d 728 (1st Dist. 1989); but see *Greene County Guidance Ctr., Inc. v. Greene-Clinton Cmty. Mental Health Bd.*, 19 Ohio App.3d 1, 5 (2nd Dist. 1984) (determining that a discussion with legal counsel in executive session under 121.22(G)(3) is permitted where litigation is a "reasonable prospect").

⁹⁰⁰ *Awadalla v. Robinson Mem'l Hosp.*, 11th Dist. No. 91-P-2385 (June 5, 1992) (finding that a board's "attorney" was identified as "senior vice president" in meeting minutes); see also *Bd. of Trs. of the Tobacco Use Prevention and Control Found. v. Boyce*, 185 Ohio App.3d 707, 2009-Ohio-6993, ¶¶66-69 (10th Dist.), *aff'd*, 127 Ohio St.3d 511, 2010-Ohio-6207 (four board members who are also attorneys are not the attorneys for the public body).

⁹⁰¹ *Bd. of Trs. of the Tobacco Use Prevention and Control Found. v. Boyce*, 185 Ohio App.3d 707, 2009-Ohio-6993, ¶¶66-69 (10th Dist.) (Executive Director, a licensed attorney, cannot act as "attorney for the public body" for purposes of this provision, because R.C. 109.02 declares Attorney General to be legal counsel for all state agencies.).

⁹⁰² R.C. 121.22(G)(4); see also *Back v. Madison Local Sch. Dist. Bd. of Educ.*, No. CA-2007-03-066, 2007-Ohio-4218, ¶8 (12th Dist.) (determining that a school board's meeting with a labor organization to renegotiate teachers' salaries was proper because the meeting was not an executive session but was a "collective bargaining meeting," which, under R.C. 4117.21, was exempt from the open meeting requirements of R.C. 121.22).

⁹⁰³ R.C. 121.22(G)(5); see also *State ex rel. Cincinnati Enquirer v. Hamilton County Comm'r's*, No. C010605, 2002-Ohio-2038 (1st Dist.) (determining that R.C. 121.22(G)(5) is intended to allow a public body to convene an executive session to discuss matters that they are legally bound to keep from the public); *J.C. Penney Prop., Inc. v. Bd. of Revision of Franklin County*, Ohio Bd. Tax Appeals Nos. 81-D-509, 81-D-510 (Jan. 19, 1982) (determining that common law may not be available under R.C. 121.22(G)(5) given the presence of R.C. 121.22(G)(3)); but see *Theile v. Harris*, 1st App. No. C-860103 (June 11, 1986) (finding that public officials have right and duty to seek legal advice from their duly constituted legal advisor).

The Ohio Open Meetings Act

Chapter Three: Executive Session

6. Security Matters

A public body may adjourn into executive session to discuss details of security arrangements and emergency response protocols for a public body or public office, if disclosure of the matters discussed could reasonably be expected to jeopardize the security of the public body or public office.⁹⁰⁴

7. Hospital Trade Secrets

A public body may adjourn into executive session to discuss trade secrets of a county hospital, a joint township hospital, or a municipal hospital.⁹⁰⁵

8. Veterans Service Commission Applications

A Veterans Service Commission must hold an executive session when considering an applicant's request for financial assistance, unless the applicant requests a public hearing.⁹⁰⁶ Note that, unlike the previous seven discussion topics, discussion of Veterans Service Commission applications in executive session is mandatory.

C. Proper Procedures for Executive Session

A public body may only hold an executive session at a regular or special meeting, and a meeting that includes an executive session must always begin and end in an open session.⁹⁰⁷ In order to begin an executive session, there must be both a roll call vote, and a proper motion approved by a majority of a quorum of the public body.⁹⁰⁸

1. The Motion

A motion for executive session must specifically identify "which one or more of the approved matters listed . . . are to be considered at the executive session."⁹⁰⁹ Thus, if the public body intends to discuss one of the matters included in the personnel exception in executive session, the motion must specify which of those specific matters it will discuss (e.g., "I move to go into executive session to consider the promotion or compensation of a public employee.").⁹¹⁰ It is not sufficient to simply state "personnel" as a reason for executive session,⁹¹¹ though the motion does not need to specify by name the person whom the public body intends to discuss.⁹¹² Similarly, "reiterated the laundry list of possible matters from R.C. 121.22(G)(1) without specifying which of those purposes [will] be discussed in executive session" is improper.⁹¹³

2. The Roll Call Vote

Members of a public body may adjourn into executive session only after a majority of a quorum of the public body approves the motion by a roll call vote.⁹¹⁴ The vote may not be by acclamation or by show of hands, and the public body must record the vote in its minutes.⁹¹⁵

⁹⁰⁴ R.C. 121.22(G)(6).

⁹⁰⁵ R.C. 121.22(G)(7).

⁹⁰⁶ R.C. 121.22(J).

⁹⁰⁷ R.C. 121.22(G).

⁹⁰⁸ *Vermillion Teachers' Ass'n v. Vermillion Local Sch. Dist. Bd. of Educ.*, 98 Ohio App.3d 524 (6th Dist. 1994); 1988 Ohio Op. Att'y Gen. No. 029 (detailing proper procedure for executive session).

⁹⁰⁹ R.C. 121.22(G)(1),(7).

⁹¹⁰ *Jones v. Brookfield Twp. Trs.*, 11th Dist. No. 92-T-4692 (June 30, 1995); 1988 Ohio Op. Att'y Gen. No. 029; *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 59, 2001-Ohio-130.

⁹¹¹ *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 59, 2001-Ohio-130 (determining that by using general terms like "personnel" instead of one or more of the specified statutory purposes is a violation of R.C. 121.22(G)(1)); *Jones v. Brookfield Twp. Trs.*, 11th Dist. No. 92-T-4692 (June 30, 1995) (determining that "a reference to 'police personnel issues' does not technically satisfy [the R.C. 121.22(G)(1)] requirement because it does not specify which of the approved purposes was applicable in this instance"); 1988 Ohio Op. Att'y Gen. No. 029, 2-120 to 2-121, fn.1..

⁹¹² R.C. 121.22(G)(1); *Beisel v. Monroe County Bd. of Educ.*, 7th Dist. No. CA-678 (Aug. 29, 1990).

⁹¹³ *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 59, 2001-Ohio-130.

⁹¹⁴ R.C. 121.22(G).

The Ohio Open Meetings Act

Chapter Three: Executive Session

Although a proper motion is required before entering executive session, a motion to end the executive session and return to public session is not necessary because the closed-door discussion is “off the record.” Similarly, a public body does not take minutes during executive session. The minutes of the meeting need only document a motion to go into executive session that properly identifies the permissible topic or topics that the public body will discuss, as well as the return to open session (e.g., “We are now back on the record.”)

⁹¹⁵ R.C. 121.22(G); 1988 Ohio Op. Att’y Gen. No. 029; see *Shaffer v. Vill. of W. Farmington*, 82 Ohio App.3d 579, 584 (11th Dist. 1992) (finding that minutes may not be conclusive evidence as to whether roll call vote was taken).

The Ohio Open Meetings Act

Chapter Four: Enforcement & Remedies

IV. Chapter Four: Enforcement & Remedies

In Ohio, no state or local government official has the authority to enforce the Ohio Open Meetings Act. Rather, if any person believes a public body has violated or intends to violate the Ohio Open Meetings Act, that person may file suit in common pleas court to enforce the law's provisions.⁹¹⁶

Courts reviewing alleged violations will strictly construe the Ohio Open Meetings Act in favor of openness.⁹¹⁷ In practice, this has included the courts looking beyond the express reason stated by a public body for an executive session to find an implied or circumstantial violation of the Act.⁹¹⁸

A. Enforcement

1. Injunction

The type of court action that any person may file for an alleged violation of the Ohio Open Meetings Act is called an injunction.⁹¹⁹ This action must be “brought within two years after the date of the alleged violation or threatened violation.”⁹²⁰ If granted by a court, an injunction compels the members of the public body to comply with the law by either refraining from the prohibited behavior or by conducting their meetings in accordance with law where they previously failed to do so.

a. Who May File

“Any person” may have standing to file for an injunction to enforce the Ohio Open Meetings Act.⁹²¹ The person need not demonstrate a personal stake in the outcome of the lawsuit.⁹²²

b. Where to File

Unlike the Ohio Public Records Act, which permits an aggrieved person to initiate a legal action directly with a common pleas court, a district court of appeals, or the Ohio Supreme Court, the Ohio Open Meetings Act requires that an action for injunction be filed only in the court of common pleas in the county where the alleged Act violation took place.⁹²³

c. Finding a Violation

Upon proof of a violation or threatened violation of the Ohio Open Meetings Act, the court will conclusively and irrebuttably presume harm and prejudice to the person who brought the suit⁹²⁴ and will issue an injunction.⁹²⁵ Once the court issues an injunction, members of the public body

⁹¹⁶ R.C. 121.22(l)(1).

⁹¹⁷ *Gannett Satellite Info. Network v. Chillicothe City Sch. Dist.*, 41 Ohio App.3d 218 (4th Dist. 1988).

⁹¹⁸ *Sea Lakes, Inc. v. Lipstreu*, 11th Dist. No. 90-P-2254 (Sept. 30, 1991) (finding a violation where board was to discuss administrative appeal merits privately, appellant's attorney objected, board immediately held executive session “to discuss pending litigation,” then emerged to announce decision on appeal); *In the Matter of Removal of Smith*, 5th Dist. No. CA-90-11 (May 15, 1991) (finding a violation where county commission emerged from executive session held “to discuss legal matters” and announced decision to remove Smith from Board of Mental Health, where there was no county attorney present in executive session and a request for public hearing on removal decision was pending).

⁹¹⁹ R.C. 121.22(l)(1). See *Fahl v. Athens*, No. 06CA23, 2007-Ohio-4925 (4th Dist.) and *Stainfield v. Jefferson Emergency Rescue Dist.*, No. 2009-A-0044, 2010-Ohio-2282, ¶40 (11th Dist.) (appellate courts declined to consider arguments alleging Open Meetings Act violations as part of administrative appeals because appellants failed to bring original actions and request appropriate relief in courts of common pleas.).

⁹²⁰ R.C. 121.22(l)(1); see also *Mollette v. Portsmouth City Council*, 179 Ohio App.3d 455, 2008-Ohio-6342 (4th Dist.).

⁹²¹ R.C. 121.22(l)(1); *McVey v. Carthage Twp. Trs.*, No. 04CA44, 2005-Ohio-2869 (4th Dist.).

⁹²² *Doran v. Northmont Bd. of Educ.*, 153 Ohio App.3d 499, 2003-Ohio-4084, ¶20 (“*Doran II*”) (2nd Dist.); *State ex rel. Mason v. State Employment Relations Bd.*, 10th Dist. No. 98AP-780 (Apr. 20, 1999); *Thompson v. Joint Twp.*, 3rd Dist. No. 2-82-8 (June 23, 1983); *Foreman v. Blaser*, 3rd Dist. No. 13-87-12 (Aug. 8, 1988); but see *Korchnak v. Civil Serv. Comm’n of Canton*, 5th Dist. No. CA-8133 (Jan. 7, 1991) (determining that a party had no standing to challenge notice of a violation without a formal request and payment of a fee established by a public body).

⁹²³ R.C. 121.22(l)(1).

⁹²⁴ R.C. 121.22(l)(3); *Ream v. Civil Serv. Comm’n of Canton*, 5th Dist. No. CA-8033 (Nov. 26, 1990).

⁹²⁵ R.C. 121.22(l)(1); see also *Doran v. Northmont Bd. of Educ.*, 153 Ohio App.3d 499, 2003-Ohio-4084, ¶21 (2nd Dist.) (“*Doran II*”) (determining that an injunction is mandatory upon finding violation of statute); *Fayette Volunteer Fire Dept. No. 2, Inc. v. Fayette Twp. Bd. of Trs.*, 87 Ohio App. 3d 51, 54 (4th Dist. 1993).

The Ohio Open Meetings Act

Chapter Four: Enforcement & Remedies

who later commit a “knowing” violation of the injunction may be removed from office through a court action that may only be brought by the county prosecutor or the Ohio Attorney General.⁹²⁶

d. *Curing a Violation*

Once a violation is proven, the court must grant the injunction, regardless of the public body’s intervening or subsequent attempts to cure the violation.⁹²⁷ Indeed, Ohio courts have differing views as to whether a public body can ever cure an invalid action with new, compliant discussions followed by official action taken in an open session.⁹²⁸ However, if the action at issue is removal of a public official that the public body decided during a meeting allegedly not open to the public, the proper vehicle to challenge that action is a *quo warranto* action.⁹²⁹

2. *Mandamus*

Where a person seeks access to the public body’s minutes, that person may also file a mandamus action under the Ohio Public Records Act to compel the creation of or access to meeting minutes.⁹³⁰ Mandamus is also an appropriate action to order a public body to give notice of meetings to the person filing the action.⁹³¹

B. *Remedies*

1. *Invalidity*

A resolution, rule, or formal action of any kind is invalid unless adopted in an open meeting of the public body.⁹³² However, courts have refused to allow public bodies to benefit from their own violations of the Ohio Open Meetings Act.⁹³³ For instance, a public body may not attempt to avoid a contractual obligation by arguing that approval of the contract is invalid due to a violation of the Act.⁹³⁴

a. *Formal Action*

Even without taking a vote or a poll, members of a public body may inadvertently take “formal action” in an executive session when they indicate how they intend to vote about a matter pending before them.⁹³⁵ For instance, while council members properly deliberated in executive

⁹²⁶ R.C. 121.22(I)(4); *McClarren v. City of Alliance*, 5th Dist. No. CA-7201 (Oct. 13, 1987).

⁹²⁷ *McVey v. Carthage Twp. Trs.*, No. 04CA44, 2005-Ohio-2869, ¶9 (4th Dist.) (stating that “[b]ecause the statute clearly provides that an injunction is to be issued upon finding a violation of the Sunshine Law, it is irrelevant that the Trustees nullified their prior [offending] action.”); *Doran v. Northmont Bd. of Educ.*, 153 Ohio App.3d 499, 2003-Ohio-4084 (2nd Dist.) (“*Doran II*”); *Beisel v. Monroe County Bd. of Educ.*, 7th Dist. No. CA-678 (Aug. 29, 1990).

⁹²⁸ Courts finding that violations cannot be cured: *Danis Montco Landfill Co. v. Jefferson Twp. Zoning Comm’n*, 85 Ohio App.3d 494 (2nd Dist. 1993); *M.F. Mon. Waste Ventures, Inc. v. Bd. of Amanda Twp. Trs.*, 3rd Dist. No. 1-87-46 (Feb. 12, 1988); *Gannett Satellite Info. Network, Inc. v. Chillicothe City Sch. Dist. Bd. of Educ.*, 41 Ohio App.3d 218, 221 (4th Dist. 1988) (finding that “[a] violation of the Sunshine Law cannot be “cured” by subsequent open meetings if the public body initially discussed matters in executive session that should have been discussed before the public). Courts finding violations can be cured: *State ex rel. Cincinnati Enquirer v. Hamilton County Cmm’r*, No. C-010605, 2002-Ohio-2038 (1st Dist.); *Theile v. Harris*, 1st Dist. No. C-860103 (June 11, 1986); *Kuhlman v. Vill. of Leipsic*, 3rd Dist. No. 12-94-9 (Mar. 27, 1995); *Carpenter v. Bd. of Cmm’r*, 3rd Dist. No. 1-81-44 (Aug. 10, 1982); *Fox v. City of Lakewood*, 39 Ohio St.3d 19 (1988); *Beisel v. Monroe County Bd. of Educ.*, 7th Dist. No. CA-678 (Aug. 29, 1990) (finding that in contrast to *Gannett Satellite Info. Network, Inc. v. Chillicothe City Sch. Dist. Bd. Of Educ.*, 41 Ohio App.3d 218 (4th Dist. 1988), (a violation can be “cured” by subsequent open meetings because matter could have been discussed in executive session had motion sufficiently reflected matter to be discussed); *Brownfield v. Bd. of Educ.*, 4th Dist. No. 89-CA-26 (Aug. 28, 1990).

⁹²⁹ *State ex rel. Newell v. City of Jackson*, 118 Ohio St.3d 138, 2008-Ohio-1965, ¶¶8-14 (finding that to be entitled to a writ of *quo warranto* to oust a good-faith appointee, a relator must take affirmative action by either filing a *quo warranto* action or an injunction challenging the appointment before the appointee completes the probationary period and becomes a permanent employee; further, this duty applies to alleged violations of the open meeting provisions of R.C. 121.22); *Randles v. Hill*, 66 Ohio St.3d 32 (1993).

⁹³⁰ *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 2001-Ohio-130; *State ex rel. Fairfield Leader v. Ricketts*, 56 Ohio St.3d 97 (1990).

⁹³¹ *State ex rel. Vindicator Printing Co. v. Kirila*, 11th Dist. No. 91-T-4550 (Dec. 31, 1991) (overruled on other grounds).

⁹³² R.C. 121.22(H); *State ex rel. Holliday v. Marion Twp. Bd. of Trs.* No. 9-2000-22, 2000-Ohio-1877 (3rd Dist.).

⁹³³ *Jones v. Brookfield Twp. Trs.*, 11th Dist. No. 92-T-4692 (June 30, 1995); *Roberto v. Brown County Gen. Hosp.*, 12th Dist. No. CA87-06-009 (Feb. 8, 1988).

⁹³⁴ *Roberto v. Brown County Gen. Hosp.*, 12th Dist. No. CA87-06-009 (Feb. 8, 1988).

⁹³⁵ *Mansfield City Council v. Richland County Council AFL-CIO*, 5th Dist. No. 03 CA 55 (Dec. 24, 2003); see also *Piekutowski v. S.Cent. Ohio Educ. Serv. Ctr. Governing Bd.*, 161 Ohio App.3d 372, 2005-Ohio-2868, ¶19 (4th Dist.) (noting that in an executive session, board members gave personal

The Ohio Open Meetings Act

Chapter Four: Enforcement & Remedies

session about whether to take action on a union request, they improperly took formal action during the executive session when they decided not to take action on the request and to announce as much via a press release. Those decisions were deemed invalid and of no effect.⁹³⁶ In addition, even if the formal action is taken in an open meeting, it is still invalid if it results from deliberations that improperly occurred outside of an open meeting, e.g., at an informal, private meeting or in an executive session that was held for other than an authorized purpose.⁹³⁷

b. Improper Notice

A formal action taken by a public body in a meeting for which it did not properly give notice is invalid.⁹³⁸

c. Minutes

At least one court has found that minutes are merely the record of actions; they are not actions in and of themselves. Thus, failure to properly approve minutes does not invalidate the actions taken during the meeting.⁹³⁹

2. Mandatory Civil Forfeiture

If the court issues an injunction, the court will order the public body to pay a civil forfeiture of \$500 to the person who filed the action.⁹⁴⁰ Courts which find that a public body has violated the law on repeated occasions have awarded a \$500 civil forfeiture for each violation.⁹⁴¹

3. Court Costs and Attorney Fees

If the court issues an injunction, it will order the public body to pay all court costs⁹⁴² and the reasonable attorney's fees of the person who filed the action.⁹⁴³ Courts have discretion to reduce or completely eliminate attorney's fees, however, if they find that: (1) based on the state of the law when the violation occurred, a well-informed public body could have reasonably believed it was not violating the law; and (2) it was reasonable for the public body to believe its actions served public policy.⁹⁴⁴

opinions and indicated how they would vote on a proposal to create new school district; resolution to adopt proposal deemed invalid, though it was also later adopted in open session).

⁹³⁶ *Mansfield City Council v. Richland County Council AFL-CIO*, 5th Dist. No. 03 CA 55 (Dec. 24, 2003).

⁹³⁷ R.C. 121.22(H); *Mansfield City Council v. Richland County Council AFL-CIO*, 5th Dist. No. 03 CA 55 (Dec. 24, 2003) (determining that council reached its conclusion based on comments in executive session and acted according to that conclusion); *State ex rel. Holliday v. Marion Twp. Bd. of Trs.* (3rd Dist.), 2000-Ohio-1877; see also *State ex rel. Delph v. Barr*, 44 Ohio St.3d 77 (1989).

⁹³⁸ R.C. 121.22(H); see also *State ex rel. Stiller v. Columbiana Exempted Vill. Sch. Dist. Bd. of Educ.*, 74 Ohio St.3d 113, 118 (1995); but see *Hoops v. Jerusalem Twp. Bd. of Trs.*, 6th Dist. No. L-97-1240 (Apr. 10, 1998) (illustrating that actions are not invalid merely because a reasonable method of notice had not been enacted by "rule"); *Barber v. Twinsburg Twp.*, 73 Ohio App.3d 587 (9th Dist. 1992).

⁹³⁹ *Davidson v. Hanging Rock*, 97 Ohio App.3d 723, 733 (4th Dist. 1994).

⁹⁴⁰ R.C. 121.22(I)(2)(a); *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 2001-Ohio-130; *Cincinnati Enquirer v. Cincinnati*, 145 Ohio App.3d 335 (1st Dist. 2001).

⁹⁴¹ *Specht v. Finnegan*, No. L-02-1012, 2002-Ohio-4660 (6th Dist.); *Manogg v. Stickle*, 5th Dist. No. 98CA00102 (Apr. 8, 1998) distinguished by *Doran v. Northmont Bd. of Educ.*, No. 19956, 2003-Ohio-7097, ¶18 (2nd Dist.) ("Doran III") (determining that the failure to adopt rule is one violation with one \$500 fine—fine not assessed for each meeting conducted in absence of rule where meetings were, in fact, properly noticed and held in an open forum); *Weisbarth v. Geauga*, No. 2007-G-2780, 2007-Ohio-6728, ¶30 (11th Dist.) (finding that the only violation alleged was Board's failure to state a precise statutory reason for going into executive session; this "technical violation entitled appellant to only one statutory injunction and one civil forfeiture.");

⁹⁴² R.C. 121.22(I)(2)(a).

⁹⁴³ R.C. 121.22(I)(2)(a); *State ex rel. Long v. Cardington Vill. Council*, 92 Ohio St.3d 54, 60, 2001-Ohio-130 (awarding a citizen over \$17,000 in attorney's fees); *Cincinnati Enquirer v. Cincinnati*, 145 Ohio App.3d 335, 339 (1st Dist. 2001).

⁹⁴⁴ R.C. 121.22(I)(2)(a)(i), (ii); *Mansfield City Council v. Richland County Council AFL-CIO*, 5th Dist. No. 03 CA 55 (Dec. 24, 2003); but see *Mathews v. E. Local Sch. Dist.*, No. 00CA647, 2001-Ohio-2372 (4th Dist.) (determining that where two board members knew not to take formal action during executive session, the board was not entitled to reduction).

The Ohio Open Meetings Act

Chapter Four: Enforcement & Remedies

If the court does not issue an injunction and deems the lawsuit to have been frivolous, the court will order the person who filed the suit to pay all of the public body's court costs and reasonable attorney's fees as determined by the court.⁹⁴⁵

⁹⁴⁵ R.C. 121.22(l)(2)(b); *McIntyre v. Westerville City Sch. Dist. Bd of Educ.*, 10th Dist. Nos. 90AP-1024, 90AP-1063 (June 6, 1991) (determining that a plaintiff engaged in frivolous conduct because her actions subjected the board to a baseless suit and the incurring of needless expense).

Appendix A – Statutes

Statutes: Public Records, Open Meetings, & Personal Information Systems Acts¹

Records Statutes

§ 9.01	Methods for making records, copies, and reproductions	[A3]
§ 109.43	Training for elected officials or appropriate designees regarding public records law and sunshine laws.....	[A4-5]
§ 121.211	Retention periods for records	[A5]
§ 149.011	Definitions.....	[A5-6]
§ 149.31	Archives administration	[A6]
§ 149.33	State records program.....	[A6-7]
§ 149.331	Functions of state records program	[A7]
§ 149.332	Records management programs in the legislative and judicial branches.....	[A8]
§ 149.333	Applications for records disposal or transfer; schedules of retention & destruction ...	[A8]
§ 149.34	Records management procedures for all state agencies.....	[A8-9]
§ 149.35	Laws prohibiting the destruction of records.....	[A9]
§ 149.351	Prohibition against destruction or damage of records.....	[A9-10]
§ 149.352	Replevin of public records unlawfully removed	[A10]
§ 149.36	Authority not restricted	[A10]
§ 149.38	County records commission	[A10-11]
§ 149.39	Municipal records commission	[A11-12]
§ 149.40	Only necessary records to be made	[A12]
§ 149.41	School district and educational service center records commissions	[A12]
§ 149.411	Library records commission in each public library	[A12-13]
§ 149.412	Special taxing district records commission	[A13]
§ 149.42	Township records commission	[A13]
§ 149.43	Availability of public records	[A13-23]
§ 149.431	Financial records of nonprofit organizations receiving governmental funds; confidentiality of patient and client records	[A23]
§ 149.432	Release of library record or patron information.....	[A24-25]
§ 149.433	Exemption of security and infrastructure records.....	[A25-26]
§ 149.434	Database or list of names and birth dates of persons elected to or employed by that public office.....	[A26]
§ 149.44	Availability of records in centers and archival institutions	[A26]
§ 149.45	Redacting, encrypting, or truncating personal information.....	[A31-33]

Meetings Statutes

§ 121.22	Meetings of public bodies to be public; exceptions	[A26-31]
----------	--	----------

Personal Information Statutes

§ 149.45	Redacting, encrypting, or truncating personal information.....	[A31-33]
§ 319.28	General tax list and general duplicate of real and public property; numbering system; request by protected individual for use of initials.....	[A33-34]
§ 1347.01	Personal Information Systems Act: Definitions	[A35]

¹ Editor's Note: These sections of the Ohio Revised Code are current as of January 1, 2012.

Appendix A – Statutes

§ 1347.04	Exemptions.....	[A36]
§ 1347.05	Duties of state and local agencies	[A36-37]
§ 1347.06	Rules	[A37]
§ 1347.07	Use of personal information	[A37]
§ 1347.071	Interconnected or combined systems	[A38]
§ 1347.08	Rights of subject of personal information	[A38-39]
§ 1347.09	Disputed information; duties of agency	[A40]
§ 1347.10	Liability for wrongful disclosure; limitation of action	[A40-41]
§ 1347.12	Disclosure or notification by state or local agency of breach of security of Personal information system.....	[A41-44]
§ 1347.15	State agencies to adopt rules regulating access to confidential personal information; privacy impact assessment form; civil action or harm resulting from violation	[A45-47]
§ 1347.99	Penalties.....	[A47]

Appendix A – Statutes

Ohio Revised Code § 9.01 – Methods for making records, copies, and reproductions

When any officer, office, court, commission, board, institution, department, agent, or employee of the state, of a county, or of any other political subdivision who is charged with the duty or authorized or required by law to record, preserve, keep, maintain, or file any record, document, plat, court file, paper, or instrument in writing, or to make or furnish copies of any of them, deems it necessary or advisable, when recording or making a copy or reproduction of any of them or of any such record, for the purpose of recording or copying, preserving, and protecting them, reducing space required for storage, or any similar purpose, to do so by means of any photostatic, photographic, miniature photographic, film, microfilm, or microphotographic process, or perforated tape, magnetic tape, other magnetic means, electronic data processing, machine readable means, or graphic or video display, or any combination of those processes, means, or displays, which correctly and accurately copies, records, or reproduces, or provides a medium of copying, recording, or reproducing, the original record, document, plat, court file, paper, or instrument in writing, such use of any of those processes, means, or displays for any such purpose is hereby authorized. Any such records, copies, or reproductions may be made in duplicate, and the duplicates shall be stored in different buildings. The film or paper used for a process shall comply with the minimum standards of quality approved for permanent photographic records by the national bureau of standards. All such records, copies, or reproductions shall carry a certificate of authenticity and completeness, on a form specified by the director of administrative services through the state records program.

Any such officer, office, court, commission, board, institution, department, agent, or employee of the state, of a county, or of any other political subdivision may purchase or rent required equipment for any such photographic process and may enter into contracts with private concerns or other governmental agencies for the development of film and the making of reproductions of film as a part of any such photographic process. When so recorded, or copied or reproduced to reduce space required for storage or filing of such records, such photographs, microphotographs, microfilms, perforated tape, magnetic tape, other magnetic means, electronic data processing, machine readable means, graphic or video display, or combination of these processes, means, or displays, or films, or prints made therefrom, when properly identified by the officer by whom or under whose supervision they were made, or who has their custody, have the same effect at law as the original record or of a record made by any other legally authorized means, and may be offered in like manner and shall be received in evidence in any court where the original record, or record made by other legally authorized means, could have been so introduced and received. Certified or authenticated copies or prints of such photographs, microphotographs, films, microfilms, perforated tape, magnetic tape, other magnetic means, electronic data processing, machine readable means, graphic or video display, or combination of these processes, means, or displays, shall be admitted in evidence equally with the original.

Such photographs, microphotographs, microfilms, or films shall be placed and kept in conveniently accessible, fireproof, and insulated files, cabinets, or containers, and provisions shall be made for preserving, safekeeping, using, examining, exhibiting, projecting, and enlarging them whenever requested, during office hours.

All persons utilizing the methods described in this section for keeping records and information shall keep and make readily available to the public the machines and equipment necessary to reproduce the records and information in a readable form.

Most Recent Effective Date: 09-26-2003

Ohio Revised Code § 109.43 – Training for elected officials or appropriate designees regarding public records law and sunshine laws

(A) As used in this section:

(1) "Designee" means a designee of the elected official in the public office if that elected official is the only elected official in the public office involved or a designee of all of the elected officials in the public office if the public office involved includes more than one elected official.

(2) "Elected official" means an official elected to a local or statewide office. "Elected official" does not include the chief justice or a justice of the supreme court, a judge of a court of appeals, court of common pleas, municipal court, or county court, or a clerk of any of those courts.

(3) "Public office" has the same meaning as in section 149.011 [149.01.1] of the Revised Code.

(4) "Public record" has the same meaning as in section 149.43 of the Revised Code.

(B) The attorney general shall develop, provide, and certify training programs and seminars for all elected officials or their appropriate designees in order to enhance the officials' knowledge of the duty to provide access to public records as required by section 149.43 of the Revised Code. The training shall be three hours for every term of office for which the elected official was appointed or elected to the public office involved. The training shall provide elected officials or their appropriate designees with guidance in developing and updating their offices' policies as required under section 149.43 of the Revised Code. The successful completion by an elected official or by an elected official's appropriate designee of the training requirements established by the attorney general under this section shall satisfy the education requirements imposed on elected officials or their appropriate designees under division (E) of section 149.43 of the Revised Code. Prior to providing the training programs and seminars under this section to satisfy the education requirements imposed on elected officials or their appropriate designees under division (E) of section 149.43 of the Revised Code, the attorney general shall ensure that the training programs and seminars are accredited by the commission on continuing legal education established by the supreme court.

(C) The attorney general shall not charge any elected official or the appropriate designee of any elected official any fee for attending the training programs and seminars that the attorney general conducts under this section. The attorney general may allow the attendance of any other interested persons at any of the training programs or seminars that the attorney general conducts under this section and shall not charge the person any fee for attending the training program or seminar.

(D) In addition to developing, providing, and certifying training programs and seminars as required under division (B) of this section, the attorney general may contract with one or more other state agencies, political subdivisions, or other public or private entities to conduct the training programs and seminars for elected officials or their appropriate designees under this section. The contract may provide for the attendance of any other interested persons at any of the training programs or seminars conducted by the contracting state agency, political subdivision, or other public or private entity. The contracting state agency, political subdivision, or other public or private entity may charge an elected official, an elected official's appropriate designee, or an interested person a registration fee for attending the training program or seminar conducted by that contracting agency, political subdivision, or entity pursuant to a contract entered into under this division. The attorney general shall determine a reasonable amount for the registration fee based on the actual and necessary expenses associated with the training programs and seminars. If the contracting state agency, political subdivision, or other public or private entity charges an elected official or an elected official's appropriate designee a registration fee for attending the training program or seminar conducted pursuant to a contract entered into under this division by that contracting agency, political subdivision, or entity, the public

Appendix A – Statutes

office for which the elected official was appointed or elected to represent may use the public office's own funds to pay for the cost of the registration fee.

(E) The attorney general shall develop and provide to all public offices a model public records policy for responding to public records requests in compliance with section 149.43 of the Revised Code in order to provide guidance to public offices in developing their own public record policies for responding to public records requests in compliance with that section.

(F) The attorney general may provide any other appropriate training or educational programs about Ohio's "Sunshine Laws," sections 121.22, 149.38, 149.381 and 149.43 of the Revised Code, as may be developed and offered by the attorney general or by the attorney general in collaboration with one or more other state agencies, political subdivisions, or other public or private entities.

(G) The auditor of state, in the course of an annual or biennial audit of a public office pursuant to Chapter 117. of the Revised Code, shall audit the public office for compliance with this section and division (E) of section 149.43 of the Revised Code.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 121.211 – Retention periods for records

Records in the custody of each agency shall be retained for time periods in accordance with law establishing specific retention periods, and in accordance with retention periods or disposition instructions established by the state records administration.

Most Recent Effective Date: 07-01-1985

Ohio Revised Code § 149.011 – Definitions

As used in this chapter, except as otherwise provided:

(A) "Public office" includes any state agency, public institution, political subdivision, or other organized body, office, agency, institution, or entity established by the laws of this state for the exercise of any function of government. "Public office" does not include the nonprofit corporation formed under section 187.01 of the Revised Code.

(B) "State agency" includes every department, bureau, board, commission, office, or other organized body established by the constitution and laws of this state for the exercise of any function of state government, including any state-supported institution of higher education, the general assembly, any legislative agency, any court or judicial agency, or any political subdivision or agency of a political subdivision. "State agency" does not include the nonprofit corporation formed under section 187.01 of the Revised Code.

(C) "Public money" includes all money received or collected by or due a public official, whether in accordance with or under authority of any law, ordinance, resolution, or order, under color of office, or otherwise. It also includes any money collected by any individual on behalf of a public office or as a purported representative or agent of the public office.

(D) "Public official" includes all officers, employees, or duly authorized representatives or agents of a public office.

Appendix A – Statutes

(E) "Color of office" includes any act purported or alleged to be done under any law, ordinance, resolution, order, or other pretension to official right, power, or authority.

(F) "Archive" includes any public record that is transferred to the state archives or other designated archival institutions because of the historical information contained on it.

(G) "Records" includes any document, device, or item, regardless of physical form or characteristic, including an electronic record as defined in section 1306.01 of the Revised Code, created or received by or coming under the jurisdiction of any public office of the state or its political subdivisions, which serves to document the organization, functions, policies, decisions, procedures, operations, or other activities of the office.

Most Recent Effective Date: 02-18-2011

Ohio Revised Code § 149.31 – Archives administration

(A) The Ohio historical society, in addition to its other functions, shall function as the state archives administration for the state and its political subdivisions.

It shall be the function of the state archives administration to preserve government archives, documents, and records of historical value that may come into its possession from public or private sources.

The archives administration shall evaluate, preserve, arrange, service repair, or make other disposition of, including transfer to public libraries, county historical societies, state universities, or other public or quasi-public institutions, agencies, or corporations, those public records of the state and its political subdivisions that may come into its possession under this section. Those public records shall be transferred by written agreement only, and only to public or quasi-public institutions, agencies, or corporations capable of meeting accepted archival standards for housing and use.

The archives administration shall be headed by a trained archivist designated by the Ohio historical society and shall make its services available to county, municipal, township, school district, library, and special taxing district records commissions upon request. The archivist shall be designated as the "state archivist."

(B) The archives administration may purchase or procure for itself, or authorize the board of trustees of an archival institution to purchase or procure, from an insurance company licensed to do business in this state policies of insurance insuring the administration or the members of the board and their officers, employees, and agents against liability on account of damage or injury to persons and property resulting from any act or omission of the board members, officers, employees, and agents in their official capacity.

(C) Notwithstanding any other provision of the Revised Code to the contrary, the archives administration may establish a fee schedule, which may include the cost of labor, for researching, retrieving, copying, and mailing copies of public records

Most Recent Effective Date: 09-29-2007

Ohio Revised Code § 149.33 – State records program

(A) The department of administrative services shall have responsibility for establishing and administering a state records program for all state agencies, except for state-supported institutions of higher education. The department shall apply efficient and economical management methods to the creation, utilization, maintenance, retention, preservation, and disposition of state records.

Appendix A – Statutes

There is hereby established within the department of administrative services a state records program, which shall be under the control and supervision of the director of administrative services or the director's appointed deputy.

(B) The boards of trustees of state-supported institutions of higher education shall have full responsibility for establishing and administering a records program for their respective institutions. The boards shall apply efficient and economical management methods to the creation, utilization, maintenance, retention, preservation, and disposition of the records of their respective institutions.

Most Recent Effective Date: 09-26-2003

Ohio Revised Code § 149.331 – Functions of state records program

The state records program of the department of administrative services shall do all of the following:

(A) Establish and promulgate in consultation with the state archivist standards, procedures, and techniques for the effective management of state records;

(B) Review applications for one-time records disposal and schedules of records retention and destruction submitted by state agencies in accordance with section 149.333 [149.33.3] of the Revised Code;

(C) Establish "general schedules" proposing the disposal, after the lapse of specified periods of time, of records of specified form or character common to several or all agencies that either have accumulated or may accumulate in such agencies and that apparently will not, after the lapse of the periods specified, have sufficient administrative, legal, fiscal, or other value to warrant their further preservation by the state;

(D) Establish and maintain a records management training program, and provide a basic consulting service, for personnel involved in record-making and record-keeping functions of departments, offices, and institutions;

(E) Provide for the disposition of any remaining records of any state agency, board, or commission, whether in the executive, judicial, or legislative branch of government, that has terminated its operations. After the closing of the Ohio veterans' children's home, the resident records of the home and the resident records of the home when it was known as the soldiers' and sailors' orphans' home required to be maintained by approved records retention schedules shall be administered by the state department of education pursuant to this chapter, the administrative records of the home required to be maintained by approved records retention schedules shall be administered by the department of administrative services pursuant to this chapter, and historical records of the home shall be transferred to an appropriate archival institution in this state prescribed by the state records program.

(F) Establish a centralized program coordinating micrographics standards, training, and services for the benefit of all state agencies;

(G) Establish and publish in accordance with the applicable law necessary procedures and rules for the retention and disposal of state records.

This section does not apply to the records of state-supported institutions of higher education, which shall keep their own records.

Most Recent Effective Date: 09-26-2003

Appendix A – Statutes

Ohio Revised Code § 149.332 – Records management programs in the legislative and judicial branches

Upon request the director of administrative services and the state archivist shall assist and advise in the establishment of records management programs in the legislative and judicial branches of state government and shall, as required by them, provide program services similar to those available to the executive branch under section 149.33 of the Revised Code. Prior to the disposal of any records, the state archivist shall be allowed sixty days to select for preservation in the state archives those records the state archivist determines to have continuing historical value.

Most Recent Effective Date: 09-26-2003

Ohio Revised Code § 149.333 – Applications for records disposal or transfer; schedules of retention and destruction

No state agency shall retain, destroy, or otherwise transfer its state records in violation of this section. This section does not apply to state-supported institutions of higher education.

Each state agency shall submit to the state records program under the director of administrative services all applications for records disposal or transfer and all schedules of records retention and destruction. The state records program shall review the applications and schedules and provide written approval, rejection, or modification of an application or schedule. The state records program shall then forward the application for records disposal or transfer or the schedule for retention or destruction, with the program's recommendation attached, to the auditor of state for review and approval. The decision of the auditor of state to approve, reject, or modify the application or schedule shall be based upon the continuing administrative and fiscal value of the state records to the state or to its citizens. If the auditor of state disapproves the action by the state agency, the auditor of state shall so inform the state agency through the state records program within sixty days, and the records shall not be destroyed.

At the same time, the state records program shall forward the application for records disposal or transfer or the schedule for retention or destruction to the state archivist for review and approval. The state archivist shall have sixty days to select for custody the state records that the state archivist determines to be of continuing historical value. Records not selected shall be disposed of in accordance with this section.

Most Recent Effective Date: 09-26-2003

Ohio Revised Code § 149.34 – Records management procedures for all state agencies

The head of each state agency, office, institution, board, or commission shall do the following:

(A) Establish, maintain, and direct an active continuing program for the effective management of the records of the state agency;

(B) Submit to the state records program, in accordance with applicable standards and procedures, schedules proposing the length of time each record series warrants retention for administrative, legal, or fiscal purposes after it has been received or created by the agency. The head also shall submit to the state records program applications for disposal of records in the head's custody that are not needed in the transaction of current

Appendix A – Statutes

business and are not otherwise scheduled for retention or destruction.

(C) Within one year after their date of creation or receipt, schedule all records for disposition or retention in the manner prescribed by applicable law and procedures.

This section does not apply to state-supported institutions of higher education.

Most Recent Effective Date: 09-26-2003

Ohio Revised Code § 149.35 – Laws prohibiting the destruction of records

If any law prohibits the destruction of records, the director of administrative services, the director's designee, or the boards of trustees of state-supported institutions of higher education shall not order their destruction or other disposition. If any law provides that records shall be kept for a specified period of time, the director of administrative services, the director's designee, or the boards shall not order their destruction or other disposition prior to the expiration of that period.

Most Recent Effective Date: 09-26-2003

Ohio Revised Code § 149.351 – Prohibition against destruction or damage of records

(A) All records are the property of the public office concerned and shall not be removed, destroyed, mutilated, transferred, or otherwise damaged or disposed of, in whole or in part, except as provided by law or under the rules adopted by the records commissions provided for under sections 149.38 to 149.42 of the Revised Code or under the records programs established by the boards of trustees of state-supported institutions of higher education under section 149.33 of the Revised Code. Such records shall be delivered by outgoing officials and employees to their successors and shall not be otherwise removed, destroyed, mutilated, or transferred unlawfully.

(B) Any person who is aggrieved by the removal, destruction, mutilation, or transfer of, or by other damage to or disposition of a record in violation of division (A) of this section, or by threat of such removal, destruction, mutilation, transfer, or other damage to or disposition of such a record, may commence either or both of the following in the court of common pleas of the county in which division (A) of this section allegedly was violated or is threatened to be violated:

(1) A civil action for injunctive relief to compel compliance with division (A) of this section, and to obtain an award of the reasonable attorney's fees incurred by the person in the civil action;

(2) A civil action to recover a forfeiture in the amount of one thousand dollars for each violation, but not to exceed a cumulative total of ten thousand dollars, regardless of the number of violations, and to obtain an award of the reasonable attorney's fees incurred by the person in the civil action not to exceed the forfeiture amount recovered.

(C) (1) A person is not aggrieved by a violation of division (A) of this section if clear and convincing evidence shows that the request for a record was contrived as a pretext to create potential liability under this section. The commencement of a civil action under division (B) of this section waives any right under this

Appendix A – Statutes

chapter to decline to divulge the purpose for requesting the record, but only to the extent needed to evaluate whether the request was contrived as a pretext to create potential liability under this section.

(2) In a civil action under division (B) of this section, if clear and convincing evidence shows that the request for a record was a pretext to create potential liability under this section, the court may award reasonable attorney's fees to any defendant or defendants in the action.

(D) Once a person recovers a forfeiture in a civil action commenced under division (B)(2) of this section, no other person may recover a forfeiture under that division for a violation of division (A) of this section involving the same record, regardless of the number of persons aggrieved by a violation of division (A) of this section or the number of civil actions commenced under this section.

(E) A civil action for injunctive relief under division (B)(1) of this section or a civil action to recover a forfeiture under division (B)(2) of this section shall be commenced within five years after the day in which division (A) of this section was allegedly violated or was threatened to be violated.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 149.352 – Replevin of public records unlawfully removed

Upon request of the department of administrative services, the attorney general may replevin any public records which have been unlawfully transferred or removed in violation of sections 149.31 to 149.44 of the Revised Code or otherwise transferred or removed unlawfully. Such records shall be returned to the office of origin and safeguards shall be established to prevent further recurrence of unlawful transfer or removal.

Most Recent Effective Date: 07-01-1985

Ohio Revised Code § 149.36 – Authority not restricted

The provisions of sections 149.31 to 149.42, inclusive, of the Revised Code shall not impair or restrict the authority given by other statutes over the creation of records, systems, forms, procedures, or the control over purchases of equipment by public offices.

Most Recent Effective Date: 10-19-1959

Ohio Revised Code § 149.38 – County records commission

(A) Except as otherwise provided in section 307.847 of the Revised Code, there is hereby created in each county a county records commission, composed of a member of the board of county commissioners as chairperson, the prosecuting attorney, the auditor, the recorder, and the clerk of the court of common pleas. The commission shall appoint a secretary, who may or may not be a member of the commission and who shall serve at the pleasure of the commission. The commission may employ an archivist or records manager to serve under its direction. The commission shall meet at least once every six months and upon call of the chairperson.

(B) The functions of the county records commission shall be to provide rules for retention and disposal of records of the county and to review applications for one-time disposal of obsolete records and schedules of

Appendix A – Statutes

records retention and disposition submitted by county offices. The commission may dispose of records pursuant to the procedure outlined in this section. The commission, at any time, may review any schedule it has previously approved and, for good cause shown, may revise that schedule, subject to division (D) of this section.

(C) (1) When the county records commission has approved any county application for one-time disposal of obsolete records or any schedule of records retention and disposition, the commission shall send that application or schedule to the Ohio historical society for its review. The Ohio historical society shall review the application or schedule within a period of not more than sixty days after its receipt of it. During the sixty-day review period, the Ohio historical society may select for its custody from the application for one-time disposal of obsolete records any records it considers to be of continuing historical value, and shall denote upon any schedule of records retention and disposition any records for which the Ohio historical society will require a certificate of records disposal prior to their disposal.

(2) Upon completion of its review, the Ohio historical society shall forward the application for one-time disposal of obsolete records or the schedule of records retention and disposition to the auditor of state for the auditor's approval or disapproval. The auditor of state shall approve or disapprove the application or schedule within a period of not more than sixty days after receipt of it.

(3) Before public records are to be disposed of pursuant to an approved schedule of records retention and disposition, the county records commission shall inform the Ohio historical society of the disposal through the submission of a certificate of records disposal for only the records required by the schedule to be disposed of and shall give the society the opportunity for a period of fifteen business days to select for its custody those records, from the certificate submitted, that it considers to be of continuing historical value. Upon the expiration of the fifteen-business-day period, the county records commission also shall notify the public libraries, county historical society, state universities, and other public or quasi-public institutions, agencies, or corporations in the county that have provided the commission with their name and address for these notification purposes, that the commission has informed the Ohio historical society of the records disposal and that the notified entities, upon written agreement with the Ohio historical society pursuant to section 149.31 of the Revised Code, may select records of continuing historical value, including records that may be distributed to any of the notified entities under section 149.31 of the Revised Code. Any notified entity that notifies the county records commission of its intent to review and select records of continuing historical value from certificates of records disposal is responsible for the cost of any notice given and for the transportation of those records.

(D) The rules of the county records commission shall include a rule that requires any receipts, checks, vouchers, or other similar records pertaining to expenditures from the delinquent tax and assessment collection fund created in section 321.261 [321.26.1] of the Revised Code, from the real estate assessment fund created in section 325.31 of the Revised Code, or from amounts allocated for the furtherance of justice to the county sheriff under section 325.071 [325.07.1] of the Revised Code or to the prosecuting attorney under section 325.12 of the Revised Code to be retained for at least four years.

(E) No person shall knowingly violate the rule adopted under division (D) of this section. Whoever violates that rule is guilty of a misdemeanor of the first degree.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 149.39 – Municipal records commission

There is hereby created in each municipal corporation a records commission composed of the chief executive or the chief executive's appointed representative, as chairperson, and the chief fiscal officer, the chief legal officer, and a citizen appointed by the chief executive. The commission shall appoint a secretary, who may or

Appendix A – Statutes

may not be a member of the commission and who shall serve at the pleasure of the commission. The commission may employ an archivist or records manager to serve under its direction. The commission shall meet at least once every six months and upon the call of the chairperson.

The functions of the commission shall be to provide rules for retention and disposal of records of the municipal corporation, and to review applications for one-time disposal of obsolete records and schedules of records retention and disposition submitted by municipal offices. The commission may dispose of records pursuant to the procedure outlined in section 149.381 of the Revised Code. The commission, at any time, may review any schedule it has previously approved and, for good cause shown, may revise that schedule under the procedure outlined in that section.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 149.40 – Only necessary records to be made

The head of each public office shall cause to be made only such records as are necessary for the adequate and proper documentation of the organization, functions, policies, decisions, procedures, and essential transactions of the agency and for the protection of the legal and financial rights of the state and persons directly affected by the agency's activities.

Most Recent Effective Date: 07-01-1985

Ohio Revised Code § 149.41 – School district and educational service center records commissions

There is hereby created in each city, local, joint vocational, and exempted village school district a school district records commission, and in each educational service center an educational service center records commission. Each records commission shall be composed of the president, the treasurer of the board of education or governing board of the educational service center, and the superintendent of schools in each such district or educational service center. The commission shall meet at least once every twelve months.

The function of the commission shall be to review applications for one-time disposal of obsolete records and schedules of records retention and disposition submitted by any employee of the school district or educational service center. The commission may dispose of records pursuant to the procedure outlined in section 149.381 of the Revised Code. The commission, at any time, may review any schedule it has previously approved and, for good cause shown, may revise that schedule under the procedure outlined in that section.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 149.411 – Library records commission in each public library

There is hereby created in each county free public library, municipal free public library, township free public library, school district free public library as described in section 3375.15 of the Revised Code, county library district, and regional library district a library records commission composed of the members and the fiscal officer of the board of library trustees of the appropriate public library or library district. The commission shall meet at least once every twelve months.

Appendix A – Statutes

The functions of the commission shall be to review applications for one-time disposal of obsolete records and schedules of records retention and disposition submitted by any employee of the library. The commission may dispose of records pursuant to the procedure outlined in section 149.381 of the Revised Code. The commission, at any time, may review any schedule it has previously approved and, for good cause shown, may revise that schedule under the procedure outlined in that section.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 149.412 – Special taxing district records commission

There is hereby created in each special taxing district that is a public office as defined in section 149.011 of the Revised Code and that is not specifically designated in section 149.38, 149.39, 149.41, 149.411, or 149.42 of the Revised Code a special taxing district records commission composed of, at a minimum, the chairperson, a fiscal representative, and a legal representative of the governing board of the special taxing district. The commission shall meet at least once every twelve months and upon the call of the chairperson.

The functions of the commission shall be to review applications for one-time disposal of obsolete records and schedules of records retention and disposition submitted by any employee of the special taxing district. The commission may dispose of records pursuant to the procedure outlined in section 149.381 of the Revised Code. The commission, at any time, may review any schedule it has previously approved and, for good cause shown, may revise that schedule under the procedure outlined in that section.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 149.42 – Township records commission

There is hereby created in each township a township records commission, composed of the chairperson of the board of township trustees and the fiscal officer of the township. The commission shall meet at least once every twelve months and upon the call of the chairperson.

The function of the commission shall be to review applications for one-time disposal of obsolete records and schedules of records retention and disposition submitted by township offices. The commission may dispose of records pursuant to the procedure outlined in section 149.381 of the Revised Code. The commission, at any time, may review any schedule it has previously approved and, for good cause shown, may revise that schedule under the procedure outlined in that section.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 149.43 – Availability of public records

(A) As used in this section:

(1) "Public record" means records kept by any public office, including, but not limited to, state, county, city, village, township, and school district units, and records pertaining to the delivery of educational services by an alternative school in this state kept by the nonprofit or for profit entity operating the alternative school pursuant to section 3313.533 [3313.53.3] of the Revised Code. "Public record" does not mean any of the following:

Appendix A – Statutes

- (a) Medical records;
- (b) Records pertaining to probation and parole proceedings or to proceedings related to the imposition of community control sanctions and post-release control sanctions;
- (c) Records pertaining to actions under section 2151.85 and division (C) of section 2919.121 [2919.12.1] of the Revised Code and to appeals of actions arising under those sections;
- (d) Records pertaining to adoption proceedings, including the contents of an adoption file maintained by the department of health under section 3705.12 of the Revised Code;
- (e) Information in a record contained in the putative father registry established by section 3107.062 [3107.06.2] of the Revised Code, regardless of whether the information is held by the department of job and family services or, pursuant to section 3111.69 of the Revised Code, the office of child support in the department or a child support enforcement agency;
- (f) Records listed in division (A) of section 3107.42 of the Revised Code or specified in division (A) of section 3107.52 of the Revised Code;
- (g) Trial preparation records;
- (h) Confidential law enforcement investigatory records;
- (i) Records containing information that is confidential under section 2710.03 or 4112.05 of the Revised Code;
- (j) DNA records stored in the DNA database pursuant to section 109.573 [109.57.3] of the Revised Code;
- (k) Inmate records released by the department of rehabilitation and correction to the department of youth services or a court of record pursuant to division (E) of section 5120.21 of the Revised Code;
- (l) Records maintained by the department of youth services pertaining to children in its custody released by the department of youth services to the department of rehabilitation and correction pursuant to section 5139.05 of the Revised Code;
- (m) Intellectual property records;
- (n) Donor profile records;
- (o) Records maintained by the department of job and family services pursuant to section 3121.894 [3121.89.4] of the Revised Code;
- (p) Peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation residential and familial information;
- (q) In the case of a county hospital operated pursuant to Chapter 339. of the Revised Code or a municipal hospital operated pursuant to Chapter 749. of the Revised Code, information that constitutes a trade secret, as defined in section 1333.61 of the Revised Code;
- (r) Information pertaining to the recreational activities of a person under the age of eighteen;

Appendix A – Statutes

(s) Records provided to, statements made by review board members during meetings of, and all work products of a child fatality review board acting under sections 307.621 [307.62.1] to 307.629 [307.62.9] of the Revised Code, and child fatality review data submitted by the child fatality review board to the department of health or a national child death review database, other than the report prepared pursuant to division (A) of section 307.626 [307.62.6] of the Revised Code;

(t) Records provided to and statements made by the executive director of a public children services agency or a prosecuting attorney acting pursuant to section 5153.171 [5153.17.1] of the Revised Code other than the information released under that section;

(u) Test materials, examinations, or evaluation tools used in an examination for licensure as a nursing home administrator that the board of examiners of nursing home administrators administers under section 4751.04 of the Revised Code or contracts under that section with a private or government entity to administer;

(v) Records the release of which is prohibited by state or federal law;

(w) Proprietary information of or relating to any person that is submitted to or compiled by the Ohio venture capital authority created under section 150.01 of the Revised Code;

(x) Information reported and evaluations conducted pursuant to section 3701.072 [3701.07.2] of the Revised Code.

(y) Financial statements and data any person submits for any purpose to the Ohio housing finance agency or the controlling board in connection with applying for, receiving, or accounting for financial assistance from the agency, and information that identifies any individual who benefits directly or indirectly from financial assistance from the agency;

(z) Records listed in section 5101.29 of the Revised Code.

(aa) Discharges recorded with a county recorder under section 317.24 of the Revised Code, as specified in division (B)(2) of that section.

(bb) Usage information including names and addresses of specific residential and commercial customers of a municipally owned or operated public utility.

(2) "Confidential law enforcement investigatory record" means any record that pertains to a law enforcement matter of a criminal, quasi-criminal, civil, or administrative nature, but only to the extent that the release of the record would create a high probability of disclosure of any of the following:

(a) The identity of a suspect who has not been charged with the offense to which the record pertains, or of an information source or witness to whom confidentiality has been reasonably promised;

(b) Information provided by an information source or witness to whom confidentiality has been reasonably promised, which information would reasonably tend to disclose the source's or witness's identity;

(c) Specific confidential investigatory techniques or procedures or specific investigatory work product;

(d) Information that would endanger the life or physical safety of law enforcement personnel, a crime victim, a witness, or a confidential information source.

Appendix A – Statutes

(3) "Medical record" means any document or combination of documents, except births, deaths, and the fact of admission to or discharge from a hospital, that pertains to the medical history, diagnosis, prognosis, or medical condition of a patient and that is generated and maintained in the process of medical treatment.

(4) "Trial preparation record" means any record that contains information that is specifically compiled in reasonable anticipation of, or in defense of, a civil or criminal action or proceeding, including the independent thought processes and personal trial preparation of an attorney.

(5) "Intellectual property record" means a record, other than a financial or administrative record, that is produced or collected by or for faculty or staff of a state institution of higher learning in the conduct of or as a result of study or research on an educational, commercial, scientific, artistic, technical, or scholarly issue, regardless of whether the study or research was sponsored by the institution alone or in conjunction with a governmental body or private concern, and that has not been publicly released, published, or patented.

(6) "Donor profile record" means all records about donors or potential donors to a public institution of higher education except the names and reported addresses of the actual donors and the date, amount, and conditions of the actual donation.

(7) "Peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation residential and familial information" means any information that discloses any of the following about a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation:

(a) The address of the actual personal residence of a peace officer, parole officer, probation officer, bailiff, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation, except for the state or political subdivision in which the peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation resides;

(b) Information compiled from referral to or participation in an employee assistance program;

(c) The social security number, the residential telephone number, any bank account, debit card, charge card, or credit card number, or the emergency telephone number of, or any medical information pertaining to, a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation;

(d) The name of any beneficiary of employment benefits, including, but not limited to, life insurance benefits, provided to a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation by the peace officer's, parole officer's, probation officer's, bailiff's, prosecuting attorney's, assistant prosecuting attorney's, correctional employee's, youth services employee's, firefighter's, EMT's, or investigator of the bureau of criminal identification and investigation's employer;

(e) The identity and amount of any charitable or employment benefit deduction made by the peace officer's, parole officer's, probation officer's, bailiff's, prosecuting attorney's, assistant prosecuting attorney's, correctional employee's, youth services employee's, firefighter's, EMT's, or investigator of the bureau of criminal identification and investigation's employer from the peace officer's, parole officer's, probation officer's, bailiff's, prosecuting attorney's, assistant prosecuting attorney's, correctional

Appendix A – Statutes

employee's, youth services employee's, firefighter's, EMT's, or investigator of the bureau of criminal identification and investigation's compensation unless the amount of the deduction is required by state or federal law;

(f) The name, the residential address, the name of the employer, the address of the employer, the social security number, the residential telephone number, any bank account, debit card, charge card, or credit card number, or the emergency telephone number of the spouse, a former spouse, or any child of a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation;

(g) A photograph of a peace officer who holds a position or has an assignment that may include undercover or plain clothes positions or assignments as determined by the peace officer's appointing authority.

As used in divisions (A)(7) and (B)(9) of this section, "peace officer" has the same meaning as in section 109.71 of the Revised Code and also includes the superintendent and troopers of the state highway patrol; it does not include the sheriff of a county or a supervisory employee who, in the absence of the sheriff, is authorized to stand in for, exercise the authority of, and perform the duties of the sheriff.

As used in divisions (A)(7) and (B)(5) of this section, "correctional employee" means any employee of the department of rehabilitation and correction who in the course of performing the employee's job duties has or has had contact with inmates and persons under supervision.

As used in divisions (A)(7) and (B)(5) of this section, "youth services employee" means any employee of the department of youth services who in the course of performing the employee's job duties has or has had contact with children committed to the custody of the department of youth services.

As used in divisions (A)(7) and (B)(9) of this section, "firefighter" means any regular, paid or volunteer, member of a lawfully constituted fire department of a municipal corporation, township, fire district, or village.

As used in divisions (A)(7) and (B)(9) of this section, "EMT" means EMTs-basic, EMTs-I, and paramedics that provide emergency medical services for a public emergency medical service organization. "Emergency medical service organization," "EMT-basic," "EMT-I," and "paramedic" have the same meanings as in section 4765.01 of the Revised Code.

As used in divisions (A)(7) and (B)(9) of this section, "investigator of the bureau of criminal identification and investigation" has the meaning defined in section 2903.11 of the Revised Code.

(8) "Information pertaining to the recreational activities of a person under the age of eighteen" means information that is kept in the ordinary course of business by a public office, that pertains to the recreational activities of a person under the age of eighteen years, and that discloses any of the following:

(a) The address or telephone number of a person under the age of eighteen or the address or telephone number of that person's parent, guardian, custodian, or emergency contact person;

(b) The social security number, birth date, or photographic image of a person under the age of eighteen;

(c) Any medical record, history, or information pertaining to a person under the age of eighteen;

(d) Any additional information sought or required about a person under the age of eighteen for the purpose of allowing that person to participate in any recreational activity conducted or sponsored by a

Appendix A – Statutes

public office or to use or obtain admission privileges to any recreational facility owned or operated by a public office.

(9) "Community control sanction" has the same meaning as in section 2929.01 of the Revised Code.

(10) "Post-release control sanction" has the same meaning as in section 2967.01 of the Revised Code.

(11) "Redaction" means obscuring or deleting any information that is exempt from the duty to permit public inspection or copying from an item that otherwise meets the definition of a "record" in section 149.011 [149.01.1] of the Revised Code.

(12) "Designee" and "elected official" have the same meanings as in section 109.43 of the Revised Code.

(B) (1) Upon request and subject to division (B)(8) of this section, all public records responsive to the request shall be promptly prepared and made available for inspection to any person at all reasonable times during regular business hours. Subject to division (B)(8) of this section, upon request, a public office or person responsible for public records shall make copies of the requested public record available at cost and within a reasonable period of time. If a public record contains information that is exempt from the duty to permit public inspection or to copy the public record, the public office or the person responsible for the public record shall make available all of the information within the public record that is not exempt. When making that public record available for public inspection or copying that public record, the public office or the person responsible for the public record shall notify the requester of any redaction or make the redaction plainly visible. A redaction shall be deemed a denial of a request to inspect or copy the redacted information, except if federal or state law authorizes or requires a public office to make the redaction.

(2) To facilitate broader access to public records, a public office or the person responsible for public records shall organize and maintain public records in a manner that they can be made available for inspection or copying in accordance with division (B) of this section. A public office also shall have available a copy of its current records retention schedule at a location readily available to the public. If a requester makes an ambiguous or overly broad request or has difficulty in making a request for copies or inspection of public records under this section such that the public office or the person responsible for the requested public record cannot reasonably identify what public records are being requested, the public office or the person responsible for the requested public record may deny the request but shall provide the requester with an opportunity to revise the request by informing the requester of the manner in which records are maintained by the public office and accessed in the ordinary course of the public office's or person's duties.

(3) If a request is ultimately denied, in part or in whole, the public office or the person responsible for the requested public record shall provide the requester with an explanation, including legal authority, setting forth why the request was denied. If the initial request was provided in writing, the explanation also shall be provided to the requester in writing. The explanation shall not preclude the public office or the person responsible for the requested public record from relying upon additional reasons or legal authority in defending an action commenced under division (C) of this section.

(4) Unless specifically required or authorized by state or federal law or in accordance with division (B) of this section, no public office or person responsible for public records may limit or condition the availability of public records by requiring disclosure of the requester's identity or the intended use of the requested public record. Any requirement that the requester disclose the requester's identity or the intended use of the requested public record constitutes a denial of the request.

(5) A public office or person responsible for public records may ask a requester to make the request in writing, may ask for the requester's identity, and may inquire about the intended use of the information requested, but may do so only after disclosing to the requester that a written request is not mandatory and that the requester may decline to reveal the requester's identity or the intended use and when a written

Appendix A – Statutes

request or disclosure of the identity or intended use would benefit the requester by enhancing the ability of the public office or person responsible for public records to identify, locate, or deliver the public records sought by the requester.

(6) If any person chooses to obtain a copy of a public record in accordance with division (B) of this section, the public office or person responsible for the public record may require that person to pay in advance the cost involved in providing the copy of the public record in accordance with the choice made by the person seeking the copy under this division. The public office or the person responsible for the public record shall permit that person to choose to have the public record duplicated upon paper, upon the same medium upon which the public office or person responsible for the public record keeps it, or upon any other medium upon which the public office or person responsible for the public record determines that it reasonably can be duplicated as an integral part of the normal operations of the public office or person responsible for the public record. When the person seeking the copy makes a choice under this division, the public office or person responsible for the public record shall provide a copy of it in accordance with the choice made by the person seeking the copy. Nothing in this section requires a public office or person responsible for the public record to allow the person seeking a copy of the public record to make the copies of the public record.

(7) Upon a request made in accordance with division (B) of this section and subject to division (B)(6) of this section, a public office or person responsible for public records shall transmit a copy of a public record to any person by United States mail or by any other means of delivery or transmission within a reasonable period of time after receiving the request for the copy. The public office or person responsible for the public record may require the person making the request to pay in advance the cost of postage if the copy is transmitted by United States mail or the cost of delivery if the copy is transmitted other than by United States mail, and to pay in advance the costs incurred for other supplies used in the mailing, delivery, or transmission.

Any public office may adopt a policy and procedures that it will follow in transmitting, within a reasonable period of time after receiving a request, copies of public records by United States mail or by any other means of delivery or transmission pursuant to this division. A public office that adopts a policy and procedures under this division shall comply with them in performing its duties under this division.

In any policy and procedures adopted under this division, a public office may limit the number of records requested by a person that the office will transmit by United States mail to ten per month, unless the person certifies to the office in writing that the person does not intend to use or forward the requested records, or the information contained in them, for commercial purposes. For purposes of this division, "commercial" shall be narrowly construed and does not include reporting or gathering news, reporting or gathering information to assist citizen oversight or understanding of the operation or activities of government, or nonprofit educational research.

(8) A public office or person responsible for public records is not required to permit a person who is incarcerated pursuant to a criminal conviction or a juvenile adjudication to inspect or to obtain a copy of any public record concerning a criminal investigation or prosecution or concerning what would be a criminal investigation or prosecution if the subject of the investigation or prosecution were an adult, unless the request to inspect or to obtain a copy of the record is for the purpose of acquiring information that is subject to release as a public record under this section and the judge who imposed the sentence or made the adjudication with respect to the person, or the judge's successor in office, finds that the information sought in the public record is necessary to support what appears to be a justiciable claim of the person.

(9) (a) Upon written request made and signed by a journalist on or after December 16, 1999, a public office, or person responsible for public records, having custody of the records of the agency employing a specified peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of

Appendix A – Statutes

the bureau of criminal identification and investigation shall disclose to the journalist the address of the actual personal residence of the peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation and, if the peace officer's, parole officer's, probation officer's, bailiff's, prosecuting attorney's, assistant prosecuting attorney's, correctional employee's, youth services employee's, firefighter's, EMT's, or investigator of the bureau of criminal identification and investigation's spouse, former spouse, or child is employed by a public office, the name and address of the employer of the peace officer's, parole officer's, probation officer's, bailiff's, prosecuting attorney's, assistant prosecuting attorney's, correctional employee's, youth services employee's, firefighter's, EMT's, or investigator of the bureau of criminal identification and investigation's spouse, former spouse, or child. The request shall include the journalist's name and title and the name and address of the journalist's employer and shall state that disclosure of the information sought would be in the public interest.

(b) Division (B)(9)(a) of this section also applies to journalist requests for customer information maintained by a municipally owned or operated public utility, other than social security numbers and any private financial information such as credit reports, payment methods, credit card numbers, and bank account information.

(c) As used in division (B)(9) of this section, "journalist" means a person engaged in, connected with, or employed by any news medium, including a newspaper, magazine, press association, news agency, or wire service, a radio or television station, or a similar medium, for the purpose of gathering, processing, transmitting, compiling, editing, or disseminating information for the general public.

- (C) (1) If a person allegedly is aggrieved by the failure of a public office or the person responsible for public records to promptly prepare a public record and to make it available to the person for inspection in accordance with division (B) of this section or by any other failure of a public office or the person responsible for public records to comply with an obligation in accordance with division (B) of this section, the person allegedly aggrieved may commence a mandamus action to obtain a judgment that orders the public office or the person responsible for the public record to comply with division (B) of this section, that awards court costs and reasonable attorney's fees to the person that instituted the mandamus action, and, if applicable, that includes an order fixing statutory damages under division (C)(1) of this section. The mandamus action may be commenced in the court of common pleas of the county in which division (B) of this section allegedly was not complied with, in the supreme court pursuant to its original jurisdiction under Section 2 of Article IV, Ohio Constitution, or in the court of appeals for the appellate district in which division (B) of this section allegedly was not complied with pursuant to its original jurisdiction under Section 3 of Article IV, Ohio Constitution.

If a requestor transmits a written request by hand delivery or certified mail to inspect or receive copies of any public record in a manner that fairly describes the public record or class of public records to the public office or person responsible for the requested public records, except as otherwise provided in this section, the requestor shall be entitled to recover the amount of statutory damages set forth in this division if a court determines that the public office or the person responsible for public records failed to comply with an obligation in accordance with division (B) of this section.

The amount of statutory damages shall be fixed at one hundred dollars for each business day during which the public office or person responsible for the requested public records failed to comply with an obligation in accordance with division (B) of this section, beginning with the day on which the requester files a mandamus action to recover statutory damages, up to a maximum of one thousand dollars. The award of statutory damages shall not be construed as a penalty, but as compensation for injury arising from lost use of the requested information. The existence of this injury shall be conclusively presumed. The award of statutory damages shall be in addition to all other remedies authorized by this section.

Appendix A – Statutes

The court may reduce an award of statutory damages or not award statutory damages if the court determines both of the following:

(a) That, based on the ordinary application of statutory law and case law as it existed at the time of the conduct or threatened conduct of the public office or person responsible for the requested public records that allegedly constitutes a failure to comply with an obligation in accordance with division (B) of this section and that was the basis of the mandamus action, a well-informed public office or person responsible for the requested public records reasonably would believe that the conduct or threatened conduct of the public office or person responsible for the requested public records did not constitute a failure to comply with an obligation in accordance with division (B) of this section;

(b) That a well-informed public office or person responsible for the requested public records reasonably would believe that the conduct or threatened conduct of the public office or person responsible for the requested public records would serve the public policy that underlies the authority that is asserted as permitting that conduct or threatened conduct.

(2) (a) If the court issues a writ of mandamus that orders the public office or the person responsible for the public record to comply with division (B) of this section and determines that the circumstances described in division (C)(1) of this section exist, the court shall determine and award to the relator all court costs.

(b) If the court renders a judgment that orders the public office or the person responsible for the public record to comply with division (B) of this section, the court may award reasonable attorney's fees subject to reduction as described in division (C)(2)(c) of this section. The court shall award reasonable attorney's fees, subject to reduction as described in division (C)(2)(c) of this section when either of the following applies:

(i) The public office or the person responsible for the public records failed to respond affirmatively or negatively to the public records request in accordance with the time allowed under division (B) of this section.

(ii) The public office or the person responsible for the public records promised to permit the relator to inspect or receive copies of the public records requested within a specified period of time but failed to fulfill that promise within that specified period of time.

(c) Court costs and reasonable attorney's fees awarded under this section shall be construed as remedial and not punitive. Reasonable attorney's fees shall include reasonable fees incurred to produce proof of the reasonableness and amount of the fees and to otherwise litigate entitlement to the fees. The court may reduce an award of attorney's fees to the relator or not award attorney's fees to the relator if the court determines both of the following:

(i) That, based on the ordinary application of statutory law and case law as it existed at the time of the conduct or threatened conduct of the public office or person responsible for the requested public records that allegedly constitutes a failure to comply with an obligation in accordance with division (B) of this section and that was the basis of the mandamus action, a well-informed public office or person responsible for the requested public records reasonably would believe that the conduct or threatened conduct of the public office or person responsible for the requested public records did not constitute a failure to comply with an obligation in accordance with division (B) of this section;

(ii) That a well-informed public office or person responsible for the requested public records reasonably would believe that the conduct or threatened conduct of the public office or person responsible for the requested public records as described in division (C)(2)(c)(i) of this section would serve the public policy that underlies the authority that is asserted as permitting that conduct or threatened conduct.

Appendix A – Statutes

(D) Chapter 1347. of the Revised Code does not limit the provisions of this section.

(E)(1) To ensure that all employees of public offices are appropriately educated about a public office's obligations under division (B) of this section, all elected officials or their appropriate designees shall attend training approved by the attorney general as provided in section 109.43 of the Revised Code. In addition, all public offices shall adopt a public records policy in compliance with this section for responding to public records requests. In adopting a public records policy under this division, a public office may obtain guidance from the model public records policy developed and provided to the public office by the attorney general under section 109.43 of the Revised Code. Except as otherwise provided in this section, the policy may not limit the number of public records that the public office will make available to a single person, may not limit the number of public records that it will make available during a fixed period of time, and may not establish a fixed period of time before it will respond to a request for inspection or copying of public records, unless that period is less than eight hours.

(2) The public office shall distribute the public records policy adopted by the public office under division (E)(1) of this section to the employee of the public office who is the records custodian or records manager or otherwise has custody of the records of that office. The public office shall require that employee to acknowledge receipt of the copy of the public records policy. The public office shall create a poster that describes its public records policy and shall post the poster in a conspicuous place in the public office and in all locations where the public office has branch offices. The public office may post its public records policy on the internet web site of the public office if the public office maintains an internet web site. A public office that has established a manual or handbook of its general policies and procedures for all employees of the public office shall include the public records policy of the public office in the manual or handbook.

(F)(1) The bureau of motor vehicles may adopt rules pursuant to Chapter 119. of the Revised Code to reasonably limit the number of bulk commercial special extraction requests made by a person for the same records or for updated records during a calendar year. The rules may include provisions for charges to be made for bulk commercial special extraction requests for the actual cost of the bureau, plus special extraction costs, plus ten per cent. The bureau may charge for expenses for redacting information, the release of which is prohibited by law.

(2) As used in division (F)(1) of this section:

(a) "Actual cost" means the cost of depleted supplies, records storage media costs, actual mailing and alternative delivery costs, or other transmitting costs, and any direct equipment operating and maintenance costs, including actual costs paid to private contractors for copying services.

(b) "Bulk commercial special extraction request" means a request for copies of a record for information in a format other than the format already available, or information that cannot be extracted without examination of all items in a records series, class of records, or database by a person who intends to use or forward the copies for surveys, marketing, solicitation, or resale for commercial purposes. "Bulk commercial special extraction request" does not include a request by a person who gives assurance to the bureau that the person making the request does not intend to use or forward the requested copies for surveys, marketing, solicitation, or resale for commercial purposes.

(c) "Commercial" means profit-seeking production, buying, or selling of any good, service, or other product.

(d) "Special extraction costs" means the cost of the time spent by the lowest paid employee competent to perform the task, the actual amount paid to outside private contractors employed by the bureau, or the actual cost incurred to create computer programs to make the special extraction. "Special extraction costs" include any charges paid to a public agency for computer or records services.

Appendix A – Statutes

(3) For purposes of divisions (F)(1) and (2) of this section, "surveys, marketing, solicitation, or resale for commercial purposes" shall be narrowly construed and does not include reporting or gathering news, reporting or gathering information to assist citizen oversight or understanding of the operation or activities of government, or nonprofit educational research.

Most Recent Effective Date: 10-17-2011

Ohio Revised Code § 149.431 – Financial records of nonprofit organizations receiving governmental funds; confidentiality of patient and client records

(A) Any governmental entity or agency and any nonprofit corporation or association, except a corporation organized pursuant to Chapter 1719. of the Revised Code prior to January 1, 1980 or organized pursuant to Chapter 3941. of the Revised Code, that enters into a contract or other agreement with the federal government, a unit of state government, or a political subdivision or taxing unit of this state for the provision of services shall keep accurate and complete financial records of any moneys expended in relation to the performance of the services pursuant to such contract or agreement according to generally accepted accounting principles. Such contract or agreement and such financial records shall be deemed to be public records as defined in division (A)(1) of section 149.43 of the Revised Code and are subject to the requirements of division (B) of that section, except that:

(1) Any information directly or indirectly identifying a present or former individual patient or client or his diagnosis, prognosis, or medical treatment, treatment for a mental or emotional disorder, treatment for mental retardation or a developmental disability, treatment for drug abuse or alcoholism, or counseling for personal or social problems is not a public record;

(2) If disclosure of the contract or agreement or financial records is requested at a time when confidential professional services are being provided to a patient or client whose confidentiality might be violated if disclosure were made at that time, disclosure may be deferred if reasonable times are established when the contractor agreement or financial records will be disclosed;

(3) Any nonprofit corporation or association that receives both public and private funds in fulfillment of any such contract or other agreement is not required to keep as public records the financial records of any private funds expended in relation to the performance of services pursuant to the contract or agreement.

(B) Any nonprofit corporation or association that receives more than fifty per cent of its gross receipts excluding moneys received pursuant to Title XVIII of the "Social Security Act," 49 Stat. 620 (1935), 42 U.S.C. 301, as amended, in a calendar year in fulfillment of a contract or other agreement for services with a governmental entity shall maintain information setting forth the compensation of any individual serving the nonprofit corporation or association in an executive or administrative capacity. Such information shall be deemed to be public records as defined in division (A)(1) of section 149.43 of the Revised Code and is subject to the requirements of division (B) of that section.

Nothing in this section shall be construed to otherwise limit the provisions of section 149.43 of the Revised Code.

Most Recent Effective Date: 07-01-1991

Appendix A – Statutes

Ohio Revised Code § 149.432 – Release of library record or patron information

(A) As used in this section:

(1) “Library” means a library that is open to the public, including any of the following:

- (a) A library that is maintained and regulated under section 715.13 of the Revised Code;
- (b) A library that is created, maintained, and regulated under Chapter 3375. of the Revised Code;
- (c) A library that is created and maintained by a public or private school, college, university, or other educational institution;
- (d) A library that is created and maintained by a historical or charitable organization, institution, association, or society.

“Library” includes the members of the governing body and the employees of a library.

(2) “Library record” means a record in any form that is maintained by a library and that contains any of the following types of information:

- (a) Information that the library requires an individual to provide in order to be eligible to use library services or borrow materials;
- (b) Information that identifies an individual as having requested or obtained specific materials or materials on a particular subject;
- (c) Information that is provided by an individual to assist a library staff member to answer a specific question or provide information on a particular subject.

“Library record” does not include information that does not identify any individual and that is retained for the purpose of studying or evaluating the use of a library and its materials and services.

(3) Subject to division (B)(5) of this section, “patron information” means personally identifiable information about an individual who has used any library service or borrowed any library materials.

(B) A library shall not release any library record or disclose any patron information except in the following situations:

- (1) If a library record or patron information pertaining to a minor child is requested from a library by the minor child’s parent, guardian, or custodian, the library shall make that record or information available to the parent, guardian, or custodian in accordance with division (B) of section 149.43 of the Revised Code.
- (2) Library records or patron information shall be released in the following situations:
 - (a) In accordance with a subpoena, search warrant, or other court order;
 - (b) To a law enforcement officer who is acting in the scope of the officer’s law enforcement duties and who is investigating a matter involving public safety in exigent circumstances.
- (3) A library record or patron information shall be released upon the request or with the consent of the individual who is the subject of the record or information.

Appendix A – Statutes

(4) Library records may be released for administrative library purposes, including establishment or maintenance of a system to manage the library records or to assist in the transfer of library records from one records management system to another, compilation of statistical data on library use, and collection of fines and penalties.

(5) A library may release under division (B) of section 149.43 of the Revised Code records that document improper use of the internet at the library so long as any patron information is removed from those records. As used in division (B)(5) of this section, “patron information” does not include information about the age or gender of an individual.

Most Recent Effective Date: 11-05-2004

Ohio Revised Code § 149.433 – Exemption of security and infrastructure records

(A) As used in this section:

(1) “Act of terrorism” has the same meaning as in section 2909.21 of the Revised Code.

(2) “Infrastructure record” means any record that discloses the configuration of a public office’s or chartered nonpublic school’s critical systems including, but not limited to, communication, computer, electrical, mechanical, ventilation, water, and plumbing systems, security codes, or the infrastructure or structural configuration of the building in which a public office or chartered nonpublic school is located. “Infrastructure record” does not mean a simple floor plan that discloses only the spatial relationship of components of a public office or chartered nonpublic school or the building in which a public office or chartered nonpublic school is located.

(3) “Security record” means any of the following:

(a) Any record that contains information directly used for protecting or maintaining the security of a public office against attack, interference, or sabotage;

(b) Any record assembled, prepared, or maintained by a public office or public body to prevent, mitigate, or respond to acts of terrorism, including any of the following:

(i) Those portions of records containing specific and unique vulnerability assessments or specific and unique response plans either of which is intended to prevent or mitigate acts of terrorism, and communication codes or deployment plans of law enforcement or emergency response personnel;

(ii) Specific intelligence information and specific investigative records shared by federal and international law enforcement agencies with state and local law enforcement and public safety agencies;

(iii) National security records classified under federal executive order and not subject to public disclosure under federal law that are shared by federal agencies, and other records related to national security briefings to assist state and local government with domestic preparedness for acts of terrorism.

(c) A school safety plan adopted pursuant to section 3313.536 of the Revised Code.

(B) A record kept by a public office that is a security record or an infrastructure record is not a public record under section 149.43 of the Revised Code and is not subject to mandatory release or disclosure under that section.

Appendix A – Statutes

(C) Notwithstanding any other section of the Revised Code, disclosure by a public office, public employee, chartered nonpublic school, or chartered nonpublic school employee of a security record or infrastructure record that is necessary for construction, renovation, or remodeling work on any public building or project or chartered nonpublic school does not constitute public disclosure for purposes of waiving division (B) of this section and does not result in that record becoming a public record for purposes of section 149.43 of the Revised Code.

Most Recent Effective Date: 09-28-2006

Ohio Revised Code § 149.434 – Database or list of names and birth dates of persons elected to or employed by that public office

(A) Each public office or person responsible for public records shall maintain a database or a list that includes the name and date of birth of all public officials and employees elected to or employed by that public office. The database or list is a public record and shall be made available upon a request made pursuant to section 149.43 of the Revised Code.

(B) As used in this section:

- (1) “Employee” has the same meaning as in section 9.40 of the Revised Code.
- (2) “Public official” has the same meaning as in section 117.01 of the Revised Code.
- (3) “Public record” has the same meaning as in section 149.43 of the Revised Code.

Most Recent Effective Date: 09-01-2008

Ohio Revised Code § 149.44 – Availability of records in centers and archival institutions

Any state records center or archival institution established pursuant to sections 149.31 and 149.331 of the Revised Code is an extension of the departments, offices, and institutions of the state and all state and local records transferred to records centers and archival institutions shall be available for use under section 149.43 of the Revised Code. The state records administration, assisted by the state archivist, shall establish rules and procedures for the operation of state records centers and archival institutions holding public records, respectively.

Most Recent Effective Date: 07-01-1985

Ohio Revised Code § 121.22 – Meetings of public bodies to be public; exceptions

(A) This section shall be liberally construed to require public officials to take official action and to conduct all deliberations upon official business only in open meetings unless the subject matter is specifically excepted by law.

Appendix A – Statutes

(B) As used in this section:

(1) "Public body" means any of the following:

(a) Any board, commission, committee, council, or similar decision-making body of a state agency, institution, or authority, and any legislative authority or board, commission, committee, council, agency, authority, or similar decision-making body of any county, township, municipal corporation, school district, or other political subdivision or local public institution;

(b) Any committee or subcommittee of a body described in division (B)(1)(a) of this section;

(c) A court of jurisdiction of a sanitary district organized wholly for the purpose of providing a water supply for domestic, municipal, and public use when meeting for the purpose of the appointment, removal, or reappointment of a member of the board of directors of such a district pursuant to section 6115.10 of the Revised Code, if applicable, or for any other matter related to such a district other than litigation involving the district. As used in division (B)(1)(c) of this section, "court of jurisdiction" has the same meaning as "court" in section 6115.01 of the Revised Code.

(2) "Meeting" means any prearranged discussion of the public business of the public body by a majority of its members.

(3) "Regulated individual" means either of the following:

(a) A student in a state or local public educational institution;

(b) A person who is, voluntarily or involuntarily, an inmate, patient, or resident of a state or local institution because of criminal behavior, mental illness or retardation, disease, disability, age, or other condition requiring custodial care.

(4) "Public office" has the same meaning as in section 149.011 [149.01.1] of the Revised Code.

(C) All meetings of any public body are declared to be public meetings open to the public at all times. A member of a public body shall be present in person at a meeting open to the public to be considered present or to vote at the meeting and for purposes of determining whether a quorum is present at the meeting.

The minutes of a regular or special meeting of any public body shall be promptly prepared, filed, and maintained and shall be open to public inspection. The minutes need only reflect the general subject matter of discussions in executive sessions authorized under division (G) or (J) of this section.

(D) This section does not apply to any of the following:

(1) A grand jury;

(2) An audit conference conducted by the auditor of state or independent certified public accountants with officials of the public office that is the subject of the audit;

(3) The adult parole authority when its hearings are conducted at a correctional institution for the sole purpose of interviewing inmates to determine parole or pardon;

(4) The organized crime investigations commission established under section 177.01 of the Revised Code;

Appendix A – Statutes

(5) Meetings of a child fatality review board established under section 307.621 [307.62.1] of the Revised Code and meetings conducted pursuant to sections 5153.171 [5153.17.1] to 5153.173 [5153.17.3] of the Revised Code;

(6) The state medical board when determining whether to suspend a certificate without a prior hearing pursuant to division (G) of either section 4730.25 or 4731.22 of the Revised Code;

(7) The board of nursing when determining whether to suspend a license or certificate without a prior hearing pursuant to division (B) of section 4723.281 [4723.28.1] of the Revised Code;

(8) The state board of pharmacy when determining whether to suspend a license without a prior hearing pursuant to division (D) of section 4729.16 of the Revised Code;

(9) The state chiropractic board when determining whether to suspend a license without a hearing pursuant to section 4734.37 of the Revised Code;

(10) The executive committee of the emergency response commission when determining whether to issue an enforcement order or request that a civil action, civil penalty action, or criminal action be brought to enforce Chapter 3750. of the Revised Code;

(11) The board of directors of the nonprofit corporation formed under section 187.01 of the Revised Code or any committee thereof, and the board of directors of any subsidiary of that corporation or a committee thereof;

(12) An audit conference conducted by the audit staff of the department of job and family services with officials of the public office that is the subject of that audit under section 5101.37 of the Revised Code.

(E) The controlling board, the development financing advisory council, the industrial technology and enterprise advisory council, the tax credit authority, or the minority development financing advisory board, when meeting to consider granting assistance pursuant to Chapter 122. or 166. of the Revised Code, in order to protect the interest of the applicant or the possible investment of public funds, by unanimous vote of all board, council, or authority members present, may close the meeting during consideration of the following information confidentially received by the authority, council, or board from the applicant:

(1) Marketing plans;

(2) Specific business strategy;

(3) Production techniques and trade secrets;

(4) Financial projections;

(5) Personal financial statements of the applicant or members of the applicant's immediate family, including, but not limited to, tax records or other similar information not open to public inspection.

The vote by the authority, council, or board to accept or reject the application, as well as all proceedings of the authority, council, or board not subject to this division, shall be open to the public and governed by this section.

(F) Every public body, by rule, shall establish a reasonable method whereby any person may determine the time and place of all regularly scheduled meetings and the time, place, and purpose of all special meetings. A public body shall not hold a special meeting unless it gives at least twenty-four hours' advance notice to the news media that have requested notification, except in the event of an emergency requiring immediate official

Appendix A – Statutes

action. In the event of an emergency, the member or members calling the meeting shall notify the news media that have requested notification immediately of the time, place, and purpose of the meeting.

The rule shall provide that any person, upon request and payment of a reasonable fee, may obtain reasonable advance notification of all meetings at which any specific type of public business is to be discussed. Provisions for advance notification may include, but are not limited to, mailing the agenda of meetings to all subscribers on a mailing list or mailing notices in self-addressed, stamped envelopes provided by the person.

(G) Except as provided in division (J) of this section, the members of a public body may hold an executive session only after a majority of a quorum of the public body determines, by a roll call vote, to hold an executive session and only at a regular or special meeting for the sole purpose of the consideration of any of the following matters:

(1) To consider the appointment, employment, dismissal, discipline, promotion, demotion, or compensation of a public employee or official, or the investigation of charges or complaints against a public employee, official, licensee, or regulated individual, unless the public employee, official, licensee, or regulated individual requests a public hearing. Except as otherwise provided by law, no public body shall hold an executive session for the discipline of an elected official for conduct related to the performance of the elected official's official duties or for the elected official's removal from office. If a public body holds an executive session pursuant to division (G)(1) of this section, the motion and vote to hold that executive session shall state which one or more of the approved purposes listed in division (G)(1) of this section are the purposes for which the executive session is to be held, but need not include the name of any person to be considered at the meeting.

(2) To consider the purchase of property for public purposes, or for the sale of property at competitive bidding, if premature disclosure of information would give an unfair competitive or bargaining advantage to a person whose personal, private interest is adverse to the general public interest. No member of a public body shall use division (G)(2) of this section as a subterfuge for providing covert information to prospective buyers or sellers. A purchase or sale of public property is void if the seller or buyer of the public property has received covert information from a member of a public body that has not been disclosed to the general public in sufficient time for other prospective buyers and sellers to prepare and submit offers.

If the minutes of the public body show that all meetings and deliberations of the public body have been conducted in compliance with this section, any instrument executed by the public body purporting to convey, lease, or otherwise dispose of any right, title, or interest in any public property shall be conclusively presumed to have been executed in compliance with this section insofar as title or other interest of any bona fide purchasers, lessees, or transferees of the property is concerned.

(3) Conferences with an attorney for the public body concerning disputes involving the public body that are the subject of pending or imminent court action;

(4) Preparing for, conducting, or reviewing negotiations or bargaining sessions with public employees concerning their compensation or other terms and conditions of their employment;

(5) Matters required to be kept confidential by federal law or regulations or state statutes;

(6) Details relative to the security arrangements and emergency response protocols for a public body or a public office, if disclosure of the matters discussed could reasonably be expected to jeopardize the security of the public body or public office;

(7) In the case of a county hospital operated pursuant to Chapter 339. of the Revised Code, a joint township hospital operated pursuant to Chapter 513. of the Revised Code, or a municipal hospital operated pursuant

Appendix A – Statutes

to Chapter 749. of the Revised Code, to consider trade secrets, as defined in section 1333.61 of the Revised Code.

If a public body holds an executive session to consider any of the matters listed in divisions (G)(2) to (7) of this section, the motion and vote to hold that executive session shall state which one or more of the approved matters listed in those divisions are to be considered at the executive session.

A public body specified in division (B)(1)(c) of this section shall not hold an executive session when meeting for the purposes specified in that division.

(H) A resolution, rule, or formal action of any kind is invalid unless adopted in an open meeting of the public body. A resolution, rule, or formal action adopted in an open meeting that results from deliberations in a meeting not open to the public is invalid unless the deliberations were for a purpose specifically authorized in division (G) or (J) of this section and conducted at an executive session held in compliance with this section. A resolution, rule, or formal action adopted in an open meeting is invalid if the public body that adopted the resolution, rule, or formal action violated division (F) of this section.

(I) (1) Any person may bring an action to enforce this section. An action under division (I)(1) of this section shall be brought within two years after the date of the alleged violation or threatened violation. Upon proof of a violation or threatened violation of this section in an action brought by any person, the court of common pleas shall issue an injunction to compel the members of the public body to comply with its provisions.

(2) (a) If the court of common pleas issues an injunction pursuant to division (I)(1) of this section, the court shall order the public body that it enjoins to pay a civil forfeiture of five hundred dollars to the party that sought the injunction and shall award to that party all court costs and, subject to reduction as described in division (I)(2) of this section, reasonable attorney's fees. The court, in its discretion, may reduce an award of attorney's fees to the party that sought the injunction or not award attorney's fees to that party if the court determines both of the following:

(i) That, based on the ordinary application of statutory law and case law as it existed at the time of violation or threatened violation that was the basis of the injunction, a well-informed public body reasonably would believe that the public body was not violating or threatening to violate this section;

(ii) That a well-informed public body reasonably would believe that the conduct or threatened conduct that was the basis of the injunction would serve the public policy that underlies the authority that is asserted as permitting that conduct or threatened conduct.

(b) If the court of common pleas does not issue an injunction pursuant to division (I)(1) of this section and the court determines at that time that the bringing of the action was frivolous conduct, as defined in division (A) of section 2323.51 of the Revised Code, the court shall award to the public body all court costs and reasonable attorney's fees, as determined by the court.

(3) Irreparable harm and prejudice to the party that sought the injunction shall be conclusively and irrebuttably presumed upon proof of a violation or threatened violation of this section.

(4) A member of a public body who knowingly violates an injunction issued pursuant to division (I)(1) of this section may be removed from office by an action brought in the court of common pleas for that purpose by the prosecuting attorney or the attorney general.

(J) (1) Pursuant to division (C) of section 5901.09 of the Revised Code, a veterans service commission shall hold an executive session for one or more of the following purposes unless an applicant requests a public hearing:

Appendix A – Statutes

- (a) Interviewing an applicant for financial assistance under sections 5901.01 to 5901.15 of the Revised Code;
 - (b) Discussing applications, statements, and other documents described in division (B) of section 5901.09 of the Revised Code;
 - (c) Reviewing matters relating to an applicant's request for financial assistance under sections 5901.01 to 5901.15 of the Revised Code.
- (2) A veterans service commission shall not exclude an applicant for, recipient of, or former recipient of financial assistance under sections 5901.01 to 5901.15 of the Revised Code, and shall not exclude representatives selected by the applicant, recipient, or former recipient, from a meeting that the commission conducts as an executive session that pertains to the applicant's, recipient's, or former recipient's application for financial assistance.
- (3) A veterans service commission shall vote on the grant or denial of financial assistance under sections 5901.01 to 5901.15 of the Revised Code only in an open meeting of the commission. The minutes of the meeting shall indicate the name, address, and occupation of the applicant, whether the assistance was granted or denied, the amount of the assistance if assistance is granted, and the votes for and against the granting of assistance.

Most Recent Effective Date: 09-29-2011

Ohio Revised Code § 149.45 – Redacting, encrypting, or truncating personal information; request by protected individual

A) As used in this section:

- (1) "Personal information" means any of the following:
 - (a) An individual's social security number;
 - (b) An individual's federal tax identification number;
 - (c) An individual's driver's license number or state identification number;
 - (d) An individual's checking account number, savings account number, or credit card number.
- (2) "Public record" and "peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation residential and familial information" have the same meanings as in section 149.43 of the Revised Code.
- (3) "Truncate" means to redact all but the last four digits of an individual's social security number.

(B) (1) No public office or person responsible for a public office's public records shall make available to the general public on the internet any document that contains an individual's social security number without otherwise redacting, encrypting, or truncating the social security number.

Appendix A – Statutes

(2) A public office or person responsible for a public office's public records that prior to the effective date of this section made available to the general public on the internet any document that contains an individual's social security number shall redact, encrypt, or truncate the social security number from that document.

(3) Divisions (B)(1) and (2) of this section do not apply to documents that are only accessible through the internet with a password.

(C) (1) An individual may request that a public office or a person responsible for a public office's public records redact personal information of that individual from any record made available to the general public on the internet. An individual who makes a request for redaction pursuant to this division shall make the request in writing on a form developed by the attorney general and shall specify the personal information to be redacted and provide any information that identifies the location of that personal information within a document that contains that personal information.

(2) Upon receiving a request for a redaction pursuant to division (C)(1) of this section, a public office or a person responsible for a public office's public records shall act within five business days in accordance with the request to redact the personal information of the individual from any record made available to the general public on the internet, if practicable. If a redaction is not practicable, the public office or person responsible for the public office's public records shall verbally or in writing within five business days after receiving the written request explain to the individual why the redaction is impracticable.

(3) The attorney general shall develop a form to be used by an individual to request a redaction pursuant to division (C)(1) of this section. The form shall include a place to provide any information that identifies the location of the personal information to be redacted.

(D) (1) A peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation may request that a public office other than a county auditor or a person responsible for the public records of a public office other than a county auditor redact the address of the person making the request from any record made available to the general public on the internet that includes peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation residential and familial information of the person making the request. A person who makes a request for a redaction pursuant to this division shall make the request in writing and on a form developed by the attorney general.

(2) Upon receiving a written request for a redaction pursuant to division (D)(1) of this section, a public office other than a county auditor or a person responsible for the public records of a public office other than a county auditor shall act within five business days in accordance with the request to redact the address of the peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation making the request from any record made available to the general public on the internet that includes peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation residential and familial information of the person making the request, if practicable. If a redaction is not practicable, the public office or person responsible for the public office's public records shall verbally or in writing within five business days after receiving the written request explain to the peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation why the redaction is impracticable.

(3) Except as provided in this section and section 319.28 of the Revised Code, a public office other than an employer of a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant

Appendix A – Statutes

prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation or a person responsible for the public records of the employer is not required to redact the residential and familial information of the peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation from other records maintained by the public office.

(4) The attorney general shall develop a form to be used by a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation to request a redaction pursuant to division (D)(1) of this section. The form shall include a place to provide any information that identifies the location of the address of a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation to be redacted.

(E) (1) If a public office or a person responsible for a public office's public records becomes aware that an electronic record of that public office that is made available to the general public on the internet contains an individual's social security number that was mistakenly not redacted, encrypted, or truncated as required by division (B)(1) or (2) of this section, the public office or person responsible for the public office's public records shall redact, encrypt, or truncate the individual's social security number within a reasonable period of time.

(2) A public office or a person responsible for a public office's public records is not liable in damages in a civil action for any harm an individual allegedly sustains as a result of the inclusion of that individual's personal information on any record made available to the general public on the internet or any harm a peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation sustains as a result of the inclusion of the address of the peace officer, parole officer, probation officer, bailiff, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation on any record made available to the general public on the internet in violation of this section unless the public office or person responsible for the public office's public records acted with malicious purpose, in bad faith, or in a wanton or reckless manner or division (A)(6)(a) or (c) of section 2744.03 of the Revised Code applies.

Most Recent Effective Date: 10-17-2011

Ohio Revised Code § 319.28 – General tax list and general duplicate of real and public utility property; numbering system; request by protected individual for use of initials

(A) Except as otherwise provided in division (B) of this section, on or before the first Monday of August, annually, the county auditor shall compile and make up a general tax list of real and public utility property in the county, either in tabular form and alphabetical order, or, with the consent of the county treasurer, by listing all parcels in a permanent parcel number sequence to which a separate alphabetical index is keyed, containing the names of the several persons, companies, firms, partnerships, associations, and corporations in whose names real property has been listed in each township, municipal corporation, special district, or separate school district, or part of either in the auditor's county, placing separately, in appropriate columns opposite each name, the description of each tract, lot, or parcel of real estate, the value of each tract, lot, or parcel, the value of the improvements thereon, and of the names of the several public utilities whose property,

Appendix A – Statutes

subject to taxation on the general tax list and duplicate, has been apportioned by the department of taxation to the county, and the amount so apportioned to each township, municipal corporation, special district, or separate school district or part of either in the auditor's county, as shown by the certificates of apportionment of public utility property. If the name of the owner of any tract, lot, or parcel of real estate is unknown to the auditor, "unknown" shall be entered in the column of names opposite said tract, lot, or parcel. Such lists shall be prepared in duplicate. On or before the first Monday of September in each year, the auditor shall correct such lists in accordance with the additions and deductions ordered by the tax commissioner and by the county board of revision, and shall certify and on the first day of October deliver one copy thereof to the county treasurer. The copies prepared by the auditor shall constitute the auditor's general tax list and treasurer's general duplicate of real and public utility property for the current year.

Once a permanent parcel numbering system has been established in any county as provided by the preceding paragraph, such system shall remain in effect until otherwise agreed upon by the county auditor and county treasurer.

(B) (1) A peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation may submit a written request by affidavit to the county auditor requesting the county auditor to remove the name of the peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation from any record made available to the general public on the internet or a publicly accessible database and the general tax list of real and public utility property and the general duplicate of real and public utility property and insert the initials of the peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation on any record made available to the general public on the internet or a publicly accessible database and the general tax list of real and public utility property and the general duplicate of real and public utility property as the name of the peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation that appears on the deed.

(2) Upon receiving a written request by affidavit described in division (B)(1) of this section, the county auditor shall act within five business days in accordance with the request to remove the name of the peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation from any record made available to the general public on the internet or a publicly accessible database and the general tax list of real and public utility property and the general duplicate of real and public utility property and insert initials of the peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation on any record made available to the general public on the internet or a publicly accessible database and the general tax list of real and public utility property and the general duplicate of real and public utility property, if practicable. If the removal and insertion is not practicable, the county auditor shall verbally or in writing within five business days after receiving the written request explain to the peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, youth services employee, firefighter, EMT, or investigator of the bureau of criminal identification and investigation why the removal and insertion is impracticable.

Most Recent Effective Date: 10-16-2009

Ohio Revised Code § 1347.01 – Personal Information Systems Act: Definitions

As used in this chapter, except as otherwise provided:

(A) "State agency" means the office of any elected state officer and any agency, board, commission, department, division, or educational institution of the state.

(B) "Local agency" means any municipal corporation, school district, special purpose district, or township of the state or any elected officer or board, bureau, commission, department, division, institution, or instrumentality of a county.

(C) "Special purpose district" means any geographic or political jurisdiction that is created by statute to perform a limited and specific function, and includes, but is not limited to, library districts, conservancy districts, metropolitan housing authorities, park districts, port authorities, regional airport authorities, regional transit authorities, regional water and sewer districts, sanitary districts, soil and water conservation districts, and regional planning agencies.

(D) "Maintains" means state or local agency ownership of, control over, responsibility for, or accountability for systems and includes, but is not limited to, state or local agency depositing or information with a data processing center for storage, processing, or dissemination. An agency "maintains" all systems of records that are required by law to be kept by the agency.

(E) "Personal information" means any information that describes anything about a person, or that indicates actions done by or to a person, or that indicates that a person possesses certain personal characteristics, and that contains, and can be retrieved from a system by, a name, identifying number, symbol, or other identifier assigned to a person.

(F) "System" means any collection or group of related records that are kept in an organized manner and that are maintained by a state or local agency, and from which personal information is retrieved by the name of the person or by some identifying number, symbol, or other identifier assigned to the person. "System" includes both records that are manually stored and records that are stored using electronic data processing equipment. "System" does not include collected archival records in the custody of or administered under the authority of the Ohio historical society, published directories, reference materials or newsletters, or routine information that is maintained for the purpose of internal office administration, the use of which would not adversely affect a person.

(G) "Interconnection of systems" means a linking of systems that belong to more than one agency or to an agency and other organizations, which linking of systems results in a system that permits each agency or organization involved in the linking to have unrestricted access to the systems of the other agencies and organizations.

(H) "Combination of systems" means a unification of systems that belong to more than one agency, or to an agency and another organization, into a single system in which the records that belong to each agency or organization may or may not be obtainable by the others.

Most Recent Effective Date: 02-17-2006

Ohio Revised Code § 1347.04 – Exemptions

(A) (1) Except as provided in division (A)(2) of this section or division (C)(2) of section 1347.08 of the Revised Code, the following are exempt from the provisions of this chapter:

(a) Any state or local agency, or part of a state or local agency, that performs as its principal function any activity relating to the enforcement of the criminal laws, including police efforts to prevent, control, or reduce crime or to apprehend criminals;

(b) The criminal courts;

(c) Prosecutors;

(d) Any state or local agency or part of any state or local agency that is a correction, probation, pardon, or parole authority;

(e) Personal information systems that are comprised of investigatory material compiled for law enforcement purposes by agencies that are not described in divisions (A)(1)(a) and (d) of this section.

(2) A part of a state or local agency that does not perform, as its principal function, an activity relating to the enforcement of the criminal laws is not exempt under this section.

(B) The provisions of this chapter shall not be construed to prohibit the release of public records, or the disclosure of personal information in public records, as defined in section 149.43 of the Revised Code, or to authorize a public body to hold an executive session for the discussion of personal information if the executive session is not authorized under division (G) of section 121.22 of the Revised Code.

The disclosure to members of the general public of personal information contained in a public record, as defined in section 149.43 of the Revised Code, is not an improper use of personal information under this chapter.

(C) The provisions of this chapter shall not be construed to prohibit, and do not prohibit, compliance with any order issued pursuant to division (D)(1) of section 2151.14 of the Revised Code, any request for records that is properly made pursuant to division (D)(3)(a) of section 2151.14 or division (A) of section 2151.141 [2151.14.1] of the Revised Code, or any determination that is made by a court pursuant to division (D)(3)(b) of section 2151.14 or division (B)(1) of section 2151.141 [2151.14.1] of the Revised Code.

Most Recent Effective Date: 10-25-1995

Ohio Revised Code § 1347.05 – Duties of state and local agencies

Every state or local agency that maintains a personal information system shall:

(A) Appoint one individual to be directly responsible for the system;

(B) Adopt and implement rules that provide for the operation of the system in accordance with the provisions of this chapter that, in the case of state agencies, apply to state agencies or, in the case of local agencies, apply to local agencies;

Appendix A – Statutes

(C) Inform each of its employees who has any responsibility for the operation or maintenance of the system, or for the use of personal information maintained in the system, of the applicable provisions of this chapter and of all rules adopted in accordance with this section;

(D) Specify disciplinary measures to be applied to any employee who initiates or otherwise contributes to any disciplinary or other punitive action against any individual who brings to the attention of appropriate authorities, the press, or any member of the public, evidence of unauthorized use of information contained in the system;

(E) Inform a person who is asked to supply personal information for a system whether the person is legally required to, or may refuse to, supply the information;

(F) Develop procedures for purposes of monitoring the accuracy, relevance, timeliness, and completeness of the personal information in this system, and, in accordance with the procedures, maintain the personal information in the system with the accuracy, relevance, timeliness, and completeness that is necessary to assure fairness in any determination made with respect to a person on the basis of the information;

(G) Take reasonable precautions to protect personal information in the system from unauthorized modification, destruction, use, or disclosure;

(H) Collect, maintain, and use only personal information that is necessary and relevant to the functions that the agency is required or authorized to perform by statute, ordinance, code, or rule, and eliminate personal information from the system when it is no longer necessary and relevant to those functions.

Most Recent Effective Date: 01-23-1981

Ohio Revised Code § 1347.06 – Rules

The director of administrative services shall adopt, amend, and rescind rules pursuant to Chapter 119. of the Revised Code for the purposes of administering and enforcing the provisions of this chapter that pertain to state agencies.

A state or local agency that, or an officer or employee of a state or local agency who, complies in good faith with a rule applicable to the agency is not subject to criminal prosecution or civil liability under this chapter.

Most Recent Effective Date: 01-23-1981

Ohio Revised Code § 1347.07 – Use of personal information

A state or local agency shall only use the personal information in a personal information system in a manner that is consistent with the purposes of the system.

Most Recent Effective Date: 01-23-1981

Appendix A – Statutes

Ohio Revised Code § 1347.071 – Interconnected or combined systems

(A) No state or local agency shall place personal information in an interconnected or combined system, or use personal information that is placed in an interconnected or combined system by another state or local agency or another organization, unless the interconnected or combined system will contribute to the efficiency of the involved agencies in implementing programs that are authorized by law.

(B) No state or local agency shall use personal information that is placed in an interconnected or combined system by another state or local agency or another organization, unless the personal information is necessary and relevant to the performance of a lawful function of the agency.

(C) When a state or local agency requests a person to supply personal information that will be placed in an interconnected or combined system, the agency shall provide the person with information relevant to the system, including the identity of the other agencies or organizations that have access to the information in the system.

Most Recent Effective Date: 01-23-1981

Ohio Revised Code § 1347.08 – Rights of subject of personal information

(A) Every state or local agency that maintains a personal information system, upon the request and the proper identification of any person who is the subject of personal information in the system, shall:

(1) Inform the person of the existence of any personal information in the system of which the person is the subject;

(2) Except as provided in divisions (C) and (E)(2) of this section, permit the person, the person's legal guardian, or an attorney who presents a signed written authorization made by the person, to inspect all personal information in the system of which the person is the subject;

(3) Inform the person about the types of uses made of the personal information, including the identity of any users usually granted access to the system.

(B) Any person who wishes to exercise a right provided by this section may be accompanied by another individual of the person's choice.

(C) (1) A state or local agency, upon request, shall disclose medical, psychiatric, or psychological information to a person who is the subject of the information or to the person's legal guardian, unless a physician, psychiatrist, or psychologist determines for the agency that the disclosure of the information is likely to have an adverse effect on the person, in which case the information shall be released to a physician, psychiatrist, or psychologist who is designated by the person or by the person's legal guardian.

(2) Upon the signed written request of either a licensed attorney at law or a licensed physician designated by the inmate, together with the signed written request of an inmate of a correctional institution under the administration of the department of rehabilitation and correction, the department shall disclose medical information to the designated attorney or physician as provided in division (C) of section 5120.21 of the Revised Code.

Appendix A – Statutes

(D) If an individual who is authorized to inspect personal information that is maintained in a personal information system requests the state or local agency that maintains the system to provide a copy of any personal information that the individual is authorized to inspect, the agency shall provide a copy of the personal information to the individual. Each state and local agency may establish reasonable fees for the service of copying, upon request, personal information that is maintained by the agency.

(E) (1) This section regulates access to personal information that is maintained in a personal information system by persons who are the subject of the information, but does not limit the authority of any person, including a person who is the subject of personal information maintained in a personal information system, to inspect or have copied, pursuant to section 149.43 of the Revised Code, a public record as defined in that section.

(2) This section does not provide a person who is the subject of personal information maintained in a personal information system, the person's legal guardian, or an attorney authorized by the person, with a right to inspect or have copied, or require an agency that maintains a personal information system to permit the inspection of or to copy, a confidential law enforcement investigatory record or trial preparation record, as defined in divisions (A)(2) and (4) of section 149.43 of the Revised Code.

(F) This section does not apply to any of the following:

(1) The contents of an adoption file maintained by the department of health under section 3705.12 of the Revised Code;

(2) Information contained in the putative father registry established by section 3107.062 [3107.06.2] of the Revised Code, regardless of whether the information is held by the department of job and family services or, pursuant to section 3111.69 of the Revised Code, the office of child support in the department or a child support enforcement agency;

(3) Papers, records, and books that pertain to an adoption and that are subject to inspection in accordance with section 3107.17 of the Revised Code;

(4) Records listed in division (A) of section 3107.42 of the Revised Code or specified in division (A) of section 3107.52 of the Revised Code;

(5) Records that identify an individual described in division (A)(1) of section 3721.031 [3721.03.1] of the Revised Code, or that would tend to identify such an individual;

(6) Files and records that have been expunged under division (D)(1) or (2) of section 3721.23 of the Revised Code;

(7) Records that identify an individual described in division (A)(1) of section 3721.25 of the Revised Code, or that would tend to identify such an individual;

(8) Records that identify an individual described in division (A)(1) of section 5111.61 of the Revised Code, or that would tend to identify such an individual;

(9) Test materials, examinations, or evaluation tools used in an examination for licensure as a nursing home administrator that the board of examiners of nursing home administrators administers under section 4751.04 of the Revised Code or contracts under that section with a private government entity to administer;

(10) Information contained in a database established and maintained pursuant to section 5101.13 of the Revised Code.

Most Recent Effective Date: 10-16-2009

Appendix A – Statutes

Ohio Revised Code § 1347.09 – Disputed information; duties of agency

- (A) (1) If any person disputes the accuracy, relevance, timeliness, or completeness of personal information that pertains to him and that is maintained by any state or local agency in a personal information system, he may request the agency to investigate the current status of the information. The agency shall, within a reasonable time after, but not later than ninety days after, receiving the request from the disputant, make a reasonable investigation to determine whether the disputed information is accurate, relevant, timely, and complete, and shall notify the disputant of the results of the investigation and of the action that the agency plans to take with respect to the disputed information. The agency shall delete any information that it cannot verify or that it finds to be inaccurate.
- (2) If after an agency's determination, the disputant is not satisfied, the agency shall do either of the following:
- (a) Permit the disputant to include within the system a brief statement of his position on the disputed information. The agency may limit the statement to not more than one hundred words if the agency assists the disputant to write a clear summary of the dispute.
 - (b) Permit the disputant to include within the system a notation that the disputant protests that the information is inaccurate, irrelevant, outdated, or incomplete. The agency shall maintain a copy of the disputant's statement of the dispute. The agency may limit the statement to not more than one hundred words if the agency assists the disputant to write a clear summary of the dispute.
- (3) The agency shall include the statement or notation in any subsequent transfer, report, or dissemination of the disputed information and may include with the statement or notation of the disputant a statement by the agency that it has reasonable grounds to believe that the dispute is frivolous or irrelevant, and of the reasons for its belief.
- (B) The presence of contradictory information in the disputant's file does not alone constitute reasonable grounds to believe that the dispute is frivolous or irrelevant.
- (C) Following any deletion of information that is found to be inaccurate or the accuracy of which can no longer be verified, or if a statement of dispute was filed by the disputant, the agency shall, at the written request of the disputant, furnish notification that the information has been deleted, or furnish a copy of the disputant's statement of the dispute, to any person specifically designated by the person. The agency shall clearly and conspicuously disclose to the disputant that he has the right to make such a request to the agency.

Most Recent Effective Date: 01-23-1981

Ohio Revised Code § 1347.10 – Liability for wrongful disclosure; limitation of action

- (A) A person who is harmed by the use of personal information that relates to him and that is maintained in a personal information system may recover damages in civil action from any person who directly and proximately caused the harm by doing any of the following:
- (1) Intentionally maintaining personal information that he knows, or has reason to know, is inaccurate, irrelevant, no longer timely, or incomplete and may result in such harm;

Appendix A – Statutes

- (2) Intentionally using or disclosing the personal information in a manner prohibited by law;
- (3) Intentionally supplying personal information for storage in, or using or disclosing personal information maintained in, a personal information system, that he knows, or has reason to know, is false;
- (4) Intentionally denying to the person the right to inspect and dispute the personal information at a time when inspection or correction might have prevented the harm.

An action under this division shall be brought within two years after the cause of action accrued or within six months after the wrongdoing is discovered, whichever is later; provided that no action shall be brought later than six years after the cause of action accrued. The cause of action accrues at the time that the wrongdoing occurs.

(B) Any person who, or any state or local agency that, violates or proposes to violate any provision of this chapter may be enjoined by any court of competent jurisdiction. The court may issue an order or enter a judgment that is necessary to ensure compliance with the applicable provisions of this chapter or to prevent the use of any practice that violates this chapter. An action for an injunction may be prosecuted by the person who is the subject of the violation, by the attorney general, or by any prosecuting attorney.

Most Recent Effective Date: 01-23-1981

Ohio Revised Code § 1347.12 – Disclosure or notification by state or local agency of breach of security of personal information system

(A) As used in this section:

- (1) "Agency of a political subdivision" means each organized body, office, or agency established by a political subdivision for the exercise of any function of the political subdivision, except that "agency of a political subdivision" does not include an agency that is a covered entity as defined in 45 C.F.R. 160.103, as amended.
- (2) (a) "Breach of the security of the system" means unauthorized access to and acquisition of computerized data that compromises the security or confidentiality of personal information owned or licensed by a state agency or an agency of a political subdivision and that causes, reasonably is believed to have caused, or reasonably is believed will cause a material risk of identity theft or other fraud to the person or property of a resident of this state.
 - (b) For purposes of division (A)(2)(a) of this section:
 - (i) Good faith acquisition of personal information by an employee or agent of the state agency or agency of the political subdivision for the purposes of the agency is not a breach of the security of the system, provided that the personal information is not used for an unlawful purpose or subject to further unauthorized disclosure.
 - (ii) Acquisition of personal information pursuant to a search warrant, subpoena, or other court order, or pursuant to a subpoena, order, or duty of a regulatory state agency, is not a breach of the security of the system.
- (3) "Consumer reporting agency that compiles and maintains files on consumers on a nationwide basis" means a consumer reporting agency that regularly engages in the practice of assembling or evaluating, and maintaining, for the purpose of furnishing consumer reports to third parties bearing on a consumer's

Appendix A – Statutes

creditworthiness, credit standing, or credit capacity, each of the following regarding consumers residing nationwide:

- (a) Public record information;
 - (b) Credit account information from persons who furnish that information regularly and in the ordinary course of business.
- (4) "Encryption" means the use of an algorithmic process to transform data into a form in which there is a low probability of assigning meaning without use of a confidential process or key.
- (5) "Individual" means a natural person.
- (6) (a) "Personal information" means, notwithstanding section 1347.01 of the Revised Code, an individual's name, consisting of the individual's first name or first initial and last name, in combination with and linked to any one or more of the following data elements, when the data elements are not encrypted, redacted, or altered by any method or technology in such a manner that the data elements are unreadable:
- (i) Social security number;
 - (ii) Driver's license number or state identification card number;
 - (iii) Account number or credit or debit card number, in combination with and linked to any required security code, access code, or password that would permit access to an individual's financial account.
- (b) "Personal information" does not include publicly available information that is lawfully made available to the general public from federal, state, or local government records or any of the following media that are widely distributed:
- (i) Any news, editorial, or advertising statement published in any bona fide newspaper, journal, or magazine, or broadcast over radio or television;
 - (ii) Any gathering or furnishing of information or news by any bona fide reporter, correspondent, or news bureau to news media described in division (A)(6)(b)(i) of this section;
 - (iii) Any publication designed for and distributed to members of any bona fide association or charitable or fraternal nonprofit corporation;
 - (iv) Any type of media similar in nature to any item, entity, or activity identified in division (A)(6)(b)(i), (ii), or (iii) of this section.
- (7) "Political subdivision" has the same meaning as in section 2744.01 of the Revised Code.
- (8) "Record" means any information that is stored in an electronic medium and is retrievable in perceivable form. "Record" does not include any publicly available directory containing information an individual voluntarily has consented to have publicly disseminated or listed, such as name, address, or telephone number.
- (9) "Redacted" means altered or truncated so that no more than the last four digits of a social security number, driver's license number, state identification card number, account number, or credit or debit card number is accessible as part of the data.

Appendix A – Statutes

(10) "State agency" has the same meaning as in section 1.60 of the Revised Code, except that "state agency" does not include an agency that is a covered entity as defined in 45 C.F.R. 160.103, as amended.

(11) "System" means, notwithstanding section 1347.01 of the Revised Code, any collection or group of related records that are kept in an organized manner, that are maintained by a state agency or an agency of a political subdivision, and from which personal information is retrieved by the name of the individual or by some identifying number, symbol, or other identifier assigned to the individual. "System" does not include any collected archival records in the custody of or administered under the authority of the Ohio historical society, any published directory, any reference material or newsletter, or any routine information that is maintained for the purpose of internal office administration of the agency, if the use of the directory, material, newsletter, or information would not adversely affect an individual and if there has been no unauthorized external breach of the directory, material, newsletter, or information.

(B) (1) Any state agency or agency of a political subdivision that owns or licenses computerized data that includes personal information shall disclose any breach of the security of the system, following its discovery or notification of the breach of the security of the system, to any resident of this state whose personal information was, or reasonably is believed to have been, accessed and acquired by an unauthorized person if the access and acquisition by the unauthorized person causes or reasonably is believed will cause a material risk of identity theft or other fraud to the resident. The disclosure described in this division may be made pursuant to any provision of a contract entered into by the state agency or agency of a political subdivision with any person or another state agency or agency of a political subdivision prior to the date the breach of the security of the system occurred if that contract does not conflict with any provision of this section. For purposes of this section, a resident of this state is an individual whose principal mailing address as reflected in the records of the state agency or agency of a political subdivision is in this state.

(2) The state agency or agency of a political subdivision shall make the disclosure described in division (B)(1) of this section in the most expedient time possible but not later than forty-five days following its discovery or notification of the breach in the security of the system, subject to the legitimate needs of law enforcement activities described in division (D) of this section and consistent with any measures necessary to determine the scope of the breach, including which residents' personal information was accessed and acquired, and to restore the reasonable integrity of the data system.

(C) Any state agency or agency of a political subdivision that, on behalf of or at the direction of another state agency or agency of a political subdivision, is the custodian of or stores computerized data that includes personal information shall notify that other state agency or agency of a political subdivision of any breach of the security of the system in an expeditious manner, if the personal information was, or reasonably is believed to have been, accessed and acquired by an unauthorized person and if the access and acquisition by the unauthorized person causes or reasonably is believed will cause a material risk of identity theft or other fraud to a resident of this state.

(D) The state agency or agency of a political subdivision may delay the disclosure or notification required by division (B), (C), or (F) of this section if a law enforcement agency determines that the disclosure or notification will impede a criminal investigation or jeopardize homeland or national security, in which case, the state agency or agency of a political subdivision shall make the disclosure or notification after the law enforcement agency determines that disclosure or notification will not compromise the investigation or jeopardize homeland or national security.

(E) For purposes of this section, a state agency or agency of a political subdivision may disclose or make a notification by any of the following methods:

(1) Written notice;

Appendix A – Statutes

(2) Electronic notice, if the state agency's or agency of a political subdivision's primary method of communication with the resident to whom the disclosure must be made is by electronic means;

(3) Telephone notice;

(4) Substitute notice in accordance with this division, if the state agency or agency of a political subdivision required to disclose demonstrates that the agency does not have sufficient contact information to provide notice in a manner described in division (E)(1), (2), or (3) of this section, or that the cost of providing disclosure or notice to residents to whom disclosure or notification is required would exceed two hundred fifty thousand dollars, or that the affected class of subject residents to whom disclosure or notification is required exceeds five hundred thousand persons. Substitute notice under this division shall consist of all of the following:

(a) Electronic mail notice if the state agency or agency of a political subdivision has an electronic mail address for the resident to whom the disclosure must be made;

(b) Conspicuous posting of the disclosure or notice on the state agency's or agency of a political subdivision's web site, if the agency maintains one;

(c) Notification to major media outlets, to the extent that the cumulative total of the readership, viewing audience, or listening audience of all of the outlets so notified equals or exceeds seventy-five per cent of the population of this state.

(5) Substitute notice in accordance with this division, if the state agency or agency of a political subdivision required to disclose demonstrates that the agency has ten employees or fewer and that the cost of providing the disclosures or notices to residents to whom disclosure or notification is required will exceed ten thousand dollars. Substitute notice under this division shall consist of all of the following:

(a) Notification by a paid advertisement in a local newspaper that is distributed in the geographic area in which the state agency or agency of a political subdivision is located, which advertisement shall be of sufficient size that it covers at least one-quarter of a page in the newspaper and shall be published in the newspaper at least once a week for three consecutive weeks;

(b) Conspicuous posting of the disclosure or notice on the state agency's or agency of a political subdivision's web site, if the agency maintains one;

(c) Notification to major media outlets in the geographic area in which the state agency or agency of a political subdivision is located.

(F) If a state agency or agency of a political subdivision discovers circumstances that require disclosure under this section to more than one thousand residents of this state involved in a single occurrence of a breach of the security of the system, the state agency or agency of a political subdivision shall notify, without unreasonable delay, all consumer reporting agencies that compile and maintain files on consumers on a nationwide basis of the timing, distribution, and content of the disclosure given by the state agency or agency of a political subdivision to the residents of this state. In no case shall a state agency or agency of a political subdivision that is required to make a notification required by this division delay any disclosure or notification required by division (B) or (C) of this section in order to make the notification required by this division.

(G) The attorney general, pursuant to sections 1349.191 [1349.19.1] and 1349.192 [1349.19.2] of the Revised Code, may conduct an investigation and bring a civil action upon an alleged failure by a state agency or agency of a political subdivision to comply with the requirements of this section.

Most Recent Effective Date: 03-30-2007

Appendix A – Statutes

Ohio Revised Code § 1347.15 – State agencies to adopt rules regulating access to confidential personal information; privacy impact assessment form; civil action for harm resulting from violation

(A) As used in this section:

(1) "Confidential personal information" means personal information that is not a public record for purposes of section 149.43 of the Revised Code.

(2) "State agency" does not include the courts or any judicial agency, any state-assisted institution of higher education, or any local agency.

(B) Each state agency shall adopt rules under Chapter 119. of the Revised Code regulating access to the confidential personal information the agency keeps, whether electronically or on paper. The rules shall include all the following:

(1) Criteria for determining which employees of the state agency may access, and which supervisory employees of the state agency may authorize those employees to access, confidential personal information;

(2) A list of the valid reasons, directly related to the state agency's exercise of its powers or duties, for which only employees of the state agency may access confidential personal information;

(3) References to the applicable federal or state statutes or administrative rules that make the confidential personal information confidential;

(4) A procedure that requires the state agency to do all of the following:

(a) Provide that any upgrades to an existing computer system, or the acquisition of any new computer system, that stores, manages, or contains confidential personal information include a mechanism for recording specific access by employees of the state agency to confidential personal information;

(b) Until an upgrade or new acquisition of the type described in division (B)(4)(a) of this section occurs, except as otherwise provided in division (C)(1) of this section, keep a log that records specific access by employees of the state agency to confidential personal information;

(5) A procedure that requires the state agency to comply with a written request from an individual for a list of confidential personal information about the individual that the state agency keeps, unless the confidential personal information relates to an investigation about the individual based upon specific statutory authority by the state agency;

(6) A procedure that requires the state agency to notify each person whose confidential personal information has been accessed for an invalid reason by employees of the state agency of that specific access;

(7) A requirement that the director of the state agency designate an employee of the state agency to serve as the data privacy point of contact within the state agency to work with the chief privacy officer within the office of information technology to ensure that confidential personal information is properly protected and that the state agency complies with this section and rules adopted thereunder;

(8) A requirement that the data privacy point of contact for the state agency complete a privacy impact assessment form; and

Appendix A – Statutes

(9) A requirement that a password or other authentication measure be used to access confidential personal information that is kept electronically.

(C) (1) A procedure adopted pursuant to division (B)(4) of this section shall not require a state agency to record in the log it keeps under division (B)(4)(b) of this section any specific access by any employee of the agency to confidential personal information in any of the following circumstances:

(a) The access occurs as a result of research performed for official agency purposes, routine office procedures, or incidental contact with the information, unless the conduct resulting in the access is specifically directed toward a specifically named individual or a group of specifically named individuals.

(b) The access is to confidential personal information about an individual, and the access occurs as a result of a request by that individual for confidential personal information about that individual.

(2) Each state agency shall establish a training program for all employees of the state agency described in division (B)(1) of this section so that these employees are made aware of all applicable statutes, rules, and policies governing their access to confidential personal information.

The office of information technology shall develop the privacy impact assessment form and post the form on its internet web site by the first day of December each year. The form shall assist each state agency in complying with the rules it adopted under this section, in assessing the risks and effects of collecting, maintaining, and disseminating confidential personal information, and in adopting privacy protection processes designed to mitigate potential risks to privacy.

(D) Each state agency shall distribute the policies included in the rules adopted under division (B) of this section to each employee of the agency described in division (B)(1) of this section and shall require that the employee acknowledge receipt of the copy of the policies. The state agency shall create a poster that describes these policies and post it in a conspicuous place in the main office of the state agency and in all locations where the state agency has branch offices. The state agency shall post the policies on the internet web site of the agency if it maintains such an internet web site. A state agency that has established a manual or handbook of its general policies and procedures shall include these policies in the manual or handbook.

(E) No collective bargaining agreement entered into under Chapter 4117. of the Revised Code on or after the effective date of this section shall prohibit disciplinary action against or termination of an employee of a state agency who is found to have accessed, disclosed, or used personal confidential information in violation of a rule adopted under division (B) of this section or as otherwise prohibited by law.

(F) The auditor of state shall obtain evidence that state agencies adopted the required procedures and policies in a rule under division (B) of this section, shall obtain evidence supporting whether the state agency is complying with those policies and procedures, and may include citations or recommendations relating to this section in any audit report issued under section 117.11 of the Revised Code.

(G) A person who is harmed by a violation of a rule of a state agency described in division (B) of this section may bring an action in the court of claims, as described in division (F) of section 2743.02 of the Revised Code, against any person who directly and proximately caused the harm.

(H) (1) No person shall knowingly access confidential personal information in violation of a rule of a state agency described in division (B) of this section.

(2) No person shall knowingly use or disclose confidential personal information in a manner prohibited by law.

Appendix A – Statutes

(3) No state agency shall employ a person who has been convicted of or pleaded guilty to a violation of division (H)(1) or (2) of this section.

(4) A violation of division (H)(1) or (2) of this section is a violation of a state statute for purposes of division (A) of section 124.341 [124.34.1] of the Revised Code.

Most Recent Effective Date: 04-07-2009

Ohio Revised Code § 1347.99 – Penalties

(A) No public official, public employee, or other person who maintains, or is employed by a person who maintains, a personal information system for a state or local agency shall purposely refuse to comply with division (E), (F), (G), or (H) of section 1347.05, section 1347.071 [1347.07.1], division (A), (B), or (C) of section 1347.08, or division (A) or (C) of section 1347.09 of the Revised Code. Whoever violates this section is guilty of a minor misdemeanor.

(B) Whoever violates division (H)(1) or (2) of section 1347.15 of the Revised Code is guilty of a misdemeanor of the first degree.

Most Recent Effective Date: 04-07-2009

*Statutory Provisions Excepting Records from the Ohio Public Records Act or Declaring Records Confidential***

*This chart is based on one previously created by the Ohio Legislative Service Commission, which was current through October 23, 2008. The editors of this publication searched for amendments to the existing list and any new statutes, but do not represent this to be an exhaustive list. Independent legal research to determine whether there are additional applicable exceptions elsewhere in Ohio or Federal law that may apply to records being requested is still recommended.

**The exceptions listed in this Appendix include those addressed in R.C. 149.43 itself. If an exception is contained in both R.C. 149.43 and a specific area of law, the specific area of law is cited first, with the R.C. 149.43 citation following. Some of the listed exceptions are qualified exceptions. The statutes enumerated in the first column should be examined to determine whether there are qualifications that operate to remove or qualify any confidentiality provision or other exception from the topical description in the second column.

<u>Citation</u>	<u>Topic</u>
R.C. 3.16(C)(2)	Records of a special commission formed by the Chief Justice of the Ohio Supreme Court to determine whether a public official should be suspended as a result of being charged with a felony, until the special commission issues its written report.
R.C. 9.235(C)(1)	Records of the receipt or expenditure of nonpublic money by the recipient of a contract with a governmental entity.
R.C. 9.312(A)	Additional financial information requested by a state agency or political subdivision from an apparent low bidder on a public contract.
R.C. 9.92(E) and 2981.12(F)	Records maintained relative to a citizens' reward program.
R.C. 9.96(C)	Records of ownership, registration, transfer, and exchange of securities.
R.C. 101.30(B)	Legislative documents arising out of confidential General Assembly member/staff and legislative staff relationship.
R.C. 101.34(F)(1)	Certain files of former House and Senate ethics committees.
R.C. 102.02(B) and 102.07	Certain disclosure statements filed with the Ohio Ethics Commission.
R.C. 102.06(B), (C)(2), and (F)	Information and records concerning investigations of complaints and charges by appropriate ethics commission.
R.C. 102.07	Information and records presented to the Ohio Ethics Commission, Joint Legislative Ethics Committee (JLEC), or Board of Commissioners on Grievances and Discipline of the Supreme Court.
R.C. 102.08(D)	Privately sought written opinions and associated records of JLEC.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 109.28	Any investigation of a charitable trust by the Attorney General.
R.C. 109.365	Information obtained by the Attorney General in an investigation to determine whether to defend a state officer or employee.
R.C. 109.57(D) and (H)	Information and materials furnished to the Superintendent of the Bureau of Criminal Identification and Investigation (BCII) and information obtained by a board, administrator, or other person under a criminal records check.
R.C. 109.5721(C), (E) and (F)	Information in the Retained Applicant Fingerprint Database maintained by BCII and information regarding the arrest, conviction, or guilty plea of a person whose information is in the Database and of which the Superintendent of BCII is required to notify a participating public office.
R.C. 109.573(E) and 149.43(A)(1)(j)	Certain DNA-related records, fingerprints, photographs, and personal information BCII receives.
R.C. 109.75(L)	Ohio Peace Officer Training Commission certification examinations, either before or after completion.
R.C. 109.94(C)(1)	An application, and any supporting documentation, made with the Attorney General for an identity fraud passport.
R.C. 113.041(E)	The report of a BCII criminal records check of an individual who applies for employment with, or is employed by, the Treasurer of State's office.
R.C. 117.14	Annual audit report of the Auditor of State's office until specified filing.
R.C. 117.15	Annual audit report of the Treasurer of State's office until specified submission.
R.C. 117.26	Certified copies of completed audit reports until specified filing.
R.C. 120.38(A) and (B)	Information obtained by a public defender when determining if a person is indigent and communications between a defendant and public defender.
R.C. 121.22(E)	Specified information provided regarding an applicant or members of the applicant's immediate family to the Controlling Board, the Development Financing Advisory Council, the Industrial Technology and Enterprise Advisory Council, the Tax Credit Authority, or the Minority Development Financing Advisory Board in relation to an application for economic development assistance or assistance from the Department of Development.
R.C. 121.37(A)(2)(c) and (C)(6)	Records of meetings of the Ohio Family and Children First Cabinet Council that identify individual children and personal family information disclosed during county service coordination meetings or in service coordination plans.
R.C. 121.404(D)(2) and (3)	Information related to a registered emergency volunteer's specific and unique responsibilities, assignments, or deployment plans, including training, preparedness, readiness, or organizational assignment, and information related to a registered volunteer's personal information, including contact information, medical information, or information related to family members or dependents.
R.C. 121.44(A), 121.45, 121.47, and 121.48	Reports of an investigation conducted and designated confidential by the Inspector General or a deputy inspector general and confidential information acquired in the course of such an investigation.
R.C. 121.481(B)	Information that would risk impairing an investigation conducted by the Inspector General, when the Inspector General is requesting a transfer of money to the Special Investigations Fund.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 121.51	The random review program of the processing of contracts associated with building and maintaining the state's infrastructure that is conducted by the Deputy Inspector General for the Department of Transportation, and any confidential information the Deputy Inspector General accesses in the course of an investigation.
R.C. 121.52	Any confidential information the Deputy Inspector General for the Bureau of Workers' Compensation and Industrial Commission accesses in the course of an investigation.
R.C. 122.07(B)	Records concerning tourism market research of the Department of Development (DOD)--Division of Travel and Tourism.
R.C. 122.075(D)	A report to the Director of Development from the recipient of an Alternative Fuel Transportation Grant that identifies the gallon amounts of blended gasoline and blended biodiesel the applicant sells at retail in Ohio.
R.C. 122.17(G) and 122.171(G)	Certain financial statements and information submitted to DOD or the Tax Credit Authority.
R.C. 122.36	Trade secrets or commercial or financial information received by the DOD Director, the Industrial Technology and Enterprise Advisory Council, or the Controlling Board.
R.C. 122.42(D)	Financial statements and data submitted to the DOD Director in connection with certain loan applications.
R.C. 122.561	Financial statements and data submitted to the DOD Director, the Development Financing Advisory Council, or the Controlling Board in connection with applications for mortgage payments insurance.
R.C. 122.74(C)(2)	Financial statements and other data submitted to the DOD Director in connection with specified financial assistance.
R.C. 123.152(C)	Business and personal financial information and trade secrets submitted by Encouraging Diversity, Growth, and Equity Program applicants to the Director of Administrative Services.
R.C. 125.071(C)	Proposals and related documents submitted in response to requests for competitive sealed proposals, until specified time.
R.C. 125.30(B)	Information that has been designated as confidential by any state agency on the business reply form established by the Department of Administrative Services.
R.C. 126.48	A preliminary or final report of an internal audit's findings and recommendations produced by the Office of Internal Auditing in the Office of Budget and Management and all work papers of the internal audit, until submission of the final report.
R.C. 131.02(F)(4) and 131.022(I)	Information contained in an uncollectible claim owed to the state that is sold, conveyed, or transferred to a private entity and that is confidential under federal or state law.
R.C. 145.27(A), (B), and (D)(4), 3305.20, 3307.20(A)(1), (B), (C), and (E)(4), and 3309.22(A), (B), and (D)(4)	Certain information and records of the Public Employees Retirement Board, State Teachers Retirement Board, School Employees Retirement Board, or an entity providing an alternative retirement plan.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 149.431(A)(1) through (3)	Certain contracts, agreements and financial records of governmental entities, agencies and nonprofit organizations receiving governmental funds that identify a present or former patient or client or his diagnosis, prognosis, or medical treatment, treatment for a mental or emotional disorder, mental retardation or developmental disability, drug abuse or alcoholism, or counseling for personal or social problems, or certain financial records that pertain to any private funds expended in relation to the performance of services pursuant to the contract or agreement made between entities or organizations and the federal government.
R.C. 149.432(B)	Library records and patron information.
R.C. 149.433(B) and (C)	Public office's security records and infrastructure records: "security record" being (1) any record that contains information directly used for protecting or maintaining the security of a public office against attack, interference, or sabotage, or (2) any record assembled, prepared, or maintained by a public office or public body to prevent, mitigate, or respond to acts of terrorism; and "infrastructure record" being any record that discloses the configuration of a public office's critical systems, including communication, computer, electrical, mechanical, ventilation, water, and plumbing systems, security codes, or the infrastructure or structural configuration of the building in which a public office is located, but not including a simple floor plan that discloses only the spatial relationship of components of a public office or the building in which a public office is located.
R.C. 149.45	If a public office makes a document available on the Internet, an individual's Social Security Number and any personal information that the individual has asked to have redacted from that document.
R.C. 166.05(E)	Financial statements and other data submitted to the DOD Director, the Development Financing Advisory Council, or the Controlling Board by a private sector person in connection with specified financial assistance, and information taken from same.
R.C. 166.14(D)	Financial statements and other data submitted to the DOD Director, the Development Financing Advisory Council, or the Controlling Board by a private sector person in connection with the Innovation Financial Assistance Program, and information taken from same.
R.C. 166.19(D)	Financial statements and other data submitted to the DOD Director, the Development Financing Advisory Council, or the Controlling Board by a private sector person in connection with the Research and Development Financial Assistance Program, and information taken from same.
R.C. 169.03(F)(4)	Audited records of holders of unclaimed funds.
R.C. 173.061	Records identifying recipients of Golden Buckeye Cards, subject to Director of Aging discretion but never a recipient's medical history.
R.C. 173.22	Certain investigative and other files and information contained in the State Long-Term Care Ombudsperson Program's or regional program's office.
R.C. 173.27(E)	The report of a criminal records check of a person who is under final consideration for employment with the Office of the State Long-Term Care Ombudsperson Program in a position that involves providing ombudsperson services to long-term care residents and recipients.
R.C. 173.393(B)	A part of a record of an evaluation of a community-based long-term care agency, if the release of the record would violate a federal or state statute, regulation, or rule.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 173.394(E)	The report of a criminal records check of a person who is under final consideration for employment with a community-based long-term care agency in a position that involves providing direct care to an individual.
R.C. 175.12(B) and 149.43(A)(1)(y)	Financial statements and data submitted for any purpose to the Ohio Housing Finance Agency or the Controlling Board in connection with applying for, receiving, or accounting for financial assistance the Agency provides and information that identifies any individual who benefits directly or indirectly from financial assistance the Agency provides.
R.C. 177.02(F)	Information concerning the filing of a complaint and the investigation of organized criminal activity, for a specified time.
R.C. 177.03(D)(4) and (5)	Task force information concerning the investigation and potential prosecution of organized criminal activity.
R.C. 307.627, 307.629, 3701.045(A)(4), and 149.43(A)(1)(s)	Certain information, documents, and reports presented to the child fatality review board; statements made by board members at meetings; work product of a child fatality review board; and child fatality review data submitted by board to department of health or national child fatality review database.
R.C. 307.862(C)	Proposals and any documents or other records related to a subsequent negotiation for a final contract by a county contracting authority that uses competitive sealed proposals, until after the award of the contract.
R.C. 307.987	Information received by a private or government entity pursuant to a contract to provide workforce development activities or family service duties, a plan of cooperation, a regional plan of cooperation, or a transportation work plan that was confidential in the hands of the entity that provided the information.
R.C. 313.091	Medical or psychiatric record provided to a coroner.
R.C. 313.10(A)(2), (D), and (E)	The following records in a coroner's office, except in specified circumstances: preliminary autopsy and investigative notes and findings made by the coroner or by anyone acting under the coroner's direction or supervision, photographs of a decedent made by the coroner or by anyone acting under the coroner's direction or supervision, suicide notes, and medical and psychiatric records provided to the coroner.
R.C. 317.24(B)(2)(a), (b) and 149.43(A)(1)(aa)	Records of a discharged armed forces member recorded with a county recorder.
R.C. 319.34	County auditor's classified tax list and county treasurer's classified tax duplicate of taxable property.
R.C. 339.81	Information, data, and reports of a tuberculosis case furnished to, or procured by, a county or district tuberculosis control unit or the Department of Health.
R.C. 340.15(B)	Certain information obtained or maintained by a public children services agency or alcohol or drug addiction program.
R.C. 351.24	Records or proprietary information relating to lessees or other users obtained by a convention facilities authority or other persons acting under the Convention Facilities Authority Law.
R.C. 718.11	Records of transactions of a municipal corporation board of appeals relative to income taxation obligations.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 718.13	Information from tax returns, investigations, hearings, or verifications concerning municipal corporation income taxes.
R.C. 742.41(A)(2), (B), (C), and (E)(4)	Certain personal information in records of the Board of Trustees of the Ohio Police and Fire Pension Fund.
R.C. 901.13(E)	Any business plan submitted to the Ethanol Incentive Board as part of an ethanol production plant construction and operation application.
R.C. 901.27	Information acquired by a Department of Agriculture agent in an investigation.
R.C. 905.57	Information in an annual tonnage report (agricultural liming material sold or distributed) and certain other information maintained by the Department of Agriculture.
R.C. 917.17	Information furnished to or procured by the Director of Agriculture under the Dairies Law.
R.C. 921.02(E)	Trade secret or confidential business information on a pesticide registration application.
R.C. 921.04(B)	Information on a pesticide registration or permit application designated as a trade secret or confidential commercial or financial information.
R.C. 924.05(B)	Information contained in the individual reports filed with the Director of Agriculture by producers, handlers, or processors of any Ohio agricultural commodity for which a marketing program is proposed.
R.C. 926.06(D)	Financial information in the Department of Agriculture's records identifying commodity handler license applicants.
R.C. 1121.18(A)	Information related to an examination of a bank or other financial institution by the Superintendent of Financial Institutions.
R.C. 1121.25(A) and (E)	Commercial or financial information in an application or notice declared confidential by the Superintendent of Financial Institutions.
R.C. 1121.43(B)	Any written agreement or other writing for which a violation may be enforced by the Superintendent of Financial Institutions, if the Superintendent determines that publishing it and making it available to the public would be contrary to the public interest; a final order issued by the Superintendent of Financial Institutions, if the Superintendent determines that publishing it and making it available to the public would seriously threaten the safety and soundness of a bank or trust company, until a reasonable time.
R.C. 1121.45(C)	Certain records and information presented at a meeting with regulated persons called by the Superintendent of Financial Institutions.
R.C. 1155.16(A)	Reports or information regarding savings and loan associations obtained by the Superintendent of Financial Institutions or other persons.
R.C. 1163.20(A)	Reports or information regarding savings banks obtained by the Superintendent of Financial Institutions or other persons.
R.C. 1306.23	Records that would jeopardize the state's use or security of computer or telecommunications devices or services associated with electronic signatures, records, or transactions.
R.C. 1315.03(C) and 1315.10(C)	Information in or related to an application for a money transmitter license or an application to acquire control of a money transmitter license to which the Superintendent of Financial Institutions decides to grant confidential treatment.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 1315.122(A)	Information leading to, arising from, or obtained in the course of the examination of a licensee or other person conducted under the money transmitter laws.
R.C. 1315.53(H)	A report, record, information, analysis, or request obtained by the Attorney General or an agency pursuant to the Currency and Foreign Transactions Reporting Act, 84 Stat. 1118 (1970).
R.C. 1315.54(C)	A record, other document, or information obtained by the Attorney General pursuant to an investigation of a money transmitter.
R.C. 1321.09(A)	Reports filed with the Superintendent of Financial Institutions by small loans licensees.
R.C. 1321.422(B)	Individual reports required to be filed with the Superintendent of Financial Institutions by licensees under the short-term loan laws regarding the business and operation for the preceding calendar year.
R.C. 1321.46(C)(4)	The database of short-term loan borrowers that the Superintendent of Financial Institutions may develop to permit licensees to determine whether a borrower is eligible for a loan.
R.C. 1321.48(B), (C), (D), and (F)	Examination and investigation information, and any information leading to or arising from an examination or an investigation that is maintained by the Superintendent of Financial Institutions or released to the Attorney General under the short-term loan laws.
R.C. 1321.55(B)(2)	Annual individual reports filed by second mortgage security loans registrants with the Superintendent of Financial Institutions.
R.C. 1321.76(C)	Information obtained by the Superintendent of Financial Institutions regarding insurance premium finance company licensees.
R.C. 1322.061(A), (B), 1349.43(E), and 1349.44(B)	Examination, investigation, and certain application information (i.e. SSN's, employer identification numbers, particular banking and financial information, etc.) obtained by the Superintendent of Financial Institutions regarding mortgage broker registrants.
R.C. 1331.16(L)	Certain records and information provided to the Attorney General pursuant to an investigative demand under the Monopoly Law.
R.C. 1332.25(G)	Information in an application made to the Director of Commerce for a video service authorization that the applicant identifies, and the Director affirms, as trade secret information.
R.C. 1332.30(E)(2)(b)	Quarterly reports to a municipal corporation or township identifying the total number of video service subscribers served within the municipal corporation or the unincorporated area of the township.
R.C. 1345.05(A)(7)	Identity of suppliers investigated or facts developed in investigations of Consumer Sales Practices Act violations.
R.C. 1346.03	Certain tax information about a tobacco product manufacturer acquired by the Department of Taxation and provided to the Attorney General.
R.C. 1501.012(B), 1501.091, and 1501.10	Questionnaires and financial statements submitted to the Director of Natural Resources by a public service facility construction contract bidder, by a bidder for a contract for the operation of public service facilities, or by a bidder for a lease of public service facilities in a state park.
R.C. 1505.03	Geological records accepted and retained on a confidential basis by the Chief of the Division of Geological Survey of the Department of Natural Resources (DNR).

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 1506.32(J)	Revelation by the Director of Natural Resources of abandoned property's location during certain time periods.
R.C. 1513.07(B)(2), (C)(12), and (D)	Information pertaining to the analysis of the chemical and physical properties of coal and certain other information by the Chief of DNR's Division of Mineral Resources Management.
R.C. 1513.072(B)	Trade secrets or certain privileged commercial or financial information submitted to the Chief of DNR's Division of Mineral Resources Management (coal exploration operations).
R.C. 1514.02(A)(9)	Information relating to test boring results submitted to the Chief of DNR's Division of Mineral Resources Management.
R.C. 1531.04 (E)	Information regarding sensitive site locations of endangered plant species and of unique natural features that are included in the Ohio Natural Heritage Database, if the Chief of Natural Areas and Preserves determines that the release of the information could be detrimental to the conservation of a species or unique natural feature.
R.C. 1531.06(M)	Information regarding sensitive site locations of endangered wildlife species and of features that are included in the Wildlife Diversity Database, if the Chief of the Division of Wildlife determines that the release of the information could be detrimental to the conservation of a species or feature.
R.C. 1547.80(C)	A copy of the registration, security plan, and emergency locator map provided by certain port facilities to the Department of Public Safety, the Department of Natural Resources, the sheriff of the county in which the port is located, and the chief of police of each municipal corporation in which the port is located.
R.C. 1551.11(B)	Trade secrets or other proprietary information submitted to the Director of Development regarding utilization of present, new, or alternative energy sources, the conservation of energy, energy resource development facilities, the attraction of funding in emerging and established national or state priority areas, or the enhancement of the state's economic development.
R.C. 1551.35(C) and 1555.17	Trade secrets or proprietary information in materials or data submitted to the Ohio Air Quality Development Authority or the Director of the Ohio Coal Development Office in connection with agreements for financial assistance relative to coal research and development projects.
R.C. 1707.12(B) and (C)	Investigation information, confidential law enforcement investigatory records, trial preparation records, and certain exempt transaction information of the Department of Commerce's Division of Securities.
R.C. 1710.02(C)	Records of organizations contracting with a special improvement district.
R.C. 1716.05(B)(5)(a)	Attorney General cannot disclose, as reflected in a fund-raising counsel's solicitation campaign records, a contributor's name and address and the date and amount of each contribution to the fund-raising counsel.
R.C. 1716.07(G)(1)(a)	Attorney General cannot disclose, as reflected in a professional solicitor's solicitation campaign records, a contributor's name, address, and telephone number and the date and amount of each contribution to the professional solicitor.
R.C. 1724.11(A)(1) and (2)	Certain financial, proprietary, and other information submitted by an entity to a community improvement corporation acting as a political subdivision's agent.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 1733.32(H)	Information obtained by the Superintendent of Financial Institutions under an examination or independent audit of a credit union.
R.C. 1733.327(A)	Certain conferences and administrative proceedings, and associated documents, regarding a credit union.
R.C. 1739.16(E)	Written agreement between a multiple employer welfare arrangement operating a group self-insurance program and a third party administrator.
R.C. 1751.19(C)	Any document or information pertaining to a complaint or response that contains a medical record, that is provided to the Superintendent of Insurance for inspection by a health insuring corporation.
R.C. 1751.52(B)	Data or information concerning an enrollee's or applicant's diagnosis, treatment, or health obtained by a health insuring corporation from specified sources.
R.C. 1751.80(A)	Health insuring corporation's clinical review rationale when made available to government agency.
R.C. 1753.38(A) and (C)(1) and 3903.88	The risk-based capital plans, reports, information, and orders maintained by the Superintendent of Insurance.
R.C. 1761.08(A)(3)	Certain financial statements and analyses furnished to a credit union share guaranty corporation.
R.C. 1761.21(A)	Conferences and administrative proceedings, and associated documents, regarding a credit union share guaranty corporation.
R.C. 2111.021	A file, record, petition, motion, account, or paper pertaining to a conservatorship upon probate court order.
R.C. 2151.14(B)	Reports and records of a juvenile court's probation department.
R.C. 2151.141(B)(2)	Under specified circumstances, certain records of a law enforcement agency or prosecuting attorney regarding abused, neglected, or dependent child complaints (protective orders).
R.C. 2151.142(B) and (C)	Under specified circumstances, residential address of an officer or employee, or person related by blood or marriage to an officer or employee, of a public children services agency or private child placing agency (the agency, the juvenile court, and any law enforcement agency cannot disclose).
R.C. 2151.313(C)	Originals and copies of fingerprints and photographs of a child and the child's related records of arrest or custody.
R.C. 2151.356 and 2151.357	Juvenile court records that have been sealed by court order.
R.C. 2151.421(H)(1) and (K)(2)	Reports by specified individuals regarding their knowledge or suspicion of a suffered, or of a threat of a, physical or mental wound, injury, disability, or condition reasonably indicating abuse or neglect of a minor or of a mentally retarded, developmentally disabled, or physically impaired child under age 21.
R.C. 2151.422(D)	Information in the possession of a homeless shelter that identifies the last known residential address and county of residence of a homeless person.
R.C. 2151.423	Information discovered during an investigation of the neglect or abuse of a child that is disclosed to any federal, state, or local government entity that needs the information to carry out its responsibilities to protect children from abuse or neglect.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 2151.85(F), 2505.073(B), 2919.121(C)(7), and 149.43(A)(1)(c)	The complaint and all other papers and records that pertain to an action brought by a pregnant, unmarried, and unemancipated minor woman who wishes to have an abortion without the notification of her parents, guardian, or custodian and all papers and records that pertain to an appeal of such an action.
R.C. 2151.86(E)	BCII criminal records check information relative to a person under final consideration for employment as a child caregiver in out-of-home care, a prospective adoptive parent, or a prospective recipient of a foster home certificate from the Department of Job and Family Services (DJFS).
R.C. 2152.19(D)(3), 2930.13(D), and 2947.051(C)	A victim impact statement associated with a felony that was committed by an adjudicated delinquent child or adult offender and that involved a specified “physical harm” aspect.
R.C. 2305.24	Information, data, reports, or records furnished to a quality assurance or utilization committee of a hospital, long-term care facility, not-for-profit health care corporation, state or local medical society, or to a quality assurance committee of the bureau of workers’ compensation or the industrial commission.
R.C. 2305.252	Proceedings and records of a peer review committee of a health care entity.
R.C. 2305.253	An incident report or risk management report and the contents of an incident report or risk management report, in a tort action.
R.C. 2307.46(A)	Upon court order in a civil action, except for limited purposes, the identity of a woman upon whom an abortion was allegedly performed, induced, or attempted.
R.C. 2317.02, 2317.021, and 4732.19	Certain privileged communications between an attorney, physician, dentist, psychologist, school psychologist, school guidance counselor, professional clinical counselor, professional counselor, social worker, independent social worker, social work assistant, mediator, communications assistant, member of the clergy, spouse, or chiropractor and a client, patient, person being religiously counseled, other spouse, or parent.
R.C. 2710.03(A), 2710.07, and 149.43(A)(1)(i)	Mediation communications.
R.C. 2743.62(A)(2)(a)	A record or report that the Court of Claims or Attorney General obtains under the Crime Victims Reparations Awards Law that is confidential or exempt from public disclosure when in its creator’s possession.
R.C. 2921.22(G)	Information about the commission of a felony that would otherwise have to be reported, under specified circumstances, such as an attorney-client relationship, doctor-patient relationship, etc.
R.C. 2921.24(A)	Home address of any peace officer who is a witness or arresting officer in a pending criminal case (law enforcement agency, court, or court clerk’s office cannot disclose in absence of court order).
R.C. 2921.25	The home address of a peace officer, parole officer, prosecuting attorney, assistant prosecuting attorney, correctional employee, or youth services employee, during examination in a court case or mayor’s court case.
R.C. 2923.129(B)(1) and (D)	Sheriff records concerning the issuance, renewal, suspension, or revocation of a concealed handgun license or temporary emergency concealed handgun license, subject to a specified journalist exception and information regarding concealed handgun licenses a sheriff makes available through the Law Enforcement Automated Data System.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 2925.42(D)(4)	Until property is seized, the recording and transcript of certain proceedings in relation to “felony drug abuse offense” forfeitures.
R.C. 2930.07	The victim’s or victim’s representative’s address, place of employment, or similar identifying fact, if the prosecutor in a case determines that there are reasonable grounds for the victim in a case to be apprehensive regarding acts or threats of violence or intimidation by the defendant or alleged juvenile offender and the court issues an order that the information should be confidential.
R.C. 2930.13(D), 2947.06, 2951.03, and 2953.08(F)(1)	Certain or all information in presentence investigation reports (contents and summaries) and those reports, psychiatric reports, and other investigative reports in an appellate court record to be reviewed.
R.C. 2930.14(A)	Written statement before sentencing of a victim, defendant, or alleged juvenile offender.
R.C. 2933.231(E)	Until search warrant is returned, the recording and transcript of proceeding concerning a request for a waiver of the statutory precondition for nonconsensual entry.
R.C. 2933.63	The contents, or evidence derived from the contents, of a wire, oral, or electronic communication that was unlawfully intercepted or improperly intercepted pursuant to an interception warrant or an oral order for an interception or that is of a privileged character and a special need for its interception is not shown.
R.C. 2939.18	Information that an indictment has been found against a person not in custody or under bail, before the indictment is filed and the case docketed.
R.C. 2950.08	Certain statements, information, photographs, fingerprints, and other material required under the Sex Offender Registration Law.
R.C. 2950.10(A)(4)	Information a sheriff obtains regarding the victim of a sexually oriented offense or a child-victim oriented offense who wishes to be notified of the offender’s or delinquent child’s registration status.
R.C. 2950.13(A)(1) and (13)	BCII’s Internet database of the State Registry of Sex Offenders and Child-Victim Offenders and information obtained by local law enforcement representatives through use of the database.
R.C. 2953.32(C) and (D) and 2953.321	Official records and related investigatory work product in a first offender’s case sealed by court order.
R.C. 2953.52(B), 2953.53(D), and 2953.54	Official records and related investigatory work product pertaining to a case sealed by court order (person found not guilty; complaint, indictment, or information against person dismissed; or no bill entered by grand jury) whether in the possession of court or another public office or agency.
R.C. 2981.03(B)(4)	Until property is seized under the Forfeiture Law, the recording and transcript of certain hearings or proceedings in relation to the forfeiture of that property.
R.C. 3101.05(A) and 3101.051	In connection with marriage license applications, under specified circumstances, a record containing applicant Social Security numbers.
R.C. 3107.17(B)(1) and (D)	Certain placement or adoption records and information; forms concerning the social or medical histories of the biological parents of an adopted person (only specified individuals may access).

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 3107.42(A) and 149.43(A)(1)(f)	The following records regarding persons available or potentially available for adoption prior to September 18, 1996: the file of releases; the indices to the file of releases; releases and withdrawals of releases in the file of releases, and information contained in them; and probate court and agency records pertaining to adoption proceedings.
R.C. 3107.52(A) and 149.43(A)(1)(f)	The Department of Health's records pertaining to adoption proceedings regarding a person available or potentially available for adoption on or after September 18, 1996.
R.C. 3111.94(A)	A physician's files concerning non-spousal artificial inseminations.
R.C. 3113.31(E)(8)(b)	The address of a person who petitions for a civil protection order or a consent agreement, if the person requests that the person's address be confidential.
R.C. 3113.36	Any information that would identify individuals served by a domestic violence shelter.
R.C. 3113.40	Information in the possession of a domestic violence shelter that identifies the residential address and county of residence information for a person admitted to the shelter.
R.C. 3121.76	Information obtained from a financial institution pursuant to an account information access agreement.
R.C. 3121.894 and 149.43(A)(1)(o)	Records maintained by the Department of Job and Family Services (DJFS) to locate individuals for the purposes of establishing paternity, or establishing, modifying, and enforcing support orders being administered by child support enforcement agencies, or to detect fraud in any DJFS administered program.
R.C. 3121.899(A)	New hire reports filed by employers with DJFS.
R.C. 3301.0711(I) and (N) and 3319.151(A)	Individual assessment scores and proposed assessment questions, anchor questions, questions that are needed for reuse on a future assessment, and assessment administered in the fall or summer.
R.C. 3301.0714(I)	Data collected or maintained in the Statewide Education Management Information System that identifies a pupil.
R.C. 3301.12(A)(3)	Individual student data used in studies and research projects for the improvement of public school education that are conducted under the authority of the Superintendent of Public Instruction.
R.C. 3301.32(D), 3301.541(D), 3301.88(E), and 3319.39(D)	BCII criminal records check information relative to a Head Start employment applicant, a preschool employment applicant, an applicant to participate in a program established under the Classroom Reading Improvement Grants Program in a specified manner, or a school district, educational service center, or chartered nonpublic school employment applicant.
R.C. 3302.021(A)(2)	Individual student test scores and reports used in the Value-Added Progress Dimension.
R.C. 3302.10(G)	Financial disclosure statements filed with the Ohio Ethics Commission by members of an academic distress commission.
R.C. 3304.21	Lists of names or information in the Rehabilitation Services Commission's records pertaining to applicants for or recipients of Commission services.
R.C. 3310.11(D)	Any document relative to the Educational Choice Scholarship Pilot Program that the Department of Education holds in its files and that contains both a student's name or other personally identifiable information and the student's data verification code.
R.C. 3313.173	Certain identifying information provided pursuant to a school district or educational service center reward offer relative to crimes committed against school employees or pupils or on school property.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 3313.533(H)(6)	Under certain circumstances, confidential or proprietary information or trade secrets contained in alternative school proposals submitted to a school district board of education.
R.C. 3313.536(C)	Copies of the safety plan and building blueprint adopted by a board of education or governing authority of a chartered nonpublic school, and copies of a school building floor plan filed with the Attorney General.
R.C. 3313.71	Certain records regarding the examination of pupils, teachers, or other school employees for tuberculosis.
R.C. 3313.714(C)	Information received by a board of education in relation to a Healthcheck program.
R.C. 3319.088(E)	Personal information concerning a pupil in the school district that was obtained or obtainable by an educational assistant.
R.C. 3319.292	Any questions the State Board of Education and the Department of Education ask an applicant for issuance or renewal of a teaching license regarding a record of a conviction, plea of guilty, bail forfeiture, or other disposition of a criminal offense committed or alleged to have been committed by the applicant that has been sealed or expunged and the responses of the applicant to such questions.
R.C. 3319.311(A) and (B)	Information obtained during a State Board of Education or Superintendent of Public Instruction investigation that may be the basis for suspending, revoking, or limiting an educator's license.
R.C. 3319.321(A), (B), and (C)	Personally identifiable information, and in some cases directory information, concerning students attending a public school, and other public school records.
R.C. 3323.05(F)(6) and (7) and (G)(2)	Discussions that occur during a mediation process or resolution session between parents of children with disabilities and a school district.
R.C. 3323.06(A)	Personally identifiable data, information, and records collected under a State Board of Education plan concerning the education of handicapped children.
R.C. 3334.11(J)	Certain records of the Ohio Tuition Trust Authority concerning tuition credits or college savings bonds.
R.C. 3334.19(H)	Records of the Ohio Tuition Trust Authority indicating the identity of purchasers, contributors, and beneficiaries under the Variable College Savings Program and amounts contributed to, earned by, or distributed from Program accounts.
R.C. 3503.10(E)(4)	The identity of the agency through which a person registered to vote, and information relating to a declination to register to vote at a designated agency.
R.C. 3503.11	Information relating to an applicant's decision to decline to register to vote or update the applicant's voter registration at the office of the Registrar of Motor Vehicles or deputy registrar.
R.C. 3505.181(B)(4)(b)	Information identifying whether a specific provisional ballot was counted, and, if the ballot was not counted, the reason the ballot was not counted.
R.C. 3506.18(D)	Any information on a voter verified paper audit trail that identifies the particular direct recording electronic voting machine that produced it.
R.C. 3509.06(E)	The count or any portion of the count of absent voter's ballots prior to the close of the polls.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 3599.161(B)	Records relating to the declination of a person to register to vote and the identity of the voter registration agency through which a particular person registered to vote maintained by directors and deputy directors of elections and board of elections employees.
R.C. 3701.028(A)	Specified records of the program for medically handicapped children and of programs funded by the federal Maternal and Child Health Block Grant.
R.C. 3701.041(B)	Records of a person's identity, diagnosis, prognosis, or treatment under the Employee Assistance Program.
R.C. 3701.044 and 3721.31(F)	Test materials, examinations, or evaluation tools used in any Department of Health examination or evaluation, specifically including competency evaluation programs and training and competency evaluation programs relative to long-term care facilities.
R.C. 3701.072(B) and (D) and 149.43(A)(1)(x)	Information reported to the Director of Health by a trauma center that describes the trauma center's preparedness and capacity to respond to disasters, mass casualties, and bioterrorism, and any evaluation the Director of Health conducts to verify that preparedness and capacity.
R.C. 3701.14(B) and (D)	Information obtained during an ongoing investigation or inquiry by the Director of Health (cause of disease or illness related) that is not in summary, statistical, or aggregate form and that identifies a person.
R.C. 3701.17(A) and (B)	Information that is reported to or obtained by the Director of Health, the Department of Health, or a board of health of a city or general health district that describes an individual's past, present, or future physical or mental health status or condition, receipt of treatment or care, or purchase of health products, and that reveals the identity of the individual or could be used to reveal the identity of the individual.
R.C. 3701.20(E)	Information of a poison prevention and treatment center about individuals to whom treatment or services are provided.
R.C. 3701.24(D), 3701.241(A), 3701.243(A), and 3701.247(A) and (C)	Information concerning AIDS cases, AIDS-related conditions, or confirmed positive HIV tests reported to the Department of Health that identifies an individual; information obtained or maintained under the associated partner notification system; certain information concerning an individual's HIV test and the identity of an individual diagnosed as having AIDS or an AIDS-related condition; and the identity of an individual against whom a probate court action has been brought to compel HIV testing.
R.C. 3701.248(B)(3) and (D)	Healthcare facilities and coroners must keep confidential certain information concerning possible exposure of emergency medical services workers and funeral services workers to a contagious or infectious disease.
R.C. 3701.263(A) and (B)	Certain information concerning a case of malignant disease furnished to a cancer registry or the Department of Health and information concerning individual cancer patients obtained by the Department for the Ohio Cancer Incidence Surveillance System.
R.C. 3701.509(E)	Patient-identifying information contained in newborn hearing screening reports submitted by hospitals and freestanding birthing centers to the Department of Health.
R.C. 3701.62	Any document regarding the Help Me Grow Program and a child's eligibility for special education services that the Director of Health holds in the Director's files that contains both a child's name or other personally identifiable information and the child's data verification code.
R.C. 3701.79(C) and (H)	Individual abortion reports and post abortion complication reports completed by a physician and submitted to the Department of Health.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 3701.881(E), 3712.09(E), 3721.121(E), and 3722.151(E)	BCII criminal records check information relative to a home health agency, a hospice care program, an adult day-care program, or an adult care facility employment applicant.
R.C. 3701.91	Information provided to the Department of Health through the toll-free patient safety telephone line.
R.C. 3702.18	Quality-of-care data, or records copied in an investigation of a violation of the Department of Health's rules, that identify specific patients; or safety reports concerning specific adverse events, bodily injuries, or complaints that are reported to the Department.
R.C. 3702.531	Identifying information about any patient in certain Director of Health investigations under the Certificates of Need Law.
R.C. 3704.08(A) and (B), 3704.18(A)(7), and 3706.19(C)(6)	Trade secrets obtained by the Director of Environmental Protection under the Air Pollution Control Law; records, reports, and information obtained by public officials under the Small Business Stationary Source Technical and Environmental Compliance Assistance Program; communications and information from small businesses seeking assistance under the Program; and information on problems and grievances assistance given to a small business by the Program's ombudsman.
R.C. 3705.09(G)	An original birth record and documentary evidence supporting a new registration of birth following fatherhood presumption, finding, declaration, or acknowledgement.
R.C. 3705.11	Under certain circumstances, a foundling report for a child of unknown parentage.
R.C. 3705.12, 3705.29(D), and 149.43(A)(1)(d)	Original birth records, adoption files, and certain other documents after a new record has been issued or obtained after an adoption.
R.C. 3705.15(D)(1)	Original birth records and index references after a new record is issued due to a correction of the original birth record.
R.C. 3705.23(A)(4)(b)	Information contained in the "Information for Medical and Health Use Only" section of a birth record (Department of Health's Office of Vital Statistics and local registrars).
R.C. 3705.32(A)	Records received and information assembled by the Birth Defects Information System.
R.C. 3706.20	Information or records relating to secret processes or methods of manufacture or production that are obtained by the Ohio Air Quality Development Authority.
R.C. 3713.09(C) and (D)	Records of any importer, manufacturer, or wholesaler of stuffed toys or articles of bedding, mobile home and recreational vehicle dealer, conversion van dealer, secondhand dealer, or auction house that are audited by the Superintendent of Industrial Compliance to determine compliance with the bedding and stuffed toy laws are confidential, except when required by the Public Records Law or as the Superintendent finds necessary for the proper administration of those laws.
R.C. 3717.28 and 3717.48	Trade secrets and other information required to be furnished to or procured by a licensor of retail food establishments or of food service operations.
R.C. 3719.13	Prescriptions, orders, and records required by the Controlled Substances Law.
R.C. 3721.026(B)	Technical assistance reports of the Department of Health's technical assistance unit for nursing facilities.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 3721.031	Information that identifies a patient or resident of a nursing home, a residential care facility, a home for the aging, or an Ohio Veterans' Home, or an individual who files a complaint or provides confidential information about a home or facility.
R.C. 3721.13(A)(10), 5119.12(B)(19)	Personal and/or medical records of the residents or patients of nursing homes, residential care facilities, homes for the aging, an Ohio Veterans' Home, adult care facilities, community alternative homes, and certain other homes.
R.C. 3721.25(A), (B), and (C)	Certain records and information concerning reports of long-term care facility or residential care facility resident abuse or neglect or misappropriation of resident property.
R.C. 5119.87(A)	Certain identifying information relative to reports alleging a violation of the Adult Care Facility Law (Director of Health).
R.C. 3723.09(H) and 3723.10	Information that the Public Health Council requires radon testers and mitigation specialists to report to the Director of Health, and the name of a complainant to the Director concerning a radon tester, mitigation specialist or contractor, or operator of a radon laboratory or a training course.
R.C. 3723.12(A)	Radon-related information collected by the Department of Health concerning a private residence or the real property upon which it is located, under certain circumstances.
R.C. 3727.081(F)	Information reported to or collected by the Department of Health regarding an application for a hospital to be designated a level II pediatric trauma center that identifies or would tend to identify specific patients.
R.C. 3727.101(E)(2)	Copies of the American College of Surgeons' report of a consultative or reverification visit and the plan and timetable for obtaining verification or reverification that are provided to the Director of Health by an adult or pediatric trauma center operating under provisional status.
R.C. 3727.36	Names and Social Security Numbers of patients, physicians, and dentists not to be included in data required to be reported by hospitals to the Department of Health.
R.C. 3733.471(D)	Information that the Migrant Agricultural Ombudsman's Office receives as a result of reports of certain violations of law filed with it.
R.C. 3734.42(A)(3) and 3734.43(L) and (N)	Certain documents associated with an Attorney General investigative report or investigative demand under the Solid and Hazardous Wastes Law.
R.C. 3737.16(E)	Information the Fire Marshal and certain other officials receive from an insurance company that has investigated or is investigating a fire loss of real or personal property, until a specified time.
R.C. 3737.23	Testimony given in an investigation into a fire is not a matter of public record in the Fire Marshal's record of Ohio fires determined by investigations.
R.C. 3742.03(E)(3)	Information that is a medical record and that is required to be reported under Public Health Council lead abatement project and lead poisoning record-keeping and reporting rules.
R.C. 3742.15	The name of a person who files a complaint with the Director of Health concerning a lead inspector, lead abatement contractor, lead risk assessor, lead abatement project designer, lead abatement worker, clearance technician, clinical laboratory, environmental lead analytical laboratory, or training course.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 3745.71	The contents of an environmental audit report, and the contents of communications between the owner or operator of a facility or property who conducts an environmental audit and employees or contractors of the owner or operator, or among employees or contractors of the owner or operator, that are necessary to the audit and are made in good faith as part of the audit after the employee or contractor is notified that the communication is part of the audit (applies to audits initiated after March 13, 1997, and completed prior to January 1, 2009).
R.C. 3750.02	Certain information obtained by the Emergency Response Commission and local emergency planning committees, such as trade secrets, confidential business information, and the name and address of a person who seeks access to information in the Commission's files.
R.C. 3750.09 and 3751.04	For purposes of the Emergency Planning Law and the Hazardous Substances Law, trade secrets or confidential business information obtained under the Emergency Planning and Community Right-To-Know Act of 1986.
R.C. 3750.10(B)(5)	Under certain circumstances, the storage location of a hazardous chemical at a facility provided on an emergency and hazardous chemical inventory form to the Emergency Response Commission or a local emergency planning committee.
R.C. 3750.22(B)(1)	Any vulnerability assessment or other security-sensitive information a public office receives from an owner or operator of a facility where chemicals are produced, or the owner or operator of any other facility or business of any type.
R.C. 3770.02(B)	State Lottery Commission meeting records, unless prior notification of the Director and a showing of good cause.
R.C. 3770.07(A)(1) and (4)	The name, address, and Social Security Number of each beneficial owner of a trust that is making a claim for a lottery prize award, unless the beneficial owner consents to the inspection or copying in writing.
R.C. 3793.07(C)(8) and (E)	Investigatory records of the Department of Alcohol and Drug Addiction Services (DADAS) regarding the certification or credentialing of chemical dependency counselors and alcohol and other drug prevention specialists for the purpose of qualifying their services for reimbursement under the Medicare or Medicaid program.
R.C. 3793.12(C)	Communications by a person seeking aid in good faith for alcoholism or drug dependence and information revealing the person's identity not to be collected or disclosed by DADAS.
R.C. 3793.13(A)	Records or information pertaining to the identity, diagnosis, or treatment of any DADAS-licensed or certified drug treatment program patient.
R.C. 3793.14	Health and medical records of a person treated for alcoholism or drug addiction.
R.C. 3793.15(D)	A record or information DADAS obtains or maintains for the Addicted Pregnant Women Program that could identify a specific woman or her child.
R.C. 3901.045	Documents and information the Superintendent of Insurance receives from local, state, federal, and international regulatory and law enforcement agencies, from local, state, and federal prosecutors, from the National Association of Insurance Commissioners and its affiliates and subsidiaries, from the Chief Deputy Rehabilitator, from the Chief Deputy Liquidator, from other deputy rehabilitators and liquidators, and from any other person employed by, or acting on behalf of, the Superintendent, if the documents or information were confidential or privileged when held by the provider.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 3901.36	Information and documents obtained by the Superintendent of Insurance in an examination or investigation of an insurer's financial condition or legality of conduct.
R.C. 3901.44(B) and (D)	Documents, reports, and evidence in the possession of the Superintendent of Insurance pertaining to an insurance fraud investigation.
R.C. 3901.48(A), (B), and (C)	Certain records concerning an audit of an insurance company or health insuring company; and the work papers of the Superintendent of Insurance resulting from specified insurer examinations, financial analyses, and performance regulation examinations.
R.C. 3901.70(A)	Reports obtained by or disclosed to Superintendent of Insurance relative to insurer material transactions.
R.C. 3901.83	Record containing the medical history, diagnosis, prognosis, or medical condition of an enrollee of a health insuring corporation, insured of an insurer, or plan member of a public employee benefit plan, which is provided to Superintendent of Insurance under law.
R.C. 3903.11	Certain records pertaining to delinquency proceedings against an insurer and judicial reviews of those proceedings.
R.C. 3903.72(B)(3)(g)	A memorandum received by the Superintendent of Insurance in support of a qualified actuary's opinion on the valuation of an insurance company's reserves for policies and annuities and other related information.
R.C. 3905.24	Under certain circumstances, records and other information obtained by the Superintendent of Insurance in an investigation of an insurance agent license applicant, or of an agent, solicitor, broker, or other person licensed or appointed under the Insurance Producers Licensing Law, the Public Insurance Adjusters Law, the Home Warranty Companies Law, or the Third-Party Administrators Law.
R.C. 3905.50(H)	Information or documentation provided to an agent or to the Superintendent of Insurance by an insurer regarding termination of an independent insurance agency contract.
R.C. 3911.021	Reports maintained by the Superintendent of Insurance regarding measures taken by a life insurance company to detect and prevent stranger-originated life insurance.
R.C. 3916.11(D), 3916.12(E), and 3916.18(E)(1) and (G)(2)	Certain viator-related and other information, documents, reports, etc. produced or acquired by the Superintendent of Insurance in the course of an examination under the Viatical Settlements Law; documents and evidence obtained by the Superintendent in an investigation of a suspected or actual fraudulent viatical settlement act; antifraud plans submitted to the Superintendent under that law; proprietary information of viatical settlement licensees; individual transaction data; and data that could compromise the privacy of the viator's or insured's personal, financial, and health information.
R.C. 3929.302(G) and (I)	Information reported to the Department of Insurance by insurers and related entities or by attorneys or law firms regarding any medical, dental, optometric, or chiropractic claim asserted against a risk located in Ohio, if the claim resulted in a final judgment in any amount, a settlement in any amount, or a final disposition of the claim resulting in no indemnity payment on behalf of the insured.
R.C. 3929.68	Reports and communications made in connection with certain actions of the Medical Liability Underwriting Association, the Stabilization Reserve Fund, the Superintendent of Insurance, and others.
R.C. 3930.10	Reports and communications concerning the performance of powers and duties by the Ohio Commercial Insurance Joint Underwriting Association, the Superintendent of Insurance, and others under the Commercial Market Assistance Plan Law.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 3935.06	Information submitted for an examination of policies, etc. by an insurance rating bureau.
R.C. 3937.42(F)	Information a law enforcement or prosecuting agency receives from an insurance company investigating a claim involving motor vehicle or vessel insurance, until a specified time.
R.C. 3953.231(E)	Statements and reports submitted by a financial institution regarding trust account (IOTA) interest used to fund legal aid programs.
R.C. 3955.14(A)(2)	Ohio Insurance Guaranty Association's recommendations regarding the status of certain member insurers.
R.C. 3956.12(A)(4), (C), and (E)	Certain records concerning the detection and prevention of life and health insurance company insolvencies (Superintendent of Insurance and the Board of Directors of the Ohio Life and Health Insurance Guaranty Association).
R.C. 3961.07(C) and (G)	All records and other information concerning a discount medical plan organization obtained by the Superintendent of Insurance in an examination or investigation of the business and affairs of such an organization.
R.C. 3999.36(C)	Written notice of impairment sent by an insurer to the Superintendent of Insurance.
R.C. 4104.19(E)(1)	The examination for a license to operate as a steam engineer, high pressure boiler operator, or low pressure boiler operator.
R.C. 4111.14(H) and (I)	The name of a person who makes a complaint, and all records and information related to investigations by the state, regarding an employer's compliance with the constitutional minimum wage requirements.
R.C. 4112.05(B)(2) and (3)(c) and 149.43(A)(1)(i)	All information that was obtained as a result of or that otherwise pertains to a Civil Rights Commission preliminary investigation into allegedly unlawful discriminatory practices, prior to certain Commission actions.
R.C. 4121.44(D)(1) and (H)(3)	Certain vendor and other information associated with the Bureau of Workers' Compensation qualified health plan system, health partnership program, and health care data program.
R.C. 4121.45	Information in a claim file that an Industrial Commission ombudsperson accesses that that would tend to prejudice the case of either party to a claim or that would tend to compromise a privileged attorney-client or doctor-patient relationship.
R.C. 4123.27	Information contained in employer annual statements filed with the Bureau of Workers' Compensation (BWC) and information regarding recipients of public assistance provided to BWC by DJFS.
R.C. 4123.88	Claim files and other information concerning a claim or appeal filed with the Bureau of Workers' Compensation or the Industrial Commission and information directly or indirectly identifying the address or phone number of a claimant.
R.C. 4125.05(E) and (F)	All records, reports, client lists, and other information obtained by BWC from a professional employer organization, including the list of client employers included on the registration form.
R.C. 4141.162(E), 4141.21, and 4141.22	Certain information maintained by the Director of Job and Family Services under the Unemployment Compensation Law; and redisclosure of information declared confidential by the Unemployment Compensation Law.
R.C. 4163.07(C)	Information pertaining to any shipment of special nuclear material or by-product material, until specified time (Executive Director of Emergency Management Agency).

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 4167.10(B)(1) and 4167.12	Names of individuals who request inspections for a violation of an Ohio Employment Risk Reduction Standard (OERRS); and trade secret information reported in an OERRS investigation, inspection, or proceeding (BWC).
R.C. 4301.441	Any information provided to a state agency by the Department of Taxation necessary to verify a permit holder's gallonage or noncompliance with taxes levied under the Liquor Control Law or the Motor Vehicle Law.
R.C. 4303.17(A)(1)	Information acquired by the Department of Commerce's Division of Liquor Control concerning a D-4 liquor permit holder's membership roster.
R.C. 4501.15	Social Security Numbers from the driver's license and vehicle registration records maintained by the Department of Public Safety and credit card account numbers or any other information obtained when a person uses a credit card to pay motor vehicle registration taxes or fees, license fees, or other similar taxes, fees, penalties, or charges imposed or levied by the state and collected by the Department.
R.C. 4501.27	An individual's driver's license identification number, name, telephone number, address, photograph or digital image, Social Security number, and medical or disability information obtained by the Bureau of Motor Vehicles in connection with a motor vehicle record, subject to certain exceptions ("personal information" and "sensitive personal information").
R.C. 4501.271(B)	Under certain circumstances, a peace officer's, correctional employee's, or youth services employee's residential address obtained by the Bureau of Motor Vehicles in connection with a motor vehicle record.
R.C. 4501.34(B)	Any information on driver's license applications other than lists of names and addresses (Registrar of Motor Vehicles).
R.C. 4501.81(A)	Information in the Next of Kin Database established by the Bureau of Motor Vehicles.
R.C. 4507.20	Any report submitted to the Registrar of Motor Vehicles by a physician stating that, in the physician's professional opinion, the holder of a driver's or commercial driver's license may be incompetent or otherwise not qualified to operate safely a motor vehicle due to medical reasons.
R.C. 4509.10	Motor vehicle accident reports submitted to the Registrar of Motor Vehicles under the Financial Responsibility Law.
R.C. 4517.43(A)	Applications for licenses and copies of contracts provided under the Motor Vehicle Dealers Law to the Registrar of Motor Vehicles.
R.C. 4519.46	Snowmobile, off-highway motorcycle, or all-purpose vehicle accident reports received by the Registrar of Motor Vehicles.
R.C. 4563.30(D)	Copies of airport registrations, emergency locator maps, and security plans that are required to be provided to, and that are in the possession of, the Department of Public Safety, the Office of Aviation, a sheriff, or a chief of police.
R.C. 4582.091(A) and 4582.58(B)	Certain trade secret and other financial and proprietary information submitted by an employer to a port authority or specified nonprofit corporation; other information so submitted until specified time.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 4701.04(K)(1), 4701.19(B), and 4701.29(D)	In certain legal proceedings, the proceedings, records, and work papers of a public accounting firm peer reviewer; the statements, records, schedules, working papers, and memoranda made by a public accountant or CPA with respect to an audit of a public office or private entity (other than client's copy of report), including the same in Auditor of State's possession; and the investigative proceedings of the Accountancy Board.
R.C. 4705.10(B)	Statements and reports of individual depositor information relative to attorney interest-bearing trust accounts.
R.C. 4715.03(D)	State Dental Board proceedings concerning an investigation of a complaint and the determination in them whether reasonable grounds exist to believe a violation of the Dentists and Dental Hygienists Law has occurred.
R.C. 4719.02(E)	Social Security Number, bank account, and other specified information submitted in an application for a certificate of registration or registration renewal as a telephone solicitor.
R.C. 4723.09(C)	BCII criminal records check results and associated report relative to a registered nurse or licensed practical nurse license applicant.
R.C. 4723.28(I), 4723.282(D), and 4723.35(E)	Information received by the Board of Nursing in an investigation of an alleged violation of the Nurses Law; records of the Board for the purpose of the practice intervention and improvement program; and all records of a participant in the Board's chemical dependency monitoring program.
R.C. 4723.65(B)(3)	A criminal records check provided to the Board of Nursing by an applicant for a medication aide certificate or by BCII regarding such an applicant.
R.C. 4723.75(C)	BCII criminal records check results and associated report relative to a dialysis technician certificate applicant.
R.C. 4723.83(B)	BCII criminal records check results and associated report relative to a community health worker certificate applicant.
R.C. 4725.22(C) and 4725.23(C)	Information the State Board of Optometry receives regarding the final disposition of a claim or malpractice action against an optometrist; and information the Board receives in an investigation of an alleged violation of the Optometrists Law, including identifying information about patients or complainants.
R.C. 4727.18	Information arising from, obtained by, or contained in the Superintendent of Financial Institutions' investigation of a pawnbroker or of another person the Superintendent reasonably suspects has violated or is violating the Pawnbroker Law.
R.C. 4729.80(C)	Information contained in, and any information obtained from, the drug database established and maintained by the State Board of Pharmacy and information contained in the records of requests for information from the database.
R.C. 4730.26(F), 4730.32(F), 4731.22(F)(5), 4731.224(F), 4760.14(E), 4760.16(F), 4762.14(E), 4762.16(F), 4774.14(E), and 4774.16(F)	Information the State Medical Board receives in an investigation of an alleged violation of the Physician Assistants Law, the Physicians Law, the Anesthesiologist Assistants Law, the Acupuncturists Law, or the Radiologist Assistants Law; and summaries, reports, and records the Board receives and maintains regarding formal disciplinary actions taken with respect to physician assistants, physicians, anesthesiologist assistants, acupuncturists, or radiologist assistants by a health care facility, their alleged violations of the applicable law, their professional membership revocation or suspension for certain reasons, or their professional liability insurance claim final dispositions.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 4734.32(F), 4734.41(C), and 4734.45(B)	Summaries, reports, and records the State Chiropractic Board receives and maintains regarding formal disciplinary actions taken with respect to chiropractors by a health care facility, their alleged violations of the Chiropractors Law, their professional membership revocation or suspension for certain reasons, or their professional liability insurance claim final dispositions; records of a chiropractor's participation in the Board's chemical dependency and mental illness monitoring program; and information the Board receives in an investigation of an alleged violation of the Chiropractors Law.
R.C. 4735.05(D)	Information obtained in investigations and audits concerning alleged violations of the Real Estate Brokers and Salespersons Law, and associated reports, documents, and work products prepared or maintained by the Department of Commerce, Superintendent of Real Estate and Professional Licensing, and investigators, auditors, or other personnel of the Department.
R.C. 4738.14	Applications for licenses as a motor vehicle salvage dealer.
R.C. 4740.04(B)(1)	Contractor examinations that the administrative section of the Ohio Construction Industry Licensing Board is responsible for administering.
R.C. 4751.041 and 149.43(A)(1)(u)	Test materials, examinations, or evaluation tools used in an examination for licensure as a nursing home administrator that the Board of Examiners of Nursing Home Administrators administers or contracts with another entity to administer.
R.C. 4752.08, 4761.03(E), and 4761.031	Confidential information obtained by, and the identity of complainants to, the Ohio Respiratory Care Board during investigations of alleged violations of the Respiratory Care Law.
R.C. 4755.02 and 4755.61(A)(7)	Information and records received or generated in investigations under the Occupational Therapist, Physical Therapist, and Athletic Trainers Law; and other information obtained by the Athletic Trainers Section of the Ohio Occupational Therapy, Physical Therapy, and Athletic Trainers Board regarding applicable violations of the Law.
R.C. 4757.38	Records of the Counselor, Social Worker, and Marriage and Family Therapist Board's investigations of alleged violations of the Counselor, Social Worker, and Marriage and Family Therapist Law.
R.C. 4758.31	Records of the Chemical Dependency Professionals Board concerning an ongoing investigation.
R.C. 4763.03(D) and (E)	Information obtained in investigations of alleged violations of the Real Estate Appraisers Law.
R.C. 4763.05(A)(1)(a)	The current residence address of an applicant for an initial state-certified general real estate appraiser certificate, an initial state-certified residential real estate appraiser certificate, an initial state-licensed residential real estate appraiser license, or an initial state-registered real estate appraiser assistant registration that is retained by the Superintendent of Real Estate.
R.C. 4765.06(C) and (E), 4765.102, and 4765.12(B)	Deliberations of persons performing risk adjustment functions under the emergency medical services incidence reporting system of the State Board of Emergency Medical Services; information the Board or the Department of Public Safety collects or receives that would identify a specific patient or recipient of emergency medical services or trauma care; information the Board receives pursuant to an investigation; and information generated solely for use in a peer review or quality assurance program conducted for an emergency medical service organization.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 4767.06(A)(7)	Proceedings and records maintained as confidential by the Ohio Cemetery Dispute Resolution Commission because the nature of a complaint merits the action.
R.C. 4769.07	Patient identifying information the Department of Health obtains in a Health Care Practitioner Balance Billing Law alleged violation investigation.
R.C. 4776.04	The results of a BCII criminal records check conducted for certain occupational licenses.
R.C. 4901.16	Certain information acquired by a Public Utilities Commission (PUCO) employee or agent concerning a public utility.
R.C. 4905.82(B) and (C)	Information concerning corporate structure and personnel on a uniform permit application, or for a background investigation for an application for a uniform permit as a carrier of hazardous wastes, submitted to the PUCO.
R.C. 4928.06(F)	Confidential information provided to the PUCO regarding competitive retail electric service.
R.C. 4928.62(D)	Financial statements, financial data, and trade secrets the Director of Development receives under the Energy Efficiency Revolving Loan Program and any information taken from those statements, data, or trade secrets.
R.C. 4929.23(A)	Information concerning competitive retail natural gas service provided by retail natural gas suppliers or governmental aggregators to the PUCO.
R.C. 4931.06(B)	Any communication made by or to a person with a communicative impairment with the assistance of a communications assistant at a telecommunications relay service.
R.C. 4931.49(F)	Information concerning telephone numbers, addresses, or names obtained from the 9-1-1 database.
R.C. 4931.66(B)	Any information provided to the Ohio 9-1-1 Coordinator by a wireless service provider, the State Highway Patrol, and each subdivision operating one or more public safety answering points for a countywide system providing wireless 9-1-1 that is provided for the purpose of carrying out the wireless 9-1-1 program if the information consists of trade secrets or of information regarding the customers, revenues, expenses, or network information of a telephone company.
R.C. 4981.03(D) and 4981.29(A)(7)	Confidential data or information obtained from a railroad by the Ohio Rail Development Commission, and trade secrets and proprietary information the Commission receives.
R.C. 5101.131 and 5101.133	Information contained in or obtained from the Uniform Statewide Automated Child Welfare Information System.
R.C. 5101.181(B) and (D) and 5101.27	Information regarding recipients of public assistance (procedure for determination of overpayments and other purposes).
R.C. 5101.182	Information furnished by the Tax Commissioner to certain officials as part of the procedure to determine overpayment of public assistance.
R.C. 5101.29 and 149.43(A)(1)(z)	Names and other identifying information regarding children enrolled in or attending, and individuals who make a complaint about, a child day-care center or home or an institution or association that receives, desires to receive and care for, or places children in homes, and names, documentation, and other information regarding a foster caregiver or prospective foster caregiver.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 5101.31	Any record, data, pricing information, or other information regarding a drug rebate or supplemental drug rebate agreement for the Medicaid Program that DJFS receives from a pharmaceutical manufacturer or creates pursuant to negotiation of the agreement.
R.C. 5101.572	Information provided by a third party to DJFS to identify individuals for the purpose of establishing third party liability pursuant to Title XIX of the Social Security Act.
R.C. 5101.61(F)	Reports made to DJFS concerning adult abuse, neglect, or exploitation and related investigatory reports.
R.C. 5104.011(C)(2)	Enrollment, health, and attendance records for children attending a day-care center and health and employment records for center employees.
R.C. 5104.012(D), 5104.013(F), 5119.072(C), 5123.081(H), 5126.28(H), and 5153.111(D)	BCII criminal records check information relative to a day-care center, type A family day-care home, or certified type B family day-care home employment applicant; a day-care center or type A family day-care home owner, licensee, or administrator; a Department of Mental Health employment applicant; a Department of Developmental Disabilities (DODD) employment applicant; a county board of DD employment applicant; or a public children services agency employment applicant.
R.C. 5107.71 and 5107.715	Information about a member of an assistance group applying for and participating in Ohio Works First who has been subjected to domestic violence.
R.C. 5111.032(B)(1) and (I)	BCII criminal records check information relative to any provider, applicant to be a provider, employee or prospective employee of a provider, owner or prospective owner of a provider, officer or prospective officer of a provider, or board member or prospective board member of a provider of Medical Assistance Programs under the Social Security Act.
R.C. 5111.033(E)	BCII criminal records check information relative to an applicant under final consideration for employment, or an existing employee, with a waiver agency in a position involving home and community-based waiver services to persons with disabilities.
R.C. 5111.034(F)	BCII criminal records check information relative to an independent provider in a DJFS administered home and community-based services program providing home and community-based waiver services to consumers with disabilities.
R.C. 5111.61(A) and (B)	Any record that identifies or would tend to identify a nursing facility resident, an individual who submits a complaint about a nursing facility, or an individual who provides information about a nursing facility (DJFS).
R.C. 5112.21	Information filed under the Hospital Care Assurance Program that includes patient-identifying material (repealed, effective 10-16-2011)
R.C. 5119.22(I)	The source of a complaint of a Residential Facilities Law violation when disclosure could be detrimental to the Department of Mental Health's purposes or could jeopardize the investigation.
R.C. 5120.17(K), 5120.21, 5120.211(B)(1) and (F), and 149.43(A)(1)(k)	Certain records that identify an inmate under the law concerning transfer of mentally ill or mentally retarded inmates from a Department of Rehabilitation and Correction (DRC) state correctional institution to a psychiatric hospital; certain records maintained by DRC; and DRC quality assurance records.
R.C. 5120.60(G)	Information provided to the Office of Victim Services in DRC's Division of Parole and Community Services by victims of crime or victim representatives for certain purposes.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 5122.31, 5122.311(B), and 5122.32(B)(1)	Certificates, applications, records, and reports identifying patients, former patients, or persons whose hospitalization was sought under the Hospitalization of the Mentally Ill Law; notices (including their information) BCII receives from courts or others in order to conduct incompetency records checks (the notices pertain to individuals found by a court to be a mentally ill person subject to hospitalization by court order and individuals who become involuntary patients other than only for purposes of observation); and quality assurance records associated with mental health and medical services at certain locations.
R.C. 5122.47	Records or information used by the Department of Mental Health to create compilations relating to patients buried on hospital grounds that must be deposited with the Ohio Historical Society and the State Library.
R.C. 5123.05, 5123.19(L), 5123.31, 5123.51(G), and 5123.57	Records created or received pursuant to a Department of Developmental Disabilities (DODD) audit; the source of certain complaints made to DODD; certain records maintained by DODD relative to residents in its institutions or persons committed to or discharged or transferred from them; files and records of certain DODD investigations pertaining to abuse or neglect of an individual with mental retardation or a developmental disability or misappropriation of such an individual's property; and information in DODD records pertaining to a mentally retarded or developmentally disabled person for whom a guardian, trustee, or protector has been appointed.
R.C. 5123.60(G), ¹ 5123.601(D) ² , 5123.602 ³ , and 5123.603(B) ⁴	All records received or maintained by the Legal Rights Service (LRS) in connection with any investigation, representation, or other activity; communications between personnel and agents of LRS and its clients; the identities of certain individuals who provide information to the LRS's Ombudsman Section; certain communications with the Ombudsman Section; and the Ombudsman Section's records and files.
R.C. 5123.61(M) and 5123.611(C)	Reports of wounds, injuries, disabilities, and conditions reasonably indicating abuse or neglect or of another major unusual incident made to the Department of Developmental Disabilities (DODD) relative to developmentally disabled persons, and DODD's associated report on a review committee's recommendations.
R.C. 5123.62(T)	Information in the personal and medical records of mentally retarded and developmentally disabled persons.
R.C. 5123.89(A)	Certificates, applications, records, and reports identifying residents, former residents, or persons whose institutionalization was sought under the Mental Retardation and Developmental Disabilities (MRDD) Law.
R.C. 5126.044	The identity of an individual who requests programs or services of a county Developmental Disabilities (DD) board, and the record of a person eligible for the programs or services.
R.C. 5126.31(E)	Reports by a county \ Developmental Disabilities (DD) board of reviews of abuse and neglect allegations.
R.C. 5139.05(D), 5139.56(C), and 149.43(A)(1)(l)	Records maintained by the Department of Youth Services (DYS) pertaining to the children in its custody, records DYS provides to a school district in which a child released from the Department's custody is entitled to attend school, and certain victim-related statements pertaining to a child who is committed to DYS's legal custody and who is the subject of a release hearing.

¹ R.C. 5123.60 will be repealed by 2011 SB 171, effective October 1, 2012.

² R.C. 5123.601 will be repealed by 2011 SB 153, effective October 1, 2012.

³ R.C. 5123.602 will be repealed by 2011 SB 153, effective October 1, 2012.

⁴ R.C. 5123.603 will be repealed by 2011 SB 153, effective October 1, 2012.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 5153.17 and 5153.173	Records kept by a public children services agency concerning certain investigations; and information an agency possesses concerning a deceased child if a court determines disclosing the information would not be in the best interest of the deceased child's sibling or another specified child.
R.C. 5153.171 and 149.43(A)(1)(t)	Records provided to and statements made by the executive director of a public children services agency or a prosecuting attorney under certain circumstances involving deceased children whose deaths may have been caused by abuse, neglect, or other criminal conduct.
R.C. 5153.175(C)	Information provided to DJFS or a county department of job and family services by a public children services agency regarding child abuse or neglect that involves a person who has applied for licensure or renewal of licensure as a type A family day-care home or certification or renewal of certification as a type B family day-care home.
R.C. 5153.176(D)	Information provided to the Superintendent of Public Instruction by a public children services agency regarding the agency's investigation of a report of child abuse or neglect involving a person who holds a license issued by the State Board of Education if the agency has determined that child abuse or neglect occurred and that abuse or neglect is related to the person's duties and responsibilities under the license.
R.C. 5501.55(D)(1) and 5501.56(B)	Reports of an investigation the Department of Transportation (ODOT) or an ODOT contractor conducts relative to the safety practices of rail fixed guideway systems; and any part of a transit agency's system safety program plan that concerns security for the system.
R.C. 5502.03(B)(2)	Information collected, analyzed, maintained, and disseminated by the Division of Homeland Security to support local, state, and federal law enforcement agencies, other government agencies, and private organizations in detecting, deterring, preventing, preparing for, responding to, and recovering from threatened or actual terrorist events.
R.C. 5502.12	State Highway Patrol (SHP) reports, statements, and photographs relative to accidents it investigates, in the Director of Public Safety's discretion and until a specified time.
R.C. 5505.04(C) and (D)(4)	State Highway Patrol Retirement Board records containing a personal history record or monthly allowance or benefit information; the identity of recipients of public assistance.
R.C. 5525.04 and 5525.15	Information the Director of Transportation receives from transportation construction project contract bidders, and the estimate of cost of any project to be constructed by ODOT by competitive bidding, in the Director's discretion until the occurrence of specified events.
R.C. 5537.07(A)	The cost estimate for the construction, demolition, alteration, repair, improvement, renovation, or reconstruction of roadways and bridges for which the Ohio Turnpike Commission is required to receive bids, in the Commission's discretion and until a specified time.
R.C. 5703.21(A) and (C)(9) and 5703.53(I)	Information acquired by a Department of Taxation agent as to any person's transactions, property, or business; notices or documents provided to a county auditor concerning the taxable value of property in the county; certain opinions the Tax Commissioner prepares for a taxpayer; and identifying information in an opinion.
R.C. 5709.081(D)	Certain records of a corporation that owns tax-exempt "public recreational facility" property used by a major league professional team.

Appendix B*

<u>Citation</u>	<u>Topic</u>
R.C. 5711.10, 5711.101, 5711.11, 5711.18, 5711.25, and 5711.26	An investments-related document filed with returns of taxable property under certain circumstances; a document filed with returns of taxable property when the Tax Commissioner requires a business to file a financial statement or balance sheet; tax returns listing personal property used in business or credits and other returns; information about a taxpayer's business, property, or transactions the Tax Commissioner obtains for the purpose of adopting or modifying the method of determining true value; and preliminary, amended, and final assessment certificates concerning certain taxpayers.
R.C. 5715.49 and 5715.50	Taxpayer transactions, property, or business information acquired by a county auditor; county board of revision member; expert, clerk, or employee of a county auditor, a county board of revision, or the Tax Commissioner; or Tax Commissioner deputy, assistant, or agent, in the course of employment.
R.C. 5727.11(I)	Information about the business, property, or transactions of any public utility obtained by the Tax Commissioner in adopting or modifying the utility's composite annual allowance.
R.C. 5731.90(A)(1)	For purposes of the Ohio Estate Tax Law, certain tax returns and information the probate court, Department of Taxation, county auditor or treasurer, municipal or township fiscal officer, Attorney General, or other authorized person possesses.
R.C. 5733.03, 5733.056(B)(4), and 5733.42(E)	For purposes of the Corporation Franchise Tax Law, information gained from returns, investigations, hearings, or verifications; a financial institution's balance sheet made available upon the Tax Commissioner's request; and financial statements and other information submitted to the Director of Job and Family Services for an employee "eligible training program" tax credit.
R.C. 5735.33	For purposes of the Motor Vehicle Fuel Tax Law, information the Tax Commissioner acquires by examination of records, books, and papers, and information acquired by Department of Taxation employees in an investigation.
R.C. 5739.35, 5741.24, 5743.45, and 5747.60	Information acquired by Department of Taxation employees in an investigation under the Sales Tax Law, the Use Tax Law, the Cigarette Tax Law, or the Personal Income Tax Law.
R.C. 5747.18	Information from a return, investigation, hearing, or verification associated with the Personal Income Tax Law.
R.C. 5751.12	Any information required by the Tax Commissioner under the Gross Receipts Tax Law.
R.C. 5901.09(A), (B), and (C) and 5902.04(B) and (C)	Certain documents and information relative to applications for financial assistance to a county veterans service commission and, generally, commission documents that the Director of Veterans Services obtains that identify applicants for or recipients of financial assistance.
R.C. 6111.05	Records, reports, or information accessible under the Water Pollution Control Law by the Director of Environmental Protection that constitute trade secrets.
R.C. 6121.21 and 6123.20	Records or information relating to secret processes or secret methods of manufacture or production the Ohio Water Development Authority obtains.

Ohio Attorney General Opinions Interpreting Ohio's Public Records Act

The following are summaries of the Opinions of the Ohio Attorney General that have addressed or interpreted the Ohio Public Records Act. Be aware that the validity of any one opinion may have been affected by a subsequent court opinion or statutory change. The full text of these opinions can be found at <http://www.ohioattorneygeneral.gov>.¹

2011-012

A provisional ballot envelope is subject to state elections laws mandating the seal and preservation of ballots until any possible recount or election contest is completed; state law, within the meaning of R.C. 149.43(A)(1)(v) and R.C. 3501.13(C), prohibits the release of provisional ballot envelopes during the time a board of elections is required to preserve ballots under seal. A provisional ballot envelope is a "public record" subject to release once the time has passed during which a board of elections is required to preserve ballots under seal. R.C. 3505.181(B)(5)(b) does not prohibit the release of provisional ballot envelopes. Rather, R.C. 3505.181(B)(5)(b) prohibits the release of particular voter information through the free access system to anyone other than the voter to whom that information pertains. The free access system established pursuant to R.C. 3505.181(B)(5)(b) may be used only by a voter to gain access to information about his individual provisional ballot.

2010-029

The Ohio Department of Job and Family Services, in support of civil or criminal prosecutions arising out of investigations by the Bureau of Workers' Compensation, may provide certified copies of employer payroll records to the Bureau or the appropriate prosecuting authority and may allow a Department representative to testify regarding those records at trial.

2010-016

Ohio Revised Code § 1347.15 requires every state agency to adopt rules regulating access to its confidential personal information systems, but excepts any judicial agency from such requirements. A judicial agency is part of the judicial branch of government or renders judgments in quasi-judicial proceedings. The Board of Tax Appeals renders judgments to resolve justiciable disputes arising under Ohio's tax laws and its proceedings are quasi-judicial in nature. The BTA is therefore not subject to the requirements of R.C. 1347.15.

¹ Only opinions after 1994 are available electronically. When searching the full text of these opinions on the AG website use the numbers found in bold above each body of text. If using another search method (such as LexisNexis or Westlaw) the citation format needed will be different. For example, if trying to locate the first opinion listed on this page, the format used would be: 2008 Ohio Op. Att'y Gen. No. 019.

2008-019

An audio tape recording of a meeting of a board of township trustees that is created by the township fiscal officer for the purpose of taking notes to create an accurate record of the meeting, as required by R.C. 507.04(A), is a public record for purposes of R.C. 149.43. The audio tape recording must be made available for public inspection and copying, and retained in accordance with the terms of the township records retention schedule for such a record.

2008-003

Depending on the manner in which it is formed and operated, a nonprofit corporation formed under R.C. 183.061 might be subject to the public records law in R.C. 149.43, the open meetings law in R.C. 121.22, or particular contracting controls governing state agencies.

2007-042

A county coroner who performs an autopsy and forensic examination, pursuant to contract with the coroner who has jurisdiction over the case, is not required by R.C. 313.09 to keep the autopsy and examination reports he prepares, but he must keep copies of the reports in conformance with his office's records retention schedule, as filed and approved in accordance with R.C. 149.38.

A county coroner who performs an autopsy and forensic examination, pursuant to contract with the coroner who has jurisdiction over the case, is required by R.C. 149.43 to make available to any person for inspection and copying the copies of the autopsy and forensic examination reports that he prepared for the jurisdictional coroner, unless a report is not a public record under a statutorily defined or constitutionally mandated exception.

A county coroner who performs an autopsy and forensic examination, pursuant to contract with the coroner who has jurisdiction over the case, has no duty under R.C. 313.10(D) or (E), or R.C. 149.43, to make available to journalists or insurers copies of any records that his office has retained in connection with performance of the contract if the records are not public records.

2007-039

In the context of R.C. 2923.129, which concerns the powers and duties of a county sheriff with respect to information kept pertaining to licenses to carry concealed handguns, a journalist is prohibited from making a reproduction by any means, other than through his own mental processes, of the information the journalist is permitted to view under that statute. A sheriff may exercise his discretion in determining a reasonable manner by which a journalist may view, but not copy, that information so long as the confidentiality of other information relative to licenses to carry concealed handguns is maintained. Subject to the journalist exception, revealing, disclosing, or otherwise making known any of the information made confidential by the statute is prohibited except as required by a court order, or unless a statute specifically authorizes or requires other uses of such information. R.C. 2923.129(B) (1) does not prohibit a newspaper from publishing information that a journalist has viewed in accordance with the statute.

2007-034

A piece of physical evidence collected by law enforcement in connection with a criminal investigation and held by a county prosecuting attorney following conclusion of the trial, appeals, and post-conviction proceedings to which the evidence pertains is not a public record for purposes of R.C. 149.43.

2007-026

Article II, Section 34a of the Ohio Constitution and Am. Sub HB690, 126th Gen. A. (2006) (eff. April 4, 2007) do not render confidential information about a public employee's rate of pay, the number of hours worked by the employee, or the amount of compensation paid to the employee, nor do they otherwise exempt this information from inspection and copying under R.C. 149.43. Therefore, any person, including any co-worker of the public employee, has the right under R.C. 149.43 to inspect and copy information about a public employee's pay rate, hours worked and amounts paid.

2007-025

The "good cause" standard described in 1991 Op. Att'y Gen. No. 91-003, under which the executive director of a public children services agency (PCSA) determines whether to grant access to child abuse or neglect investigation records included as confidential records under R.C. 5153.17, is applicable to all PCSA records described in R.C. 5153.17, including records pertaining to matters other than child abuse or neglect investigations. (1991 Op. Att'y Gen. No. 91-003, approved and clarified.)

A PCSA is responsible for keeping records described in R.C. 5153.17 confidential and may disclose them only as authorized by statute, in accordance with the "good cause" standard described in 1991 Op. Att'y Gen. No. 91-003. If, in conjunction with a criminal proceeding or investigation or a civil proceeding, a PCSA received a subpoena requesting the disclosure of information that is confidential under R.C. 5153.17, the PCSA, in order to preserve the confidentiality prescribed by statute, may file a motion to quash the subpoena, thereby seeking from the court an in camera review of the PCSA's records and a determination as to whether and to what extent the information may be disclosed.

2006-038

In the absence of a statute to the contrary, foreign individuals and entities domiciled in a foreign country are "persons" who are entitled to inspect and copy public records pursuant to R.C. 149.43.

2006-037

Except as provided in R.C. 149.43(A)(1)(a)-(y) and R.C. 1724.11, information kept in the records of a community improvement corporation designated as an agency of a county under R.C. 1724.10 is a public record for purposes of R.C. 149.43.

2005-047

Because individuals possess a constitutionally protected privacy right in their social security numbers, such numbers when contained in a court's civil case files are not public records for purposes of R.C. 149.43.

Prior to releasing information from a court's civil case files, the clerk of court has a duty to redact social security numbers included in those files. An individual's personal financial information contained in a court's civil case files is a public record for purposes of R.C. 149.43 unless the information is not a "record" of the court or the information falls within one of the exceptions to the definition of the term "public record" set forth in R.C. 149.43(A)(1).

2004-050

Under Ohio law, a board of elections has a duty to preserve ballots in sealed containers until any possible recount or election contest is completed. Ballots are therefore not "public records" for purposes of R.C. 149.43 while they remain under seal or where they are subject to a court order prohibiting their release. In addition, they are not subject to inspection under R.C. 3501.13 during such time.

However, once the time within which a possible recount or election contest may occur has passed, pursuant to R.C. 3501.13, such ballots are subject to public inspection "under such reasonable regulations as shall be established by the board." Nonetheless, the board of elections remains under a duty to "carefully preserve" ballots used in an election for the remainder of the preservation period prescribed by R.C. 3505.31.

In addition, following the completion of the canvass of election returns under R.C. 3505.32, poll books used in an election are public records of a board of elections and are subject to public inspection in accordance with any reasonable regulations the custodian board of elections has established under R.C. 3501.1.

2004-045

Information within a criminal case file is subject both to Ohio's public records law and a constitutional right of access. Therefore, whether information within a criminal case file may be withheld depends on whether the information meets or is exempt from the definition of a "public record" under the Public Records Act, R.C. 149.43(A) (1), and whether the qualified constitutional right has been overridden.

2004-033

A county recorder who makes available in her office a photocopying machine for use by the public may not charge the two-dollar per page fee set forth in R.C. 317.32(I) where the public without the assistance of the recorder or her staff operates the photocopier. The recorder is, instead, subject to R.C. 149.43(B), which requires a public office to provide copies of public records "at cost."

2004-011

A county recorder may not impose a fee upon a requester to inspect records or make copies using their own equipment. However, the county recorder may impose reasonable rules governing the use and operation of such equipment.

2003-030

R.C. 2303.26 requires the clerk of courts to carry out her duties “under the direction of [her] court.” Once the judges of a court of common pleas have delegated to the judges of a division of that court authority to determine whether to make that division’s records available to the public through the Internet, and the judges of that division have ordered that its records are not to be accessible to the public through the Internet, the clerk of courts must obey that order, unless a court of competent jurisdiction reverses that order or prohibits its enforcement.

2002-040

Except as provided in R.C. 149.43(A)(1) and R.C. 2950.081(B), sex offender registration information submitted to a county sheriff by a sex offender who is required to register with the sheriff under R.C. Chapter 2950 may be made available to the general public on the Internet through the sheriff’s web site, provided such access to the public records does not endanger the safety and integrity of the records or interfere with the discharge of the sheriff’s duties.

A county sheriff that provides sex offender registration information to the general public on the Internet through a web site must provide a written notice containing the information set forth in R.C. 2950.11(B) to all the persons listed in R.C. 2950.11(A).

Except for the persons listed in R.C. 2950.11(A)(1) and Ohio Admin. Code 109:5-2-03(A)(1)(c), a county sheriff may use e-mail to electronically transmit the written notice required by R.C. 2950.11(A). The persons listed in R.C. 2950.11(A)(1) and Rule 109:5-2-03(A)(1)(c) must receive the written notice required by R.C. 2950.11(A) by regular mail or by personal delivery to their residences.

2002-030

In the absence of facts indicating that the names and addresses of a county sewer district’s customers fall within one of the exceptions to the definition of “[p]ublic record” contained in R.C. 149.43(A)(1), such names and addresses are public records that are subject to disclosure by the sewer district in accordance with R.C. 149.43.

2002-014

Transcripts prepared pursuant to R.C. 2301.23 by a court reporter of the court of common pleas are public records under R.C. 149.43, unless the transcripts include or comprise a record that is excepted from the definition of “public record” in R.C. 149.43(A)(1). (1989 Op. Att’y Gen. No. 89-073, syllabus,

Appendix C

paragraph two, approved and followed.) A party in a trial of a civil or criminal action in the court of common pleas that requests a photocopy of a transcript previously prepared pursuant to R.C. 2301.23 in the action is required to pay the compensation fixed by the judges of the court of common pleas under R.C. 2301.24 in order to obtain the photocopy of the transcript from the court.

Each party in a trial of a civil or criminal action in the court of common pleas that requests a transcript pursuant to R.C. 2301.23 is required to pay the court reporter of the court of common pleas who prepares the transcript the compensation fixed by the judges of the court of common pleas in accordance with R.C.2301.24.

Each time that a party in a trial of a civil or criminal action in the court of common pleas requests a transcript pursuant to R.C. 2301.23, the court reporter of the court of common pleas who prepares the transcript is entitled to the entire compensation fixed by the judges of the court of common pleas in accordance with R.C. 2301.24, unless the party requests at the same time more than one transcript of the same testimony or proceeding. In such a situation, pursuant to R.C. 2301.25, the court reporter is entitled to the entire compensation fixed by the judges of the court of common pleas in accordance with R.C. 2301.24 for the first copy and to one-half the compensation allowed for the first copy for each additional copy.

A prosecuting attorney in a trial of a civil or criminal action in the court of common pleas or the court of appeals may not obtain a photocopy of a transcript previously prepared in the action from the court's file without paying the court reporter of the court of common pleas or the court of appeals, respectively, the compensation fixed by the judges of the court of common pleas in accordance with R.C. 2301.24 or the judges of the court of appeals in accordance with R.C.2501.17, R.C. 9.92(E) and 2933.41(G) respectively.

2001-041

Information on a run sheet created and maintained by a county emergency medical services (EMS) organization that documents medication or other treatment administered to a patient by an EMS unit, diagnostic procedures performed by an EMS unit, or the vital signs and other indicia of the patient's condition or diagnosis satisfies the "medical records" exception of R.C. 149.43(A)(1)(a), and thus is not a "public record" that must be released to the public pursuant to R.C. 149.43(B). (1999 Op. Att'y Gen. No. 99-006, approved and followed.)

Information on a run sheet created and maintained by a county emergency medical services organization that documents medication or other treatment administered to a patient by an EMS unit, diagnostic procedures performed by an EMS unit, or the vital signs and other indicia of the patient's condition or diagnosis, and is relied upon by a physician for diagnostic or treatment purposes, is a communication covered by the physician-patient testimonial privilege of R.C. 2317.02(B), and thus is confidential information, the release of which is prohibited by law for purposes of R.C. 149.43(A)(1)(v). (1996 Op. Att'y Gen. No. 96-005 and 1999 Op. Att'y Gen. No. 99-006, approved and followed.) If a physician authorizes an emergency medical technician (EMT) to administer a drug or perform other emergency medical services, documentation of the physician's authorization and administration of the treatment or procedure by the EMS unit may also fall within the physician-patient testimonial privilege.

A written protocol, developed pursuant to R.C. 4765.41, without reference to a particular patient, for use by emergency squad personnel in cases where communication with a physician is not possible and the patient's life is in danger, does not establish, for purposes of R.C. 149.43(A)(1)(v), a physician-patient testimonial privilege between the physician who prepared the protocol and a patient who is treated by an

Appendix C

EMS unit pursuant to that protocol, where there is no further communication by the EMS unit with the physician about the condition or treatment of the patient.

If an EMS unit administers a controlled substance to a patient, the patient's name and address documented on the run sheet will, pursuant to 11 Ohio Admin. Code 4729-9-14(A)(3) (Supp. 2000-2001), be deemed to meet a portion of the record keeping requirements of R.C. 3719.07, and thus will be confidential under the terms of R.C. 3719.13, if the run sheet becomes a permanent part of the patient's medical record. However, information on the run sheet that pertains to the administration of a drug that is not a controlled substance is not required by R.C. 3719.07 or other provision of R.C. Chapter 3719, and thus does not fall within the confidentiality requirements of R.C. 3719.13.

2001-012

Data, photographs, maps, and other information created, collected, prepared, maintained, and published pursuant to R.C. 1504.02(A)(6) by the Department of Natural Resources' Division of Real Estate and Land Management are public records for purposes of R.C. 149.43.

If the Department of Natural Resources stores, produces, organizes, or compiles public records in such a manner that enhances the value of data or information included therein, it may charge for copies an amount that includes the additional costs of copying the information in such enhanced or "value-added" format.

R.C. 1501.01, which authorizes the director of the Department of Natural Resources to "publish and sell" data, reports, and information, does not authorize the director to charge an amount in excess of its actual cost for providing copies of the records created and maintained pursuant to R.C. 1504.02(A)(6).

2000-046

A county recorder may make indexed public records available through the Internet, provided this does not endanger the records or interfere with the recorder's duties; a fee cannot be charged or collected to inspect or copy records from the Internet when a person does not use equipment maintained by the recorder; Internet access cannot be limited to real estate title companies.

2000-036

Governor's Office of Veterans Affairs is prohibited by 32 C.F.R. § 45.3(e)(4) from releasing a copy of a Certificate of Release or Discharge from Active Duty (DD Form 214) without the written consent of the service member who is the subject of the DD Form 214.

2000-021

R.C. 149.43, as amended by Am. Sub. S.B. 78, 123rd Gen. A. (1999) (eff. Dec. 16, 1999), imposes no duty upon any particular individual or office to notify public offices of a peace officer's residential and familial information or to update the database. For purposes of R.C. 149.43, a child of a peace officer includes a natural or adopted child, a stepchild, and a minor or adult child.

Appendix C

Under the definition in R.C. 149.43(A)(7), peace officer residential and familial information encompasses only records that both contain the information listed in the statute and disclose the relationship of the information to a peace officer or a spouse, former spouse, or child of the peace officer, and those are the only records that come within the statutory exception to mandatory disclosure provided by R.C.

149.43(A)(1)(p). The exception for peace officer residential and familial information applies only to information contained in a record that presents a reasonable expectation of privacy, and does not extend to records kept by a county recorder or other public official for general public access. The general provisions of R.C. 149.43 excluding peace officer residential and familial information from mandatory disclosure do not operate to impose requirements or limitations on systems of public records that have been designed and established for general public access, where there is no reasonable basis for asserting a privacy interest and no expectation that the information will be identifiable as peace officer residential and familial information.

R.C.149.43 provides no liability for disclosing information that comes within an exception to the definition of “public record.” Liability may result, however, from disclosing a record that is made confidential by a provision of law other than R.C.149.43.

1999-012

When county office chooses to create customized document from existing public record it may only charge its actual cost, which does not include employee time or computer programming fees.

1999-006

Information on a county EMS run sheet that does not satisfy either the medical records exception or the “catch-all” exception is a public record and must be disclosed pursuant to R.C. 149.43(B). HIV testing information contained in run sheets must not be disclosed.

1997-038

Information submitted to county sheriff pursuant to R.C. Chapter 2950 by an individual who has been convicted of or pleaded guilty to a sexually oriented offense is a public record that must be made available for inspection to any person, except to the extent that such information comprises “records the release of which is prohibited by state or federal law.”

1997-001

Information in workers’ compensation claim file that indicates that an individual has been diagnosed as having AIDS or an AIDS-related condition is not a public record that the Bureau of Workers’ Compensation must disclose to the public.

1996-034

County recorder not required removing or obliterating Social Security Numbers from documents before recording those instruments.

1996-005

Records collected for trauma system registry or emergency medical services incidence reporting system that constitute medical records or physician/patient privilege do not constitute public records; the State Board of Emergency Medical Services is not required to disclose such records; and the Board is required to maintain confidentiality of any patient identifying information contained therein.

1995-001

PASSPORT administrative agency operated by a private non-profit agency is a public office for purposes of Ohio Public Records Act and public body for purposes of Ohio Open Meetings Act.

1994-089

Clerk of court cannot remove from a court file a pleading that is stricken from the record or an original pleading when a substitute pleading is filed in place of the original unless permitted by law or appropriate records commission.

1994-084

A county human services department may release the address of a current recipient of aid to dependent children, general assistance, or disability assistance to a law enforcement agency that has authority to apprehend an individual under an outstanding felony warrant.

1994-058

A township clerk is authorized to have access to estate tax returns or other records or information made confidential by R.C. 5731.90 in connection with the duties and responsibilities of the clerk; county treasurer who reports collection of estate tax to a township clerk is permitted to reveal the identity of taxpayer to the township clerk in the course of making the report.

1994-046

All information pertaining to LEADS is not public record subject to disclosure.

1994-006

If a person requesting copies of public records stored by the county recorder on microfiche or film presents a legitimate reason why paper copies are insufficient or impracticable and assumes the expense of making the copies in that medium, the county recorder is required to make available in the same medium a copy of the portions of the microfiche or film containing the public records.

1994-038

When a court orders official records of a case sealed and such order does not require sealing of the pertinent official records of an administrative licensing agency, the agency is not required to seal its records; the agency may seal its records containing information prohibited from disclosure pursuant to R.C. 2953.35(A).

1993-010

Blueprints submitted to a county building inspection department for approval under 3791.04 are public records while in possession of the department.

1992-076

Estate tax returns and other tax returns filed pursuant to R.C. 5731 are confidential and may be inspected or copied only as provided in R.C. 5731.90; a township clerk has no authority to inspect or copy estate tax materials that are made confidential by R.C. 5731.90 except pursuant to court order for good cause shown.

1992-071

A county board of mental retardation and developmental disabilities may not disclose to a parent organization the names of the board's clients or the names, addresses and phone numbers if the parents of the board's clients unless proper consent is obtained.

1992-046

Reports and investigations pursuant to R.C. 2151.421 are confidential and dissemination of such information to an agency or organization is permitted only if the agency or organization has rules or policies governing the dissemination of confidential information consistent with O.A.C. 5101:2-34-38; O.A.C. 5101:2-34-38(F) permits disclosure of child abuse and neglect investigation information when the dissemination of information is believed to be in the best interest of an alleged child victim, his family, or caretaker, a child residing or participating in an activity at an out-of-home care setting where alleged abuse or neglect has been reported, or a child who is an alleged perpetrator.

1992-005

A copy of a federal income tax Form W-2 prepared and maintained by a township as an employer is subject to inspection as a public record.

1991-053

Federal tax return information filed by an individual pursuant to R.C. 3113.215(B) (5) and a local rule of court is a public record; confidentiality of federal income tax returns is inapplicable to income tax returns submitted to a court of common pleas by a litigant in connection with a child support determination or modification proceeding in that court.

1991-003

County prosecuting attorney may release children services agency's child abuse or neglect investigation file only with written permission of agency executive secretary; executive secretary may only grant permission for good cause; child abuse or neglect investigation records are not public records.

1990-103

Absent statutory authority, a county recorder is without authority to delete documents from the records of the county recorder.

1990-102

Ohio Public Records Act does not make confidential all records filed with Ohio taxation authorities; specific revised code sections make particular information confidential.

1990-101

Records of juvenile offenders are not public records to the extent they are law enforcement investigator records; sealed or expunged juvenile records are not public records.

1990-099

Public school officials may not release information concerning illegal drug or alcohol use by students to law enforcement agencies where such information is personally identifiable information, other than directory information concerning any student attending a public school.

1990-057

Subject to the provisions of R.C. 149.351(A), a county official may, pursuant to a valid contract, temporarily transfer physical custody of the records of his office to a private contractor to microfilm such records at the facilities of the contractor; a contract must incorporate sufficient safeguards to prevent loss, damage, mutilation, or destruction of the records.

1990-050

Names, addresses, and telephone numbers of employees of a public school district are public records open to inspection by any person; motive is irrelevant even if for commercial purposes.

1990-007

Unless state or federal law prohibits disclosure to person who is subject of information kept by an Ohio public office, R.C. Chapter 1347 permits person to inspect and copy such information. Chapter 1347 is not a provision of state law prohibiting the release of information under R.C. 149.43.

1989-084

Records that do not constitute personal information systems as used in R.C. Chapter 1347 are not subject to disclosure provision of Chapter 1347; child abuse and neglect investigatory records maintained by public children services agency constitute investigatory material compiled for law enforcement purposes within the meaning of R.C. 1347(A)(1)(e).

1989-073

Shorthand notes taken pursuant to R.C. 2301.20 and transcripts prepared pursuant to 2301.23 are public records unless they include or comprise a record excepted from the definition of public record.

1989-055

A judicial determination that a particular entity is a public office under R.C. 149.011(A) is not determinative of the question whether that entity is a public office under R.C. 117.01(D) for purposes of audit and regulation by the Auditor of State.

1989-042

Providing that properly approved record retention schedules under R.C. 149.333 permit disposal of paper or other original documents after recording by optical disk process, original documents may be destroyed and the recorded information stored on optical disks becomes the original of the public record.

1988-103

Application to the County Veterans Service Commission for assistance under R.C. chapter 5901 is a public record (now exempt, R.C. 121.22 and 149.43).

1987-024

A community improvement corporation organized pursuant to R.C. chapter 724 is not a political subdivision as that term is defined in R.C. 2744.01(F).

1987-010

A public school may not forward personal information regarding the first-time use of drugs or alcohol by a student on school property to local law enforcement agencies without the consent of the student's parent or guardian, or the student, where appropriate.

1986-096

Disclosure of the number of persons employed by an applicant at the time of application for a loan is prohibited where such information is submitted to the Director of Development, the Controlling Board, or the Minority Development Financing Commission in connection with a loan application.

1986-089

A personnel file maintained by an exempted village school district is a public record except to the extent such file may include records that are excepted from the definition of the term public record.

1986-069

A letter requesting an advisory opinion from the Ohio Ethics Commission under R.C. 102.08 and the documents held by the Commission concerning such advisory opinion are public records.

1986-033

The Unemployment Compensation Board of Review may, in accordance with the specific terms of the schedule of retention pertaining thereto and approved by the State Records Commission, destroy or dispose of its hearing records six months after a decision by the Board of Review becomes final; the hearing records shall be destroyed or disposed of within 60 days after the expiration of the six-month retention period, unless, in the opinion of the Board of Review, they pertain to any pending case, claim or action.

1985-087

Appraisal cards that are kept by the office of the county auditor and that contain information used in the evaluation and assessment of real property for purposes of taxation are subject to public inspection and disclosure of such documents does not violate either R.C. 5715.49 or R.C. 5715.50.

1984-084

Client records held by the Rehabilitation Services Commission in connection with the state vocational rehabilitation services program are not public records and cannot be disclosed without the consent of the person to whom the records relate.

1984-079

Grand jury subpoenas while in possession of the clerk of courts prior to issuance in accordance with R.C.2939.12 are not public records.

1984-077

Under R.C. 1347.08, a juvenile court must permit a juvenile or a duly-authorized attorney who represents the juvenile to inspect court records pertaining to the juvenile unless the records are exempted under R.C. 1347.04(A)(1)(e), 1347.08(C) or (E)(2). Under Juv. R. 37(B), the records may not be put to any public use except in the course of an appeal or as authorized by order of the court.

1984-015

The director of the Ohio Department of Mental Retardation and Developmental Disabilities may make available to persons approved by the director the medical, psychological, social, and educational records of persons who have been nominated for protective services pursuant to R.C. 5123.58.

1983-100

The Ohio State Board of Psychology does not have the authority to expunge or actually destroy its official records except as provided by law; it is not required to seal any of its official records unless an order sealing the same specifically directs the Board to do so by the court; and the Board may seal information or data contained in its official records which are not public records within meaning of 149.43(A)(1).

1983-099

Since the examinations administered by the State Board of Examiners of Architects are records under R.C. 149.40 and there is no law prohibiting the destruction of such examinations or requiring the retention of such examinations for a specified period of time, such examinations may be disposed of in accordance with a schedule of records retention or an application for records disposal approved by the State Records Commission pursuant to R.C. 149.32.

1983-071

A county department of welfare is prohibited from disclosing to law enforcement personnel personal information about applicants for or recipients of aid to Families with Dependent Children or poor relief unless such law enforcement personnel are prosecuting fraud or seeking child support and are directly connected with the enforcement of the Food Stamp Act or regulations, other federal assistance programs or general relief programs or the applicant or recipient has consented in writing.

1983-003

Materials of all varieties (including but not limited to, correspondence, memorandums, notes, reports, audio and video recordings, motion picture films, and photographs) which are received by public officials and employees, or created and maintained by them at public expense, are considered records if they serve to document the organization, functions, policies, decisions, procedures, operations, or other activities of the public office.

1982-104

Birth and death records kept by a probate court pursuant to R.C. 2101.12 are public records which must be made available to any member of the general public as required by R.C. 149.43, regardless of the motive which such member of the public has for inspecting such records.

1981-051

Neither federal law nor R.C. 149.43 exempts from disclosure records concerning amounts paid to individual providers by the state of Ohio in connection with the Medicaid program.

1981-043

A news-hook maintained by a city police department is not a public record under the terms of R.C. 149.43, and need not, therefore, be disclosed to all members of the public for any reason whatsoever.

1981-038

With the exception of confidential law enforcement investigatory records, trial preparation records, and adoption records, the Ohio Civil Rights Commission must disclose to an employee personnel information that is subject to the provisions of R.C. Chapter 1347, including medical records and records the release of which is prohibited by state or federal law, unless state or federal law expressly prohibits disclosure of such information even to the person who is the subject of the information. Unless it is determined that the disclosure of medical records to the employee may have an adverse effect upon the employee, the Commission must disclose the medical records to a physician, psychiatrist, or psychologist designated by the employee, rather than to the employee himself.

1981-019

The faculty inventory and the report on faculty services maintained by the Ohio Board of Regents on computer tapes are not public records as 20 U.S.C. 1232(b)(1) restricts the public release of such.

1981-014

Complaints filed with the Division of Real Estate concerning violations of R.C. Chapter 4735 except those that qualify as confidential law enforcement investigatory records are public records.

1981-006

Employee address and payroll records maintained by a board of township trustees are public records.

1980-103

Trial preparation records include only those records specifically compiled by a governmental unit after the unit's attention has focused upon a particular person or claim, in reasonable anticipation of a civil or criminal proceeding and does not include those records routinely compiled by a governmental unit as a matter of common practice.

1980-096

Unless made confidential by law, all records maintained by a governmental agency that are necessary to the agency's execution of its duties and responsibilities are public records; public records must be disclosed upon request to any member of the public for any reason; records made confidential by law and subject to Ohio's Privacy Act may not be disclosed to the public at large, but must be disclosed to the person who is the subject of the records; records pertaining to confidential law enforcement investigations, trial preparations, and adoptions may not be disclosed to either the public at large nor to the person who is the subject of the records, except adoption records may be disclosed with consent of the court.

1979-023

As used in R.C. 149.99, "each offense" means each transaction that results in the removal, destruction, mutilation, transfer or other disposal of records or other damage to records in violation of R.C. 149.351.

1977-075

Pursuant to R.C. 4112.05(B), the Ohio Civil Rights Commission may not reveal the final terms of conciliation, written or unwritten, to members of the general public who are not parties to the matters conciliated.

1977-043

It is not a violation of R.C. 5122.31 to permit unrestricted access to the general and separate indices of mental illness matters filed in the probate court by the public, as they are public records.

Ohio Attorney General Opinions Interpreting Ohio's Open Meetings Act

The following are summaries of the Opinions of the Ohio Attorney General that have addressed or interpreted the Ohio Open Meetings Act. Be aware that the validity of any one opinion may have been affected by a subsequent court opinion or statutory change. The full text of these opinions can be found at <http://www.ohioattorneygeneral.gov>.¹

2011-038

A public body that is subject to the requirements of the Ohio open meetings law may not vote in an open meeting by secret ballot. R.C. 121.22 is intended to ensure openness and accountability in government. Voting by secret ballot is inconsistent with the purpose of the open meetings law and denies the people their right to view and evaluate the workings of their government. A meeting is not "open" to the public where members of a public body vote by way of secret ballot. (1980 Op. Att'y Gen. No. 80-083 (syllabus, paragraph 4), overruled.)

2009-034

During a declared emergency, R.C. 5502.24(B) provides a limited exception to fulfilling the requirements of the Ohio Open Meetings Law. A public body may meet at an alternate location, and exercise their powers and functions "in the light of the exigencies of the emergency without regard to or compliance with time-consuming procedures and formalities prescribed by law pertaining thereto." However, this is not an exception to the "in person" meeting requirement of R.C. 121.22(C) and does not permit the public body to meet by teleconference.

2008-003

Depending on the manner in which it is formed and operated, a nonprofit corporation formed under R.C. 183.061 might be subject to the public records law in R.C. 149.43, the open meetings law in R.C. 121.22, or particular contracting controls governing state agencies.

2007-019

A board of township trustees has authority to maintain order at, approve the minutes of, and provide and distribute a written agenda for its regular meetings.

¹ Only opinions after 1994 are available electronically. When searching the full text of these opinions on the AG website use the numbers found in bold above each body of text. If using another search method (such as LexisNexis or Westlaw) the citation format needed will be different. For example if trying to locate the first opinion listed on this page, the format used would be - 2008 Ohio Op. Att'y Gen. No. 019.

2005-035

Public hearings conducted by a township board of zoning appeals to consider the matters described in R.C. 519.14(A)-(C) are not “meetings” for purposes of R.C. 121.22, but, rather, are quasi-judicial proceedings. (1985 Op. Atty. Gen. No. 85-044 (syllabus, paragraph two), overruled.); followed by *Groeff-Knight v. Brd. of Appeals of Liberty Twnshp*, (June 14, 2004) Fifth Dist. No. 03CAH08042.

1996-010

Absent adoption of a rule by a county board of mental retardation and developmental disabilities specifying the day on which its annual organizational meeting is to be held, the board’s annual organizational meeting is not one of the regularly scheduled meetings for purposes of the removal provision of R.C. 5126.04.

1995-030

A district advisory council, established pursuant to R.C. 3709.03 has inherent authority to call special meetings of the council by acting through the concurrence of a majority of its members with respect to a particular meeting or by promulgating a procedural rule authorizing specified officers or members of the council to call special meetings; the board of health of a general health district and the state director of health, as expressly provided in R.C. 3709.03, are the only other public authorities with power to call a special meeting of the district advisory council.

1995-001

A PASSPORT administrative agency that is operated by a private not-for-profit agency pursuant to Ohio Admin. Code 5101:3-31-03(A)(1) is a public office as defined at R.C. 149.011(A) for purposes of the public records law and a public body as defined at R.C. 121.22 for purposes of the open meetings law.

1994-096

A committee of private citizens and various public officers or employees that is established by the board of health of a general health district for the purpose of advising the board on matters pertaining to the administration of a state or federal grant program is a public body; where the establishment of the committee is not required or authorized by the terms of the grant or any action of the general health district board, such committee is not a public body.

1994-014

The panel created by the Erie County Court of Common Pleas in Local Rule 17.08(F) is not subject to the open meeting requirements.

1993-012

The Industrial Commission is a public body as defined in R.C. 121.22(B)(1) and is therefore subject to the open meeting requirements of R.C. 121.22; R.C. 4121.36 provides that orders, rules, memoranda, and decisions of the Industrial Commission with respect to hearings conducted under R.C. 4121.36 may be adopted either in a meeting of the commission or by circulation to individual commissioners and thereby establishes an exception to the requirement of R.C. 121.22 that the Industrial Commission adopt all resolutions, rules, or formal actions in an open meeting.

1992-078

The board of directors of a county agricultural society is a public body subject to the open meeting requirements of R.C. 121.22.

1992-077

An advisory committee legislatively created by a board of county commissioners to make recommendations to the board on matters relating to a proposed county jail is a public body subject to the provisions of R.C. 121.22.

1992-065

A housing advisory board created by a county under R.C. 176.01 is a public body for purposes of R.C.121.22.

1992-032

A board of township trustees must conduct its open meetings in a public meeting place, as determined in its fair and impartial discretion; board of township trustees may not conduct an executive session from which the public is excluded in order to deliberate about a proposed zoning change, even if the board ultimately votes on that matter in an open meeting, unless the deliberations were solely for the purpose of discussing one or more of the six subject areas listed in R.C. 121.22(G).

1992-028

Unless a statutory or constitutional provision expressly grants a specific officer of a public body the power to make the decision to call a meeting of such body, the power to make the decision is vested in the body itself and not in an individual officer; the decision that a meeting is necessary requires a concurrence of a majority of the body; pursuant to R.C. 5715.09, the secretary of the board of revision has the power to call a meeting of the board as necessary.

1988-087

A board of township trustees has authority to adopt reasonable rules for the conduct of its meetings; such rules may not prohibit audio and video recording of township proceedings, but may regulate such recording to promote the orderly transaction of business without unreasonably interfering with the rights of those present.

1988-029

The Public Utilities Commission Nominating Council is a public body as defined in R.C. 121.22.

1988-003

The word “property” as used in R.C. 121.22(G)(2) means real and personal property, which includes both tangible and intangible property; the PERS may discuss in executive session the purchase or sale of tangible or intangible property authorized under R.C. 145.11, including but not limited to such items as bonds, notes, stocks, shares, securities commercial paper, and debt or equity interests.

1986-091

The Ohio Legal Rights Service Commission is a public body for purposes of R.C. 121.22.

1985-048

The open meeting requirements of R.C. 121.22 and R.C. 305.09 are satisfied where a board of county commissioners convenes a public meeting at which only two of the three members are present and the third member of the board, who is not physically present, participates in such board proceedings by means of communications equipment (prior to enactment of R.C. 121.22(C)).

1985-046

In its development of amendments to the state health plan, the Statewide Health Coordinating Council (SHCC) must, pursuant to R.C. 3702.56(C), follow the procedures set forth in R.C. 119.03(A), (B), (C), and (H), with the exception of requirements imposed pursuant to R.C. 119.03(D), (E), (F), (G), and (I); in particular, the SHCC must follow the public notice and hearing procedures of R.C. 119.03(A) and (C) and must file proposals with the Secretary of State, the Director of the Legislative Service Commission, and the Joint Committee on Agency Rule Review under R.C. 119.03(B) and (H); but proposed amendments to the state health plan are not subject to invalidation by the General Assembly pursuant to R.C. 119.03(I).

1985-044

A township board of zoning appeals is a public body for purposes of R.C. 121.22; a township board of zoning appeals may not conduct, in an executive session, deliberations concerning zoning appeal heard pursuant to R.C. 519.14(A) or (B). (Syllabus, paragraph two, overruled by 2000 Op. Att'y Gen. No. 00-035.)

1982-081

A soldiers' relief commission established pursuant to R.C. 5901.02 is a public body for the purposes of R.C. 121.22.

1981-005

Because the superintendent's offices are, pursuant to R.C. 3319.19, to be used by the county board of education when it is in session, and because the board's meetings are required by R.C. 121.22 to be open to the public, the duty of the board of county commissioners to provide and equip offices includes the duty to provide some type of conference facility.

1980-083

A county central committee of a political party is a public body and its members are public officials for purposes of R.C. 121.22; convening the committee pursuant to R.C. 305.02 is a meeting as defined by R.C. 121.22(B)(2), even when the number of members present is fewer than the majority of the total membership; the committee may discuss appointment of a person pursuant to its duties under R.C. 305.02 in executive session under R.C. 121.22(G), however, final voting on such appointment must be held in a public meeting; convening the committee for conducting purely internal party affairs unrelated to the committee's duties of making appointments to vacant public offices is not a meeting as defined by R.C. 121.22(B)(2). **(Syllabus, paragraph 4, overruled by 2011 Op. Att'y Gen. No. 11-038).**

1979-110

The Safety Codes Committee, created by resolution of the Industrial Commission for the purpose of reviewing safety code requirements and drafting revisions for consideration by the Industrial Commission, is not a public body for the purposes of R.C. 121.22.

1979-061

The governing board of a community improvement corporation, organized in the manner provided in R.C. 1702.04 and R.C. 1724.01 to R.C. 1724.09, inclusive, does not constitute a public body for the purposes of R.C. 121.22 unless designated an agency of a county, municipal corporation, or any combination thereof pursuant to R.C. 1724.10.

1978-059

The Internal Security Committee, established by the Industrial Commission and the Bureau of Workers' Compensation pursuant to R.C. 4121.22(D), is a public body for purposes of R.C. 121.22.

1977-075

Pursuant to R.C. 4112.05(B), the Ohio Civil Rights Commission may not reveal the final terms of conciliation, written or unwritten, to members of the general public who are not parties to the matters conciliated.



Mike DeWine

Mike DeWine
Attorney General



Dave Yost

Dave Yost
Auditor of State

Highlights

- HB 543 – (Suicide Awareness Training) – Passed by the Senate on 12.13.2012.
- [CDC Releases the STEADI \(Stopping Elderly Accidents, Deaths & Injuries\) Tool Kit for Health Care Providers](#)
- REPORT: [The Tipping Point: Highest Number of TV and Furniture Tip-Over Deaths Recorded By CPSC in 2011](#)
- [CDC MMWR: Buprenorphine Prescribing Practices and Exposures Reported to a Poison Center — Utah, 2002–2011](#)
- [Washington Court House City Council Pushes Forward Texting Ban](#)

General Injury Prevention

- [1 in 3 use phones, text while crossing the road](#)

Motor Vehicle Safety

- [Teen Driver Program In Georgia Gets National Recognition](#)
- [STUDY: Booster seat use: individual, parent–child relationship and neighbourhood characteristics](#)

Child Injury

- [Rule changes may be best way to curb hockey injuries](#)
- [STUDY: Kids can drown in inflatable pools too!](#)
- [Concussion Effects On Child's Brain May Last Months After Injury: Study](#)

Drug Overdose

- [To Reduce Prescription Drug Abuse, Focus Less on Patient Satisfaction](#)
- [Kentucky Law Uncovers Dentists Who Prescribe Opioids to Those Who Abuse Them](#)
- [FDA Panel Votes Against Recommending Zohydro for Approval](#)
- [Ohio addiction clinic opens in ex-pill mill center](#)

Falls Among Older Adults

- [Simple Sit Test Predicts Long Life](#)

Suicide Prevention

- [Holiday suicide myth persists, research says](#)
- [Senate backs awareness bill; Ohio educators to receive youth suicide prevention training](#)

Violence Prevention

- [Teen dating violence affects well-being in adulthood](#)
- [Teen Fighting Declines in U.S., Europe](#)

Ohio House

HB 35 – DRIVER EDUCATION (Sears) To require the classroom and behind-the-wheel instruction that is given to minors in driver education courses to include instruction on the proper driving techniques that noncommercial motor vehicle operators should utilize in order to share the roadway with large commercial motor vehicles safely.

Current Status: (02.09.2011) Received first hearing in the House Transportation, Public Safety & Homeland Security Committee. [Full Text](#) [Bill Analysis](#)

HB 64 – CONTROLLED SUBSTANCES (Ruhl, M., Burke, D.) To add synthetic cannabinoids commonly known as K2 or Spice to the list of Schedule I controlled substances, to prohibit the possession of Spice, to prohibit trafficking in Spice, to provide that if Spice is the drug involved in a violation of the offense of corrupting another with drugs the penalty for the violation will be the same as if marihuana was the drug involved in the offense, to add six synthetic derivatives of cathinone that have been found in bath salts to the list of Schedule I controlled substances, to define a "controlled substance analog" for purposes of the Controlled Substances Law, and to treat controlled substance analogs as Schedule I controlled substances.

Current Status: (07.15.2011) SIGNED BY THE GOVERNOR. [Full Text](#) [Bill Analysis](#)

HB 71 – PRESCRIPTION DRUGS (Luckie) To create the Ohio Official Prescription Program and to require prescribers and pharmacists to obtain information from the Ohio Automated Rx Reporting System.

Current Status: (05.04.2011) Received first hearing in the House Health and Aging Committee. [Full Text](#) [Bill Analysis](#)

HB 93 – PRESCRIPTION DRUGS (Burke, Johnson) To establish and modify laws regarding the prevention of prescription drug abuse, development of information programs by the State Medical Board, and Medicaid coverage of prescription drugs.

Current Status: (05.20.2011) SIGNED BY THE GOVERNOR. [Full Text](#) [Bill Analysis](#)

HB 99 – DRIVER TEXTING (Damschroder, Garland) To prohibit driving a vehicle while writing, sending, or reading a text-based communication on a handheld electronic wireless communications device and to establish the violation as a secondary traffic offense; to prohibit a person who is less than 18 years of age from using, in any manner, an electronic wireless communications device while driving; and to require driver education courses to include instruction in the dangers of texting while driving.

Current Status: (6.1.2012) Signed by the Governor, law becomes effective 08/31/12. [Full Text](#) [Bill Analysis](#)

HB 112 – ANTIFREEZE (Grossman, C.) To require the inclusion of a bittering agent in engine coolant and antifreeze.

Current Status: (05.18.2011) Reported out of the House Transportation, Public Safety & Homeland Security Committee. [Full Text](#) [Bill Analysis](#)

HB 116 – BULLYING (Barnes, J.) To enact the School Day Security and Anti-Bullying Act to require age-appropriate instruction on and parental notification of public schools' policies prohibiting harassment, intimidation, or bullying.

Current Status (2.3.2012) SIGNED BY GOVERNOR, EFFECTIVE IN 90 DAYS. [Full Text](#) [Bill Analysis](#)

HB 127 – BATH SALTS (Luckie, C.) To add six synthetic derivatives of cathinone that have been found in bath salts to the list of Schedule I controlled substances.

Current Status: AMENDED INTO [HB 64](#). [Full Text](#) [Bill Analysis](#)

HB 132 – DRUG POSSESSION (DeGeeter, T.) To require a court imposing sentence for certain drug possession offenses to take into consideration that the offender was seeking medical assistance for the offender or another person for a drug-related overdose and that evidence related to the offense was obtained as a result of seeking that assistance.

Current Status: (06.08.2011) Received second hearing in the House Criminal Justice Committee. [Full Text](#) [Bill Analysis](#)

HB 143 – YOUTH CONCUSSION (Stinziano, M., O'Brien, S.) With regard to head injuries and concussions in youth sports.

Current Status: (12.5.2012) House concurs with Senate Amendments. Bill sent to Governor for signature. [Full Text](#) [Bill Analysis](#)

HB 155 – SCHOOL BULLYING (Fedor, T., Garland, N.) To enact the "Jessica Logan Act" to require that public school bullying policies prohibit bullying by electronic means and address certain acts that occur off school property and to require staff training on the bullying policy.

Please be advised that this document is for information purposes only and does not represent an endorsement by ODH or any state agency on the policies/legislation featured. The Ohio Violence and Injury Prevention Program is not permitted to lobby Federal, State or Local entities on specific legislation. Allowable activities related to contact with public policymakers vary by state; therefore it is important to consult internal agency rules, state laws, and (where applicable) federal laws to ensure full compliance.

Current Status: AMENDED INTO HB 116 (see above) [Full Text](#) [Bill Analysis](#)

HB 208 – BULLYING (Stinziano, M., Antonio, N.) To require that school anti-bullying policies prohibit harassment, intimidation, or bullying that is based on any actual or perceived trait or characteristic of a student.

Current Status: (06.15.2011) Received first hearing in the House Education Committee. [Full Text](#) [Bill Analysis](#)

HB 332 – ACCESSIBLE HOMES TAX CREDIT (Stinziano, M., Grossman, C.) To authorize a nonrefundable income tax credit for the purchase or construction of an accessible home or for the renovation of a home to improve its accessibility.

Current Status: (1.25.2012) Received second hearing in the House Ways and Means Committee. [Full Text](#) [Bill Analysis](#)

HB 334 – PRESCRIPTION TRACKING (Johnson, T., Bulp, D.) Regarding the participation of pharmacies, retailers, and the Attorney General in electronically tracking pseudoephedrine and ephedrine product sales through a national exchange. Am. & En. 2925.55, 2925.56, 2925.57, and 3715.05; and 109.88, 3715.051, 3715.052, and 3715.053

Current Status: (12.5.2012) House concurs with Senate Amendments. Bill sent to Governor for signature. [Full Text](#) [Bill Analysis](#)

HB 337 – COMMERCIAL DRIVERS LICENSE (Rosenberger, C.) To make changes in the law governing commercial drivers' licenses, including hazardous material endorsements, medical certification requirements, disqualifications, conviction records, *establishing texting while driving as a serious traffic violation*, and licensure of private commercial driver's license test administrators, and to exclude certain components from the prohibited length dimensions of specified types of vehicles.

Current Status: (1.27.2012) SIGNED BY GOVERNOR, EFFECTIVE 1.27.2012 [Full Text](#) [Bill Analysis](#)

HB 466 – CHILD ABUSE TRAINING (Patmon, B.) To require that employees and students at state institutions of higher education who work with children receive training in child abuse prevention.

Current Status: (4.18.2012) First hearing (sponsor testimony) in the House. [Full Text](#) [Bill Analysis](#)

HB 543 – SUICIDE AWARENESS TRAINING (Anielski, M.) To enact the "Jason Flatt Act" to require public schools to train staff in youth suicide awareness and prevention.

Current Status: (12.12.2012) Passed by the Senate. Sent to Governor for Signature. [Full Text](#) [Bill Analysis](#)

HB 563 – FIREARM STORAGE (Patmon, B.) To prohibit any person from storing or leaving a firearm in the person's residence unless the firearm is secured in safe storage or rendered inoperable by a tamper-resistant lock or other safety device if the person knows or reasonably should know that a minor is able to gain access to the firearm and to provide criminal penalties if a minor gains unauthorized access to a firearm not so stored or rendered inoperable.

Current Status: (5.30.2012) Introduced. [Full Text](#)

HCR 8 – BRAIN INJURY AWARENESS MONTH (Stinziano, M., O'Brien, S.) Designating March 2011 as Brain Injury Awareness Month [Full Text](#)

Current Status: (04.06.2011) Adopted in House, Referred to Senate Health, Human Services and Aging Committee.

Ohio Senate

SB 19 – YOUTH DRIVER SUSPENSIONS (Hughes) To permit a judge to elect to order the Registrar of Motor Vehicles not to suspend the probationary driver's license, restricted license, or temporary instruction permit of certain juvenile repeat traffic violators, and to require the Registrar to establish standards for advanced juvenile driver improvement programs.

Current Status: (6.26.2012) Signed by Governor. [Full Text](#) [Bill Analysis](#)

SB 29 – SCHOOL ZONE SPEEDING (Tavares) To double the fine for a speeding violation that occurs in a school zone during restricted hours.

Current Status: (02.02.2011) Referred to Senate Highways and Transportation Committee. [Full Text](#)

SB 35 – DRIVER TEXTING (Tavares) To prohibit driving a vehicle while using a handheld or manually operated mobile communication device and to establish the violation as a secondary traffic offense.

Current Status: (02.02.2011) Referred to Senate Highways and Transportation Committee. [Full Text](#)

SB 77 – BICYCLE HELMETS (Skindell, M.) To require bicycle operators and passengers under 18 years of age to wear protective helmets when the bicycle is operated on a roadway and to establish the Bicycle Safety Fund to be used by the Department of Public

Safety to assist low-income families in the purchase of bicycle helmets.

Current Status: (02.23.2011) Referred to Senate Highways and Transportation Committee. [Full Text](#)

SB 83 – PRESCRIPTIVE AUTHORITY (Oelslager, S.) To modify the authority of certain advanced practice nurses to prescribe schedule II controlled substances.

Current Status: (3.9.2012) SIGNED BY THE GOVERNOR. [Full Text](#) [Bill Analysis](#)

SB 92 – TRAFFIC LAWS (Schaffer) To provide for increased penalties when a person violates the motor vehicle traffic law assured clear distance ahead provision or commits a failure to yield the right-of-way offense that results in serious physical harm or death to another person.

Current Status: (12.14.2011) Received second hearing in the Senate Highways and Transportation Committee. [Full Text](#) [Bill Analysis](#)

SB 101 – SUBSTANCE ABUSE AWARENESS MONTH (Patton, T.) To designate May as "Substance Abuse Awareness and Education Month."

Current Status: (10.11.2011) SIGNED BY GOVERNOR. [Full Text](#)

SB 127 – SCHOOL BULLYING (Schiavoni, J.) To enact the "Jessica Logan Act" to require that public school bullying policies prohibit bullying by electronic means and address certain acts that occur off school property and to require staff training on the bullying policy.

Current Status: AMENDED INTO HB 116. [Full Text](#) [Bill Analysis](#)

SB 140 – BITTERING AGENT (Bacon, K., Skindell, M.) To require the inclusion of a bittering agent in engine coolant and antifreeze.

Current Status: (11.15.2011) Received second hearing in the Senate Criminal Justice Committee. [Full Text](#) [Bill Analysis](#)

SB 157 – DISABLED CHILDREN SIGNS (Patton, T.) To authorize the use of traffic signs warning of the presence of a child with a disability.

Current Status: (06.22.2011) Received first hearing (sponsor) in the Senate Highways and Transportation Committee. [Full Text](#) [Bill Analysis](#)

SB 247 – TBI AWARENESS DAY (Balderson, T.) To designate the ninth day of July as "Traumatic Brain Injury Awareness Day."

Current Status: (3.9.2012) SIGNED BY GOVERNOR. [Full Text](#)

SB 301 – CONTROLLED SUBSTANCES (Burke, D., Cafaro, C.) Regarding enforcement powers of certain health care professional licensing boards, regulation of pain management clinics, limits on prescriber-furnished controlled substances, and classifications of certain controlled substances. [Full Text](#) [Bill Analysis](#)

Current Status: (12.11.2012) Signed by Governor.

SB 368 – NONVIOLENCE WEEK (Schiavoni, J.) To designate the first week in October as "Nonviolence Week." [Full Text](#)

Current Status: (9.12.12) Introduced.

Useful Links

Interested in attending a committee hearing? Use the links below (usually updated on Fridays) for upcoming meeting dates.

[Senate Committee Schedule](#)

[House Committee Schedule](#)

Everything you ever wanted to know about the Ohio General Assembly: [Guidebook for Ohio Legislators](#)

Who is my legislator?

Ohio House and Senate: <http://www.legislature.state.oh.us/>

US House: <http://www.house.gov/>

Senator Brown: <http://brown.senate.gov/>

Senator Portman: <http://portman.senate.gov/public/>

Please be advised that this document is for information purposes only and does not represent an endorsement by ODH or any state agency on the policies/legislation featured. The Ohio Violence and Injury Prevention Program is not permitted to lobby Federal, State or Local entities on specific legislation. Allowable activities related to contact with public policymakers vary by state; therefore it is important to consult internal agency rules, state laws, and (where applicable) federal laws to ensure full compliance.

MEMORANDUM

TO: State of Ohio Trauma Committee Members and EMS Board Members

FROM: Nancie Bechtel, Vice-Chair, State Trauma Registry Advisory Subcommittee (TRAS)

DATE: August 17, 2010

Copy: Barry Knotts, MD, TRAS Chairperson; Richard Rucker, Executive Director Ohio Department of Public Safety, Division of Emergency Medical Services

RE: Staff Support for the Ohio Trauma Registry

This memo is to document a need for additional full-time equivalent (FTE) personnel at the Ohio Department of Public Safety (ODPS) in order to support the Ohio Trauma Registry.

BACKGROUND ON OHIO'S THREE TRAUMA-RELATED DATABASES. Ohio has three databases encompassing cases of traumatic injury, collectively referred to as the Ohio Trauma Registry or OTR. These databases collectively hold a wealth of information that when properly analyzed would benefit Ohioans.

- The Trauma Acute Care Registry (TACR) currently captures approximately **38,000 patient records** annually. This number is anticipated to increase as isolated hip fractures and trauma patient hospital admissions of less than 48 hours are added to the database beginning in 2011. TACR data is abstracted from individual patient records by hospitals from across Ohio and submitted quarterly to ODPS. Each submitted record encompasses **77 distinct data elements**. Hospitals must commit ongoing resources in order to submit this data to the State. The TACR has accumulated nearly **400,000 records** from hospitals since 1999.
- Similarly, the EMS Incident Reporting System (EMSIRS) database captures nearly **one million** EMS run reports annually, and has over **seven million** stored records. **Eighty data elements** comprise the EMSIRS report submitted by EMS providers to ODPS. Fire and EMS agencies also must commit precious resources in order to submit EMSIRS data to ODPS.
- The Trauma Rehabilitation Database (TRD) is the smallest of the three databases, capturing about **1,000 records** on average per year, with a total database of approximately **5,000 records** since inception.

PATTERNS OF UNDERSTAFFING. OTR understaffing is evident in comparison to other states with trauma registries, as well as when compared to similar health databases in Ohio.

- Of sixteen other U.S. states that have trauma registries based on hospital data, the average ratio of trauma registry cases to FTEs is **11,400:1**. Comparatively for just the TACR in Ohio, the ratio of

registry cases to FTEs is **38,000:1**. Given that the EMSIRS and TRD are included in the same FTE, the ratio expands to more than **1,000,000:1**.

- Other Ohio registries have significantly higher ratios of FTEs than those managed under ODPS:
 - The Ohio Cancer Registry has a staff of 14 that oversees an annual registry submission of 90,000 records. This ratio is 90,000:14 or **6,428:1**.
 - The Ohio Violent Data Reporting System (OVRs) managed by ODH includes all “violent” trauma deaths---those that result from homicide, legal intervention, suicide, unintentional firearm discharge, terrorism, and deaths of “undetermined intent.” This database collected 2007 records for the calendar year 2007, and is managed by a staff of four. This ratio is 2007:4 or **502:1**. Staff for this registry includes a program manager, a data manager, an abstractor/ registrar, and an epidemiologist.

The intent of sharing these ratios is not to disparage other programs, but rather to highlight disparities. *Tables 1 and 2* help depict the inequality in FTEs for the OTR databases.

Table 1:
U.S. States’ FTE Comparison to TACR Comparison @38,000:1

State	Number of FTEs	Number of Annual Cases	Cases per FTE
AZ	3	25,000	8,333
DE	1	6,000	6,000
FL	1	50,000	50,000
ID	3	6,000	2,000
IN	1	12,000	12,000
MD	0.5	20,000	40,000
ND	0.5	4,500	9,000
NE	2	9,000	4,500
NM	1	3,000	3,000
NY	2.5	27,000	10,800
OR	1.5	11,000	7,333
PA	2	31,000	15,500
TN	1	20,000	20,000
UT	1.25	7,500	6,000
WA	2.4	25,000	10,417
WV	1	24,000	24,000
TOTALS	24.65	281,000	11,400

Table 2:
Ohio Trauma Database FTE Comparison

State of Ohio Trauma Database	Cases per FTE
OTR (TACR, EMSIRS & TRD)	1,000,000:1
TACR <i>Only</i>	38,000:1
Ohio Cancer Registry	6,428:1
OVRs	502:1

ISSUE #1. An inadequate number of OTR staff prevents compliance with statutory requirements.

- ORC Sec. 4765.06 mandates that the OTR shall collect “information regarding the care of adult and pediatric trauma victims” in Ohio. “The registry shall provide for the reporting of adult and pediatric trauma-related deaths, identification of adult and pediatric trauma patients, monitoring

of adult and pediatric trauma patient care data, determination of the total amount of uncompensated adult and pediatric trauma care provided annually by each facility that provides care to trauma victims, and collection of any other information specified by the Board.” More generally, ORC Sec 4765.06 mandates that EMSIRS collect “information regarding the delivery of emergency medical services in this state and the frequency at which the services are provided.” Despite that the TACR has been collecting data since 2000 and EMSIRS since 2002, minimal state registry reports have come from OTR staff that describe the status of trauma care in Ohio as delineated in the mandates of ORC 4765.06.

ISSUE #2. An inadequate number of OTR staff results in serious data gaps in Ohio.

- A 2008 EMSIRS database update (*EMSIRS-1 to EMSIRS-2*) was interrupted while in progress because of cited OTR staffing shortages. The update had been widely publicized by ODPS to local EMS agencies. Some agencies had simultaneously undertaken the update in an effort to be fully compliant with OTR reporting. Many of these agencies completed their own updates (done at their own expense). When ODPS failed to complete their update, the updated EMS agencies could not contribute their EMSIRS-2 data to the OTR’s still-existing EMSIRS-1 database. This has resulted in nearly **188,000 missing EMS records** from the EMSIRS database in the 2 ½ years that ODPS has failed to complete their EMSIRS update. This void in data makes the EMSIRS database significantly unreliable since 2008.
- In 2009, it was discovered by a local hospital that their data had not been submitted for two years to the TACR by a regionally contracted registrar. Upon investigation, it was realized that this regional registrar had failed to submit data for **over 30 hospitals** in the same time period. OTR personnel shortages impeded the discovery of this lapse. Data requests had come from independent researchers from across the state in this time period and data provided for studies as inclusive of Ohio’s population data was immediately invalid.

ISSUE #3. An inadequate number of OTR staff impedes the reliability and validity of Ohio’s trauma registry data.

- Trauma registrars and regional registry programs from around Ohio have from time to time notified OTR staff about discrepancies found in local data submission patterns, which affect the reliability and validity of OTR data. These discrepancies have been communicated in writing to OTR staff. OTR staff has on multiple occasions failed to respond to these issues.
- OTR staff has not been able to effectively assess submitted data for gaps in select fields. They have not had time to conduct random queries to identify inconsistencies, nor to work with data submitters from around the state to ameliorate these inconsistencies.

ISSUE #4. The current OTR staff has a skill-set gap. This missing skill set involves statistical analysis of data that will drive practice changes from an evidence-base, ultimately saving lives.

- Since 1999, OTR staff has only published two basic registry data reports describing demographics and injury patterns seen across the state, despite the richness of OTR data available. Neither of

these reports was comprehensive. No reports have been published using EMSIRS or TRD data. No reports have been published that describe statistically significant trends in Ohio's trauma system.

- In 2004, OTR staff hired private consultants to conduct a validity assessment of the TACR. One-thousand records were abstracted at a cost to the state of \$24,000. But the project was never finished due to a lack of funds to continue with the consultants. OTR staff did not have the time and/or expertise to document abstracted findings and areas of needed improvement. No recommendations have been cited or implemented as a result of this work.
- In day-to-day operations, OTR staff has admittedly not been able to process complex data requests from the public. OTR staff has only been able to meet simple data requests from stakeholders.

Recommendation/Request. Given the staffing patterns documented above, the State Trauma Registry Advisory Subcommittee (TRAS) strongly encourages ODPS to hire additional OTR staff when the State budget allows it. FTEs should increase to a number which provides adequate oversight to the state trauma databases, and should include personnel with the statistical knowledge to evaluate and publish the data to stakeholders. *At minimum*, we suggest mirroring the staffing patterns of the OVRs for the OTR, to include a program manager, a data manager, an abstractor/registrar, and an epidemiologist/statistician. TRAS offers its support in writing job descriptions for these positions as needed.

Summary. An appropriate increase in FTEs and skill set in the OTR will help to improve the quality of care and outcomes for Ohioans who sustain serious injuries. Adequate oversight of the OTR is necessary to provide valid and reliable information to state leaders to make good decisions regarding trauma service and prevention initiatives in Ohio. These prevention initiatives ultimately save the state money by preventing trauma cases and by decreasing the utilization of intensive trauma resources. The cost-benefit supporting better OTR management and data reporting cannot be understated. In Franklin County alone, the annual cost of trauma injuries and fatalities is over \$750,000,000. Much of this expense is borne by the State through Medicaid; by local municipalities for EMS and law enforcement services (needed to manage "accident" scenes); and by Ohio's hospitals for uncompensated care to trauma victims.

Please feel free to contact Dr. Barry Knotts or me with questions. Thank you.

POSITION DESCRIPTION

OHIO DEPARTMENT OF
ADMINISTRATIVE SERVICES

PERSONNEL DIVISION

AGENCY
Ohio Department of Public Safety
DIVISION OR INSTITUTION
Emergency Medical Services
UNIT OR OFFICE

☒ State Agency ☐ County Agency ☒ New Position ☐ Change

COUNTY OF EMPLOYMENT
Franklin

USUAL WORKING TITLE OF POSITION
Trauma Coordinator

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR
1500.0 Deputy Director 5

NORMAL WORKING HOURS (Explain unusual or rotating shift.)
FROM: 8:00 a.m.

TO: 5:00 p.m.

JOB DESCRIPTION AND WORKER CHARACTERISTICS

%	Job Duties in order of importance	Minimum Acceptable Characteristics
40%	Relieves Executive Director of a variety of difficult administrative duties, serves as liaison between the Division and other state agencies; serves as advisor to Executive Director in representing the Division on all trauma, data, and research matters, serves as staff liaison to the state trauma committee, provides information on Division programs, activities and policies to private organizations, government officials and general public; maintains ongoing relationship, communication and problem solving activities among EMS stakeholders at both state and local levels; assists Executive Director with the establishment of a strategic operating plan that incorporates anticipated technological and regulatory changes; identifies short and long term goals for the Division consistent with those of the State EMS Board and the mission of the Department; develops and implements policies and procedures; assists with establishing quality standards and measures by developing information systems which provides data depicting performance; ensures information monitored complies with Division performance standards; oversees and manages activities regarding trauma system development; serves as liaison to other state agencies and private organizations on matters related to trauma; serves as advisor to the Executive Director, State EMS Board and ODPS on trauma care and trauma system issues; ensures that the Division operations of the state trauma registry remains compliant with applicable federal and state laws, regulations and guidelines; works with EMS agencies and trauma centers to ensure that EMS providers know what hospitals trauma verification levels are, assists with analysis of data from the trauma registry for the purpose of formulating program policy; oversees rules and rulemaking review relative to trauma reports, protocols and the trauma registry; ensures that trauma related EMS grants and research supported by the Division and/or State EMS Board is compliant with state laws and regulations and is consistent with the Divisions and Board strategic and operating plans; ensures continued participation and compliance with federal trauma system development initiatives (e.g., federal grants, and educational efforts);	Knowledge: (5) Management; (11a) Public Relations; (13b) (ODPS Work Rules & Procedures); (14) Government Structure & Process; (23) (EMS & Fire laws); Abilities: (30d) Deal with problems in involving few variables in familiar context; (30h) apply principles to solve practical, everyday problems; (30i) Define problems, collect data, establish facts & draw valid conclusions; (32p) Interview job applicants; (32u) prepare & deliver speech before specialized audiences & general public; (34e) Establish friendly atmosphere as supervisor of work unit ; (34f) Handle sensitive inquiries from & contacts with officials & general public; (34i) Resolve complains from angry citizens & government officials, ability to work closely with health care providers (emergency physicians, nurses, paramedics) Preferred Knowledge: Health Care Prehospital clinical / emergency trauma
40%	Supervise operations of statewide clinical data systems and provides immediate supervision to assigned staff.	

List Position Numbers and Class Titles of Positions directly supervised.
1525.0 Admin Asst 2
1504.0, 1524.0, 1520.0, 1511.0, 1508.0 Admin Asst 3

SIGNATURE OF AGENCY REPRESENTATIVE

DATE

PCN

Class Title
Trauma Coordinator

Class Number

POSITION DESCRIPTION

OHIO DEPARTMENT OF
ADMINISTRATIVE SERVICES

PERSONNEL DIVISION

AGENCY
Ohio Department of Public Safety
DIVISION OR INSTITUTION
Emergency Medical Services
UNIT OR OFFICE

☒ State Agency ☐ County Agency ☒ New Position ☐ Change

COUNTY OF EMPLOYMENT
FRANKLIN

USUAL WORKING TITLE OF POSITION
Trauma Coordinator

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR
1500.0 Deputy Director 5

NORMAL WORKING HOURS (Explain unusual or rotating shift.)
FROM: 8:00 a.m.

TO: 5:00 p.m.

JOB DESCRIPTION AND WORKER CHARACTERISTICS

%	Job Duties in order of importance	Minimum Acceptable Characteristics
15%	Maintains liaison between state trauma committee and health care providers, health care professional organizations and governmental entities at the local, state and national levels.	(5); (11a); (13b); (14); (23); (30l); (32p); (32u); (34e)
5%	Performs other related duties as requested.	

PCN

Class Title
Trauma Coordinator

Class Number

List Position Numbers and Class Titles of Positions directly supervised.
1525.0 Admin Asst 2
1504.0, 1524.0, 1520.0, 1511.0, 1508.0 Admin Asst 3

SIGNATURE OF AGENCY REPRESENTATIVE

DATE

POSITION DESCRIPTION

AGENCY/DEPT ID
Ohio Department of Public Safety

DIVISION OR INSTITUTION
Emergency Medical Services

UNIT OR OFFICE

COUNTY OF EMPLOYMENT
Franklin

POSITION NUMBER

☐ Reclassification

☐ New Position

☒ Update

Position Hyperlinked to ☐

Agency Organizational Tree

USUAL WORKING TITLE OF POSITION

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR

☒ Permanent
☐ Temporary
☐ Intermittent

☒ Classified
☐ Unclassified

Overtime: ☒ Eligible ☐ Exempt

Bargaining Unit

If FLSA Exempt, exemption type:

Page 1 of 2

NORMAL WORKING HOURS (Explain unusual or rotating shift):

FROM:

TO:

JOB DESCRIPTION AND WORKER CHARACTERISTICS

JOB TITLE

%	Job Duties in Order of Importance	Knowledge, Skills & Abilities
50%	Independently designs and conducts research activities pertaining to emergency medical services, trauma care and the statewide trauma system: Reviews and analyzes issues to be researched; Develops appropriate research tools and research methodology; Tabulates and analyzes data using standard and complex statistical measures and determines appropriate statistical methods for specific data sets (e.g., calculations of rates; generation of projections and estimates; logistic regression and other multivariate regression); Operates personal computer to apply appropriate statistical analysis and methods using statistical computer software packages (e.g., STATA, SAS, SPSS); Participates in other research projects as assigned by supervisor; Serves as a resource person and technical advisor in areas of research and evaluation and replies to requests for information within the EMS Division, elsewhere in ODPS, and from outside the Department; Directs and/or participates in completion of scientific reports (e.g., evaluation of validity and significance of findings) and assists in preparation of reports for publication in peer-reviewed journals.	Knowledge of: natural sciences (epidemiology); social sciences (research, sampling & survey methods for human studies); agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records. Skills in: software for statistical analysis (SAS, SPSS, STATA), database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: define problems, collect data establish facts and draw conclusions; use statistical analysis; use proper research methods in gathering data; prepare concise & meaningful reports.
30%	Assists supervisor in investigation and analysis of data pertaining to emergency medical services, trauma care and the statewide trauma system in Ohio: Collects, receives and reviews electronic data submitted to the EMS Incident Reporting System (EMSIRS) and Ohio Trauma Registry (OTR); Retrieves data for research purposes; Prepares descriptive data and informational reports for stakeholders; Participates in the cleaning, organization, and re-coding of EMSIRS and OTR data as needed to assist in the data linkage process; Works in consultation with other data center staff to develop the matching/linking routines needed to associate all collected information.	Knowledge of: agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records; Skills in: database linkage programs (LinkSolv, Link Plus), database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: use proper research methods in gathering data; prepare concise & meaningful reports; cooperate with coworkers on group projects.

JOB CODE

List Position Numbers & Job Titles of Positions Directly Supervised:

SIGNATURE OF AGENCY REPRESENTATIVE

DATE

Thomas P. Charles, Director

POSITION DESCRIPTION		AGENCY/DEPT ID Ohio Department of Public Safety
DIVISION OR INSTITUTION	UNIT OR OFFICE	COUNTY OF EMPLOYMENT Franklin

POSITION NUMBER	<input type="checkbox"/> Reclassification <input type="checkbox"/> New Position <input checked="" type="checkbox"/> Update		Position Hyperlinked to <input type="checkbox"/>	
			Agency Organizational Tree	
	USUAL WORKING TITLE OF POSITION		POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR	
	<input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Classified <input type="checkbox"/> Unclassified	Overtime: <input checked="" type="checkbox"/> Eligible <input type="checkbox"/> Exempt If FLSA Exempt, exemption type:	Bargaining Unit Page 2 of 2
	NORMAL WORKING HOURS (Explain unusual or rotating shift): FROM: TO:			
	JOB DESCRIPTION AND WORKER CHARACTERISTICS			
	%	Job Duties in Order of Importance	Knowledge, Skills & Abilities	
	10%	Assists data managers in EMSIRS and OTR database management, including: Developing a data quality assurance plan in order to maintain the quality, accuracy, integrity and confidentiality of all records; Development of policies, procedures and computerized data processing programs to facilitate a database containing timely, complete, and accurate data; Development of data security, confidentiality and data release policies; Coordination of EMSIRS and OTR advisory committee meetings.	Knowledge of: agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records; Skills in: database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: use proper research methods in gathering data; prepare concise & meaningful reports; cooperate with coworkers on group projects; handle sensitive inquiries from and contacts with officials, stakeholders and general public.	
	10%	Represents and promotes EMS data systems: At public and professional gatherings; Drafts/prepares reports, presentations and articles (e.g., newsletters, web-pages); Participates in projects to support the effective collection, analysis and dissemination of public health information.	Skills in: database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: prepare concise & meaningful reports; prepare and present speeches before specialized and lay audiences; originate and/or edit articles for publications; develop complex reports; originate and/or edit technical or scientific publications.	
	JOB TITLE	List Position Numbers & Job Titles of Positions Directly Supervised:		SIGNATURE OF AGENCY REPRESENTATIVE
		DATE		
JOB CODE			Thomas P. Charles, Director	

POSITION DESCRIPTION

AGENCY/DEPT ID DPS
Ohio Department of Public Safety

DIVISION OR INSTITUTION
Emergency Medical Services

UNIT OR OFFICE

COUNTY OF EMPLOYMENT
Franklin

<input type="checkbox"/> Reclassification <input type="checkbox"/> New Position <input checked="" type="checkbox"/> Update	Position Hyperlinked to <input type="checkbox"/> Agency Organization Tree						
USUAL WORKING TITLE OF POSITION 20084269 Program Administrator 2	POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR 20075155 Program Administrator 3						
<input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Temporary <input type="checkbox"/> Intermittent	<input type="checkbox"/> Classified <input type="checkbox"/> Unclassified						
Overtime: <input type="checkbox"/> Eligible <input type="checkbox"/> Exempt If FLSA Exempt, exemption type:	Bargaining Unit Page 1 of 2						
NORMAL WORKING HOURS (Explain unusual or rotating shift.) FROM: 8:00 a.m. TO: 5:00 p.m.							
JOB DESCRIPTION AND WORKER CHARACTERISTICS							
%	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%; text-align: center;">Job Duties in order of Importance</th> <th style="text-align: center;">Knowledge, Skills & Abilities</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;"> 50% Independently designs and conducts statistical research activities pertaining to emergency medical services, trauma care and the statewide trauma system: Reviews and analyzes issues to be researched; Develops appropriate technical objectives, plans, timelines, and research methodology; Tabulates and analyzes data using standard and complex statistical measures and determines appropriate statistical methods for specific data sets (e.g., calculation of sample size requirements; generation of projections and estimates; logistic and multivariate regression); Operates personal computer to apply appropriate statistical analysis and methods using statistical computer software packages (e.g., STATA, SAS, SPSS); Participates in other research projects as assigned by supervisor; Serves as a resource person and technical advisor in areas of research and evaluation and replies to requests for information within the EMS Division, elsewhere in ODPS, and from outside the Department; Directs, supervises and/or participates in completion of scientific reports (e.g., evaluation of validity and significance of findings) and assists in preparation of reports for publication in peer-reviewed journals and/or inclusion in reports to committees and state or federal agencies. Assists supervisor, physicians or other professionals in investigation and analysis of data pertaining to emergency medical services, trauma care and the statewide trauma system in Ohio: Collects, receives and reviews electronic data submitted to the EMS Incident Reporting System (EMSIRS) and Ohio Trauma Registry (OTR); Retrieves data for research purposes; Prepares descriptive data and informational reports for stakeholders. Designs and implements statistically valid surveys to assess EMS and trauma system issues. Develops policies on conduct of research activities. </td> <td style="vertical-align: top;"> Knowledge of: natural sciences (biostatistics); social sciences (research, sampling & survey methods for human studies); agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records. Skills in: software for statistical analysis (SAS, SPSS, STATA), database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: define problems, collect data establish facts and draw conclusions; use statistical analysis; use proper research methods in gathering data; prepare concise & meaningful reports; originate and/or edit articles for publications; develop complex reports; originate and/or edit technical or scientific publications; handle sensitive inquiries from and contacts with officials, stakeholders and general public. </td> </tr> <tr> <td style="vertical-align: top;"> 30% Assists data managers in EMSIRS and OTR database management, including: Developing a data quality assurance plan in order to maintain the quality, accuracy, integrity and confidentiality of all records; Development of policies, procedures and computerized data processing programs to facilitate a database containing timely, complete, and accurate data; Development of data security, confidentiality and data release policies; Coordination of EMSIRS and OTR advisory committee meetings. </td> <td style="vertical-align: top;"> Knowledge of: agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records; Skills in: database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). </td> </tr> </tbody> </table>	Job Duties in order of Importance	Knowledge, Skills & Abilities	50% Independently designs and conducts statistical research activities pertaining to emergency medical services, trauma care and the statewide trauma system: Reviews and analyzes issues to be researched; Develops appropriate technical objectives, plans, timelines, and research methodology; Tabulates and analyzes data using standard and complex statistical measures and determines appropriate statistical methods for specific data sets (e.g., calculation of sample size requirements; generation of projections and estimates; logistic and multivariate regression); Operates personal computer to apply appropriate statistical analysis and methods using statistical computer software packages (e.g., STATA, SAS, SPSS); Participates in other research projects as assigned by supervisor; Serves as a resource person and technical advisor in areas of research and evaluation and replies to requests for information within the EMS Division, elsewhere in ODPS, and from outside the Department; Directs, supervises and/or participates in completion of scientific reports (e.g., evaluation of validity and significance of findings) and assists in preparation of reports for publication in peer-reviewed journals and/or inclusion in reports to committees and state or federal agencies. Assists supervisor, physicians or other professionals in investigation and analysis of data pertaining to emergency medical services, trauma care and the statewide trauma system in Ohio: Collects, receives and reviews electronic data submitted to the EMS Incident Reporting System (EMSIRS) and Ohio Trauma Registry (OTR); Retrieves data for research purposes; Prepares descriptive data and informational reports for stakeholders. Designs and implements statistically valid surveys to assess EMS and trauma system issues. Develops policies on conduct of research activities.	Knowledge of: natural sciences (biostatistics); social sciences (research, sampling & survey methods for human studies); agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records. Skills in: software for statistical analysis (SAS, SPSS, STATA), database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: define problems, collect data establish facts and draw conclusions; use statistical analysis; use proper research methods in gathering data; prepare concise & meaningful reports; originate and/or edit articles for publications; develop complex reports; originate and/or edit technical or scientific publications; handle sensitive inquiries from and contacts with officials, stakeholders and general public.	30% Assists data managers in EMSIRS and OTR database management, including: Developing a data quality assurance plan in order to maintain the quality, accuracy, integrity and confidentiality of all records; Development of policies, procedures and computerized data processing programs to facilitate a database containing timely, complete, and accurate data; Development of data security, confidentiality and data release policies; Coordination of EMSIRS and OTR advisory committee meetings.	Knowledge of: agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records; Skills in: database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint).
Job Duties in order of Importance	Knowledge, Skills & Abilities						
50% Independently designs and conducts statistical research activities pertaining to emergency medical services, trauma care and the statewide trauma system: Reviews and analyzes issues to be researched; Develops appropriate technical objectives, plans, timelines, and research methodology; Tabulates and analyzes data using standard and complex statistical measures and determines appropriate statistical methods for specific data sets (e.g., calculation of sample size requirements; generation of projections and estimates; logistic and multivariate regression); Operates personal computer to apply appropriate statistical analysis and methods using statistical computer software packages (e.g., STATA, SAS, SPSS); Participates in other research projects as assigned by supervisor; Serves as a resource person and technical advisor in areas of research and evaluation and replies to requests for information within the EMS Division, elsewhere in ODPS, and from outside the Department; Directs, supervises and/or participates in completion of scientific reports (e.g., evaluation of validity and significance of findings) and assists in preparation of reports for publication in peer-reviewed journals and/or inclusion in reports to committees and state or federal agencies. Assists supervisor, physicians or other professionals in investigation and analysis of data pertaining to emergency medical services, trauma care and the statewide trauma system in Ohio: Collects, receives and reviews electronic data submitted to the EMS Incident Reporting System (EMSIRS) and Ohio Trauma Registry (OTR); Retrieves data for research purposes; Prepares descriptive data and informational reports for stakeholders. Designs and implements statistically valid surveys to assess EMS and trauma system issues. Develops policies on conduct of research activities.	Knowledge of: natural sciences (biostatistics); social sciences (research, sampling & survey methods for human studies); agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records. Skills in: software for statistical analysis (SAS, SPSS, STATA), database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: define problems, collect data establish facts and draw conclusions; use statistical analysis; use proper research methods in gathering data; prepare concise & meaningful reports; originate and/or edit articles for publications; develop complex reports; originate and/or edit technical or scientific publications; handle sensitive inquiries from and contacts with officials, stakeholders and general public.						
30% Assists data managers in EMSIRS and OTR database management, including: Developing a data quality assurance plan in order to maintain the quality, accuracy, integrity and confidentiality of all records; Development of policies, procedures and computerized data processing programs to facilitate a database containing timely, complete, and accurate data; Development of data security, confidentiality and data release policies; Coordination of EMSIRS and OTR advisory committee meetings.	Knowledge of: agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records; Skills in: database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint).						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">List Position Numbers & Job Titles of Positions Directly Supervised.</td> <td style="width: 30%;">SIGNATURE OF AGENCY REPRESENTATIVE</td> <td style="width: 20%;">DATE</td> </tr> <tr> <td style="height: 40px;"></td> <td style="text-align: center; vertical-align: middle;">X</td> <td></td> </tr> </table>		List Position Numbers & Job Titles of Positions Directly Supervised.	SIGNATURE OF AGENCY REPRESENTATIVE	DATE		X	
List Position Numbers & Job Titles of Positions Directly Supervised.	SIGNATURE OF AGENCY REPRESENTATIVE	DATE					
	X						

POSITION DESCRIPTION

AGENCY/DEPT ID
Ohio Department of Public Safety

DIVISION OR INSTITUTION
Emergency Medical Services

UNIT OR OFFICE

COUNTY OF EMPLOYMENT
Franklin

POSITION NUMBER

☐ Reclassification

☐ New Position

☒ Update

Position Hyperlinked to ☐

Agency Organizational Tree

USUAL WORKING TITLE OF POSITION

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR

☒ Permanent
☐ Temporary
☐ Intermittent

☒ Classified
☐ Unclassified

Overtime: ☒ Eligible ☐ Exempt

If FLSA Exempt, exemption type:

Bargaining Unit

Page 1 of 2

NORMAL WORKING HOURS (Explain unusual or rotating shift):

FROM:

TO:

JOB DESCRIPTION AND WORKER CHARACTERISTICS

JOB TITLE

%	Job Duties in Order of Importance	Knowledge, Skills & Abilities
50%	In a supervisory capacity, coordinates and manages implementation of the EMS Incident Reporting System (EMSIRS) and Ohio Trauma Registry (OTR): Coordinates the prioritization of responses to requests for data; Collects, receives and reviews medical record data submitted to EMSIRS and OTR; Performs EMSIRS and OTR data and record management to maintain the timeliness, quality, accuracy, integrity and confidentiality of all medical records; Develops data quality assurance plans and policies in order to maintain the quality, accuracy, integrity and confidentiality of all records; Works closely with management, technical staff and data owners to enhance the data capture, submission and overall quality of the data; Develops short- and long-term plans for data system operations; Serves as liaison between EMS Division and all entities required to submit data; Provides technical assistance in data collection and abstraction.	Knowledge of: Supervisory principles/techniques; emergency medical services or trauma registry; agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records; medical terminology, anatomy/physiology, and disease process. Skills in: medical record creation and/or management; database (Access, Crystal Reports), and spreadsheet (Excel). Ability to: define problems, collect data establish facts and draw conclusions.
40%	Assists in obtaining data owner participation in EMSIRS and OTR through outreach: Serves as administrative contact for EMSIRS and OTR; Communicates benefits of EMSIRS and OTR through telephone, e-mail and/or site visits; Oversees and participates in training for users of EMSIRS and OTR; Assists in coordination of EMSIRS and OTR advisory committee meetings; Represents and promotes the program at public and professional gatherings; Drafts/prepares presentations and articles (e.g., newsletters, web-pages).	Knowledge of: emergency medical services or trauma registry; agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records. Skills in: medical record creation and/or management; database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: handle sensitive inquiries from and contacts with officials, stakeholders and general public; prepare concise & meaningful reports; cooperate with coworkers on group projects.

JOB CODE

List Position Numbers & Job Titles of Positions Directly Supervised:

SIGNATURE OF AGENCY REPRESENTATIVE

DATE

Thomas P. Charles, Director

POSITION DESCRIPTION

AGENCY/DEPT ID
Ohio Department of Public Safety

DIVISION OR INSTITUTION
Emergency Medical Services

UNIT OR OFFICE

COUNTY OF EMPLOYMENT
Franklin

POSITION NUMBER

☐ Reclassification

☐ New Position

☒ Update

Position Hyperlinked to ☐

Agency Organizational Tree

USUAL WORKING TITLE OF POSITION

POSITION NO. AND TITLE OF IMMEDIATE SUPERVISOR

☒ Permanent
☐ Temporary
☐ Intermittent

☒ Classified
☐ Unclassified

Overtime: ☒ Eligible ☐ Exempt

Bargaining Unit

If FLSA Exempt, exemption type:

Page 1 of 2

NORMAL WORKING HOURS (Explain unusual or rotating shift):

FROM:

TO:

JOB DESCRIPTION AND WORKER CHARACTERISTICS

%	Job Duties in Order of Importance	Knowledge, Skills & Abilities
50%	Coordinates and manages implementation of the EMS Incident Reporting System (EMSIRS) and Ohio Trauma Registry (OTR): Collects, receives and reviews medical record data submitted to EMSIRS and OTR; Performs EMSIRS and OTR data and record management to maintain the timeliness, quality, accuracy, integrity and confidentiality of all medical records; Develops data quality assurance plans and policies in order to maintain the quality, accuracy, integrity and confidentiality of all records; Works closely with management, technical staff and data owners to enhance the data capture, submission and overall quality of the data; Serves as liaison between EMS Division and all entities required to submit data; Provides technical assistance in data collection and abstraction.	Knowledge of: emergency medical services or trauma registry; agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records; medical terminology, anatomy/physiology, and disease process. Skills in: medical record creation and/or management; database (Access, Crystal Reports), and spreadsheet (Excel). Ability to: define problems, collect data establish facts and draw conclusions.
40%	Assists in obtaining data owner participation in EMSIRS and OTR through outreach: Serves as administrative contact for EMSIRS and OTR; Communicates benefits of EMSIRS and OTR through telephone, e-mail and/or site visits; Oversees and participates in training for users of EMSIRS and OTR; Assists in coordination of EMSIRS and OTR advisory committee meetings; Represents and promotes the program at public and professional gatherings; Drafts/prepares presentations and articles (e.g., newsletters, web-pages).	Knowledge of: emergency medical services or trauma registry; agency policy & procedures (EMS & trauma reporting, data management, data release, confidentiality); interpretation of data from medical records. Skills in: medical record creation and/or management; database (Access, Crystal Reports), spreadsheet (Excel), and graphics (PowerPoint). Ability to: handle sensitive inquiries from and contacts with officials, stakeholders and general public; prepare concise & meaningful reports; cooperate with coworkers on group projects.

JOB TITLE

JOB CODE

List Position Numbers & Job Titles of Positions Directly Supervised:

SIGNATURE OF AGENCY REPRESENTATIVE

DATE

Thomas P. Charles, Director

4765.03 Executive director duties.

(A) The director of public safety shall appoint a full-time executive director for the state board of emergency medical services. The executive director shall be knowledgeable in emergency medical services and trauma care and shall serve at the pleasure of the director of public safety. The director of public safety shall appoint the executive director from among three persons nominated by the board. The director of public safety may refuse, for cause, to appoint any of the board's nominees. If the director fails to appoint any of the board's nominees, the board shall continue to nominate groups of three persons until the director does appoint one of the board's nominees. The executive director shall serve as the chief executive officer of the board and as the executive director of the division of emergency medical services. The executive director shall attend each meeting of the board, except the board may exclude the executive director from discussions concerning the employment or performance of the executive director or medical director of the board. The executive director shall give a surety bond to the state in such sum as the board determines, conditioned on the faithful performance of the duties of the executive director's office. The executive director shall receive a salary from the board and shall be reimbursed for actual and necessary expenses incurred in carrying out duties as executive director. The executive director shall submit a report to the director of public safety at least every three months regarding the status of emergency medical services in this state. The executive director shall meet with the director of public safety at the director's request.

(B) The board shall appoint a medical director, who shall serve at the pleasure of the board. The medical director shall be a physician certified by the American board of emergency medicine or the American osteopathic board of emergency medicine who is active in the practice of emergency medicine and has been actively involved with an emergency medical service organization for at least five years prior to being appointed. The board shall consider any recommendations for this appointment from the Ohio chapter of the American college of emergency physicians, the Ohio chapter of the American college of surgeons, the Ohio chapter of the American academy of pediatrics, the Ohio osteopathic association, and the Ohio state medical association. The medical director shall direct the executive director and advise the board with regard to adult and pediatric trauma and emergency medical services issues. The medical director shall attend each meeting of the board, except the board may exclude the medical director from discussions concerning the appointment or performance of the medical director or executive director of the board. The medical director shall be employed and paid by the board and shall be reimbursed for actual and necessary expenses incurred in carrying out duties as medical director.

(C) The board may appoint employees as it determines necessary. The board shall prescribe the duties and titles of its employees.

Effective Date: 11-03-2000

STATE OF OHIO

EMS BOARD

Emergency Medical Services Pediatric Guidelines and Procedures Manual

INTRODUCTION

On behalf of the State Board of Emergency Medical Services, the Ohio Emergency Medical Services for Children Program was charged with drafting proposed pediatric guidelines that EMS agencies could use in setting a standard for emergency medical services to the children of Ohio.

Please note that the proposed guidelines are not mandatory for Ohio EMS agencies. The guidelines and procedures manual is meant to assist in the development of local protocols. It is the Board's hope that individual regions or agencies will review these guidelines with their medical directors and legal counsel when drafting their own individualized protocols.

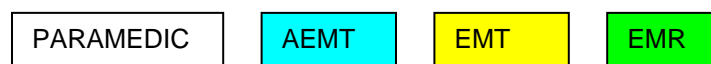
February 6, 2012

USING THE PEDIATRIC GUIDELINES

The pediatric guidelines are color coded for quick and easy reference, and represent the scope of practice as recommended by the Ohio EMSC Committee. In some cases, this differs from Ohio's scope of practice. Consult your medical director should questions arise regarding scope of practice.

Please see the color coded key below to determine how to use the guidelines.

PARAMEDICS may perform all instructions coded:



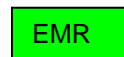
ADVANCED EMERGENCY MEDICAL TECHNICIANS (AEMT) may perform all instructions coded:



EMERGENCY MEDICAL TECHNICIANS (EMT) may perform all instructions coded:



EMERGENCY MEDICAL RESPONDERS (EMR) may perform all instructions coded:



MEDICAL CONTROL RECOMMENDATION



TABLE OF CONTENTS

PEDIATRIC PROTOCOL

Pediatric Altered Level of Consciousness	3
Arrhythmias	7
Pediatric Bradycardia	12
Pediatric Narrow Complex Tachycardia	13
Pediatric Stable Wide Complex Tachycardia	14
Pediatric Unstable Wide Complex Tachycardia	15
Cardiac Arrest	16
Pediatric Cardiac Arrest: AED Use-Ages 1-8 Years	20
Pediatric Cardiac Arrest: AED Use-Age 8 Years and Older	21
Pediatric Cardiac Arrest	22
Child Abuse / Neglect	23
Fever	26
Fluid and Drug Administration	27
Multiple Trauma	28
Newborn Resuscitation	29
Pediatric Respiratory Distress	34
Upper Airway Obstruction	34
Lower Airway Obstruction	36
Pediatric Seizure	40
Pediatric Shock	43
Special Needs Children	47
Emergencies in Children with Tracheostomies	49
Emergencies in Children with In-Dwelling Central Lines	51
Emergencies in Children with Gastrostomy Tubes	53
Emergencies in Children on Ventilators	55
APPENDIX	
Normal Pediatric Vital Signs	57
Pediatric Coma Scoring	57
Pediatric Prehospital Medications	58

PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS

EMR

- A. Assess ABCs. Manually stabilize cervical spine as per Multiple Trauma Protocol if cause of unconsciousness is unknown.
- B. If not breathing, assist ventilation with bag-valve-mask while administering 100% oxygen or provide mouth to mouth ventilation using barrier device.
- C. If breathing, administer 100% oxygen by NRB mask.
- D. Evaluate patient's general appearance, relevant history of condition and determine:
 - Allergies
 - Medication
 - Past Medical History - especially, diabetic, seizures, stroke, head injury, drug abuse
 - Last Meal
 - Events leading to present illness
- E. Obtain and document a pulse oximetry and/or capnography measurement.

EMT

- A. Determine blood sugar level by available means.
 - 1. If blood sugar is less than 70 mg/dl, administer oral glucose if alert. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl.

PATIENT MUST HAVE A GAG REFLEX.
 - 2. If blood sugar is greater than 400 mg/dl, TRANSPORT.
- B. If unable to check blood sugar or blood sugar is between 70 mg/dl and 400 mg/dl, establish communications with Medical Control and advise of patient condition.
- C. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.

AEMT

- A. Assist EMS professionals; obtain patient condition and circumstances.
- B. Check heart rhythm.
- C. Start IV saline, TKO.
- D. If any of the following are present: unresponsiveness, dehydrated or dry appearance, tachycardia, low BP, poor capillary refill and/or blood sugar is above 400 mg/dl, IV fluid bolus 20 ml/kg of normal saline.

PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS (cont'd)

- E. Determine blood sugar level by available means. Treat accordingly:
1. Blood sugar less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose (D25)
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl
 2. Blood sugar greater than 400 mg/dl and signs of hypoperfusion are present, administer an IV fluid bolus:
 - a. 20 ml/kg of saline
 - b. May be repeated if no response in 10 minutes.
- F. If blood sugar is normal, respirations are impaired, or patient does not respond to dextrose or fluid bolus, administer Narcan® 0.1 mg/kg IV, IO, ET. Refer to most current version of length based drug treatment guide (e.g. BROSELOW® PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage.
- If patient improves somewhat with Narcan® but is not fully awake, contact medical control for repeat dose.
- G. Re-evaluate patient condition, contact medical control, and transport to the hospital.
- H. In some cases, patient may require restraint, and should not be transported until appropriately restrained.

DO NOT DELAY TRANSPORT

PARAMEDIC

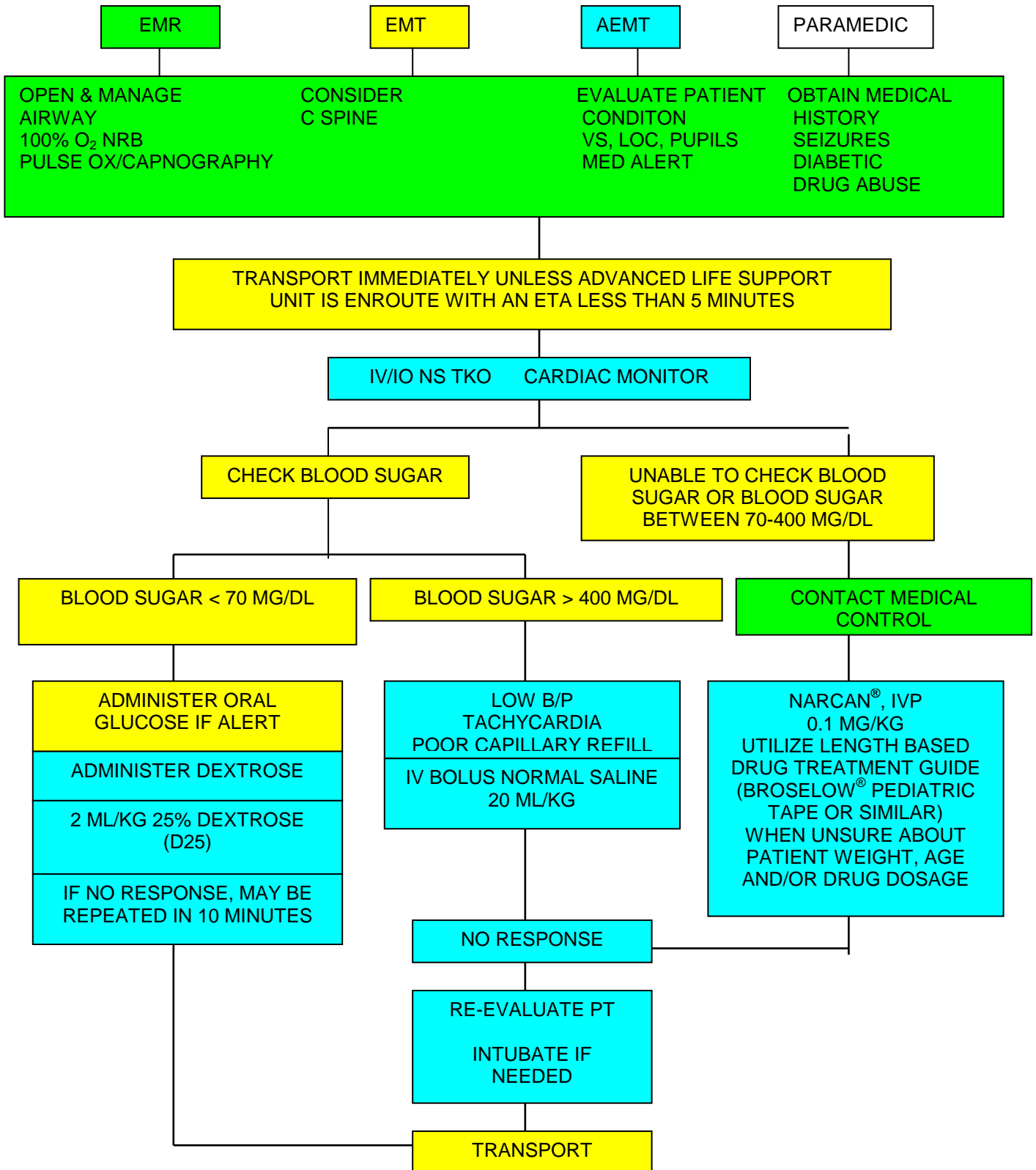
- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Assess airway adequacy and assist ventilation with bag-valve-mask while administering 100% oxygen. May consider intubation.
- C. Check heart rhythm.
- D. Start IV/IO of normal saline. If any of the following are present: unresponsiveness, dehydrated or dry appearance, tachycardia, low BP, or poor capillary refill, administer a fluid bolus of 20 ml/kg normal saline IV/IO push.
- E. Determine blood sugar level by available means. Treat accordingly:
1. Blood sugar less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose (D25)
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl
 2. Blood sugar greater than 400 mg/dl and signs of hypoperfusion are present, administer an IV fluid bolus:

PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS (cont'd)

- a. 20 ml/kg of normal saline
 - b. May be repeated if no response in 10 minutes.
- F. If blood sugar is normal, respirations are impaired, or patient does not respond to dextrose or fluid bolus, administer Narcan® 0.1 mg/kg IV, IO, ET. Refer to most current version of length based drug treatment guide (e.g. BROSELOW® PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage.

If patient improves somewhat with Narcan® but is not fully awake, contact medical control for repeat dose.
- G. Re-evaluate patient condition, contact medical control, and transport to the hospital.
- H. In some cases, patient may require restraint, and should not be transported until appropriately restrained.

PEDIATRIC ALTERED LEVEL OF CONSCIOUSNESS



PEDIATRIC ARRHYTHMIAS

GENERAL CONSIDERATIONS

- A. In the treatment of cardiac arrhythmia, current American Heart Association guidelines were referred to for protocol development.
- B. Life-threatening cardiac rhythm disturbances in children are more frequently the result rather than the cause of acute cardiovascular emergencies with hypoxia being the primary cause.
- C. In infants and children, an arrhythmia should be treated if:
 - 1. the arrhythmia compromises cardiac output (poor perfusion), or
 - 2. the arrhythmia has the potential for degenerating into a rhythm that compromises cardiac output
- D. Initial therapy in children will consist of proper ventilation and oxygenation, along with the assessment of cardiac output
- E. Quality CPR consists of pushing hard with compression of the chest to $\geq 1/3$ of the anteroposterior diameter of the chest, compressions of at least 100 per minute, and allowing complete chest recoil.
- F. For two-person CPR, the rate of chest compressions without the presence of an advanced airway is 3:1 in newborns with a suspected primary etiology of respiratory compromise, and 15:2 in children and newborns in arrest with a suspected cardiac etiology. If an advanced airway is in place, 8-10 breaths per minute should be administered with continuous chest compressions.
- G. Transport is essential when advanced cardiac life support is not available within ten minutes of receipt of the call
- H. Refer to length based drug treatment guide (e.g. BROSELOW[®] PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage.

EMR

- A. Per current American Heart Association Pediatric Basic Life Support guidelines, establish unresponsiveness, activate the emergency response system, get the AED/defibrillator, and check for a pulse.
- B. If the patient has a pulse and is not breathing or only gasping, give one breath every three minutes and recheck the pulse every 2 minutes. Assist ventilation with bag-valve-mask while administering 100% oxygen or provide mouth to mouth ventilation using barrier device.
- C. If the patient does not have a pulse, immediately provide quality CPR for two minutes, apply the AED, analyze the rhythm, and deliver a shock if indicated. If the patient remains unresponsive, resume quality CPR for two minutes and analyze the rhythm after each two minute cycle of CPR until the patient starts to Move or ALS providers assume care
- D. Immobilize the patient's cervical spine only if clinically indicated.

EMT

- A. Open and manage the airway and provide 100% oxygen by NRB mask
 - 1. Assist ventilations if rate is below or above normal limits and signs of hypoxia are present
 - 2. Apply pulse oximeter and obtain reading
- B. If patient show signs of decreased cardiac output (decreased LOC, poor capillary refill, low blood pressure,) and a heart rate less than 60 bpm that is unimproved with oxygenation, start quality CPR.

PEDIATRIC ARRHYTHMIAS (cont'd)

- C. Evaluate patient's general appearance and determine:
 - 1. Vital signs
 - 2. Level of consciousness
 - 3. Cardiac output
 - 4. Lung sounds
- D. Obtain relevant history of current condition.
- E. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.
- F. If cardiac monitor is available, and patient has an unusual and/or irregular heart rate or pulse, may assist the AEMT or Paramedic with the application of a cardiac monitor and the acquisition of a strip for interpretation by ED physician, during transport only.

AEMT

- A. Start IV normal saline (NS), TKO.
- B. Assess airway adequacy and assist ventilation with bag-valve-mask while administering 100% oxygen. May consider intubation.
- C. Apply monitor and determine arrhythmia.
- D. Treat arrhythmias as follows:
 - 1. Bradycardia. Treat only if:
 - a. Infant or child's heart rate < 60 bpm and the patient has poor perfusion.
 - b. Airway management and 100% oxygenation does not improve patient condition.
 - i. Begin quality CPR
 - ii. Transport immediately

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Assess airway adequacy and assist ventilation with bag-valve-mask while administering 100% oxygen. Perform appropriate airway management (airway adjuncts or intubation).
- C. Apply monitor and determine arrhythmia.
- D. Treat arrhythmias as follows:
 - 1. Bradycardia. Treat if:
 - a. Infant or child's heart rate < 60 bpm and patient has poor perfusion.
 - c. Airway management and 100% oxygenation does not improve patient condition.
 - i. Begin quality CPR

- ii. Administer epinephrine IV, IO, or ET every three to five minutes or until perfusion improves
 - (a) When IV or IO routes are available, administer 0.01 mg/kg (0.1 mL/kg) of 1:10,000
 - (b) When administering through ET tube, use 0.1 mg/kg (0.1 mL/kg) of epinephrine 1:1,000 ET that must be diluted with 3-5 ml of NS.
 - iii. If no response, administer atropine
 - (a) When IV or IO routes are available, 0.02 mg/kg. (minimum dose 0.1 mg, maximum single dose 0.5 mg)
 - (b) When administering through ET tube, administer 0.04 mg/kg
 - (c) Atropine may be repeated once if the patient is not improved in 3-5 minutes
 - (d) Refer to length based drug treatment guide (e.g. BROSELOW® PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage.
 - iv. Transport and contact medical control for possible cardiac pacing
2. Narrow Complex Tachycardia:
- a. If patient is asymptomatic, transport immediately.
 - b. Consider normal pulse for age of patient
 - d. Consider hypovolemia and follow Hypovolemic Shock Protocol.
 - d. Inquire about a history of Wolfe Parkinson White syndrome or other arrhythmias.
 - e. Consider vagal maneuver. Success of vagal maneuvers are variable and depend upon the presence of underlying conditions, the patient's level of cooperation, and age. Regardless of what type of vagal maneuver is attempted, obtain a cardiac monitor tracing before and during the attempt. The following vagal maneuvers may be attempted in pediatric patients:
 - Ice water applied to the face
 - Crushed ice in a plastic bag/glove applied to the face without obstructing ventilation
 - Have child blow through a straw
 - f. If patient is symptomatic (poor perfusion, shock, hypotension, respiratory difficulty, SOB, signs of CHF, altered LOC) and heart rate is ≥ 220 /minute in an infant or ≥ 180 /minute in a child:
 - i. Administer adenosine, 0.1 mg/kg (maximum 6mg) RAPID IV bolus over 1 to 3 seconds followed IMMEDIATELY with a 5-10 ml NS bolus IV.

- ii. If the first dose is ineffective, repeat adenosine in 1-2 minutes, 0.2 mg/kg (maximum 12 mg) RAPID IV bolus followed IMMEDIATELY with a 5-10 ml NS bolus IV.
- iii. Contact medical control
- iv. Consider sedation Valium®/Versed® 0.2 mg/kg IV
- v. Synchronous cardioversion at
 - (a) : 0.5-1 joules (monophasic or biphasic)
 - (b) : 2 joules/kg (monophasic or biphasic)
 - (c) If the second synchronized cardioversion is unsuccessful, consider contacting medical control for an antiarrhythmic (amiodarone or procainamide)

3. Wide Complex Tachycardia (With a pulse)

Assess patient's perfusion. Signs/symptoms of poor perfusion include

- Hypotension
- Acutely altered mental status
- Signs of shock

a. Good perfusion

i. If the rhythm is regular and the QRS complex is monomorphic, consider the administration of adenosine 0.1 mg/kg (maximum 6 mg) RAPID IV bolus over 1 to 3 seconds followed IMMEDIATELY with a 5-10 ml NS bolus IV. If the first dose is ineffective, repeat adenosine in 1-2 minutes, 0.2 mg/kg (maximum 12 mg) RAPID IV bolus followed IMMEDIATELY with a 5-10 ml NS bolus IV.

Antiarrhythmics that are indicated for a wide complex tachycardia are amiodarone or procainamide. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization. Do not routinely administer amiodarone and procainamide together. If the patient is stable or has a history of congenital heart disease, please discuss with the medical control physician at the receiving facility prior to administration of an antiarrhythmic. Otherwise, follow these guidelines for administration:

ii. If the rhythm is not regular and/or the QRS complex is not monomorphic or the EMT is unsure about the rhythm, contact medical direction for potential orders for an antiarrhythmic.

- Amiodarone 5 mg/kg IV over 20-60 minutes
- Procainamide IV infusion of 15 mg/kg over 30-60 minutes
 - Max dose is 15 mg/kg
 - Discontinue infusion if hypotension develops, development of a prolonged QRS complex greater than 50%, the arrhythmia resolves, or the maximum dose of 15 mg/kg has been administered.

****NOTE: If at anytime the patient becomes unstable with poor perfusion, go directly to synchronous cardioversion.**

****NOTE: Do not administer more than one antiarrhythmic to a patient. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization.**

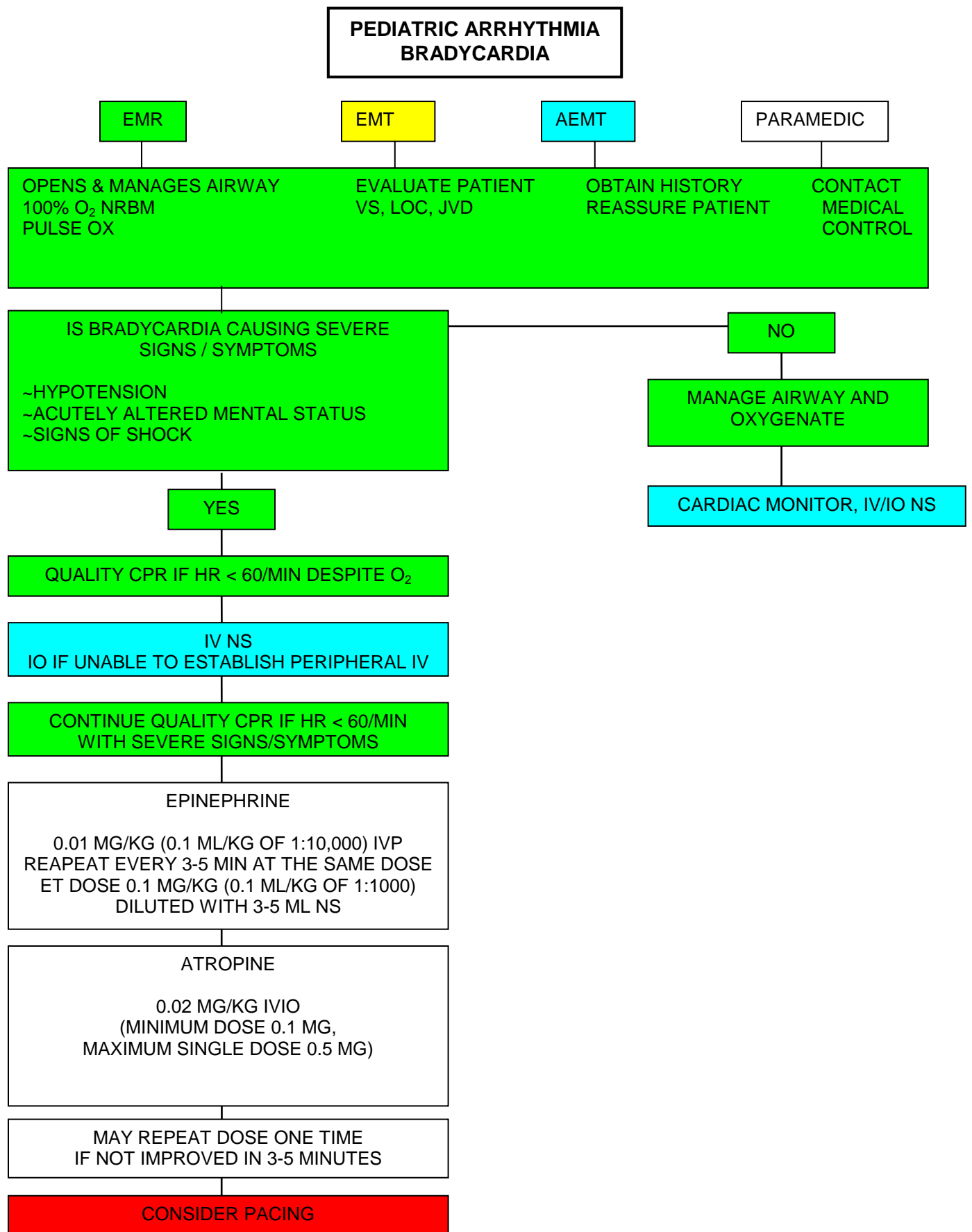
- ii. Consider sedation Valium®/Versed® 0.2 mg/kg IV

- iii. Synchronous cardioversion at:
 - (a) : 0.5-1 joules/kg (monophasic or biphasic)
 - (b) : 2 joules/kg (monophasic or biphasic)
- b. Poor perfusion (with a pulse):
 - i. Prepare for immediate cardioversion
 - ii. Consider sedation Valium®/Versed® 0.2 mg/kg IV
 - iii. Synchronous cardioversion at:
 - (a) : 0.5 joules/kg (monophasic or biphasic)
 - (b) : 2 joules/kg (monophasic or biphasic)
 - iv. Administer an antiarrhythmic

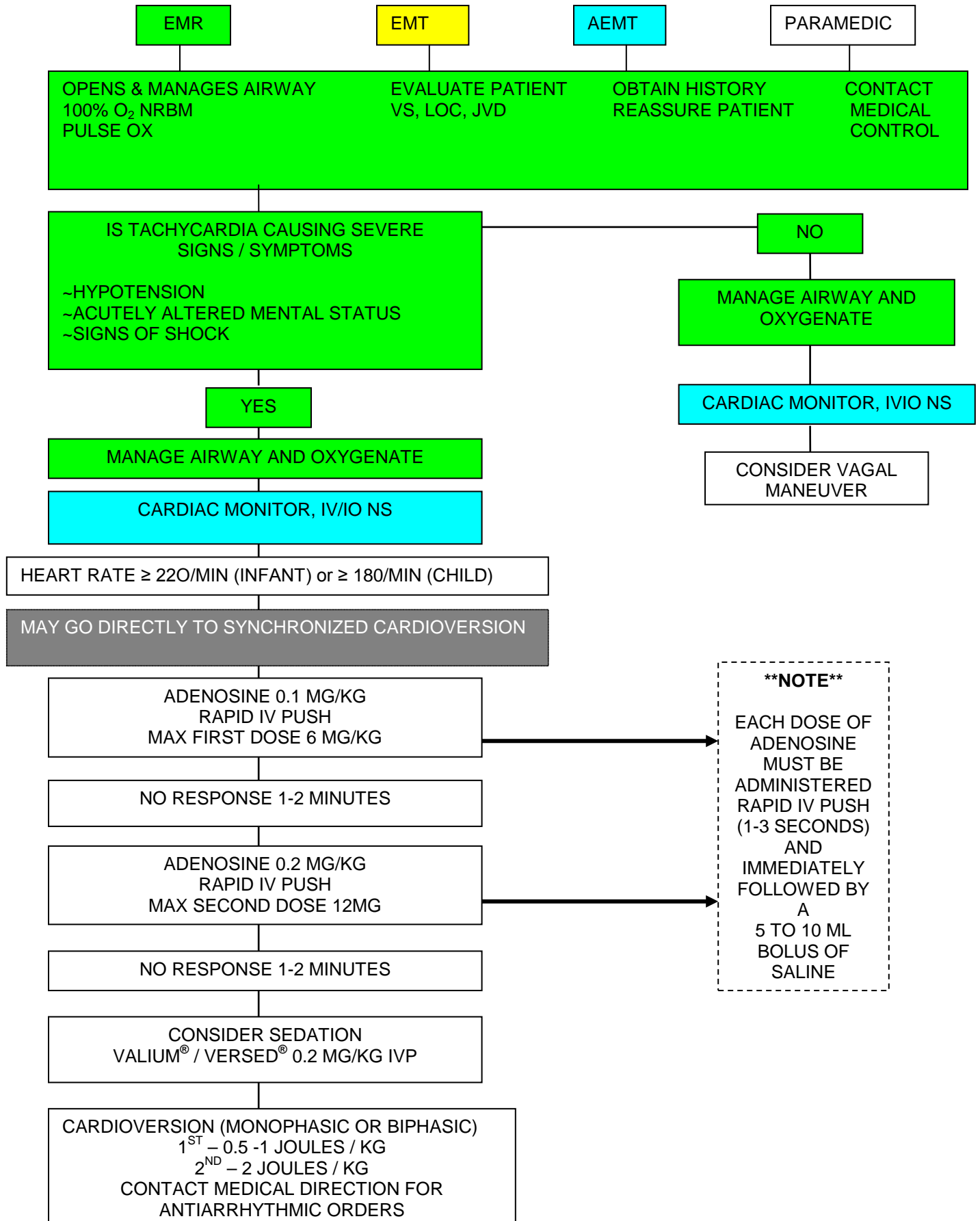
Antiarrhythmics that are indicated for a wide complex tachycardia are amiodarone or procainamide. The choice of the antiarrhythmic to be administered should be predetermined by the medical director for your organization. Do not routinely administer amiodarone and procainamide together. If the patient is stable or has a history of congenital heart disease, please discuss with the medical control physician at the receiving facility prior to administration of an antiarrhythmic. Otherwise, follow these guidelines for administration:

- Amiodarone 5 mg/kg IV over 20-60 minutes
- Procainamide IV infusion of 15 mg/kg over 30-60 minutes
 - Maximum dose is 15 mg/kg
 - Discontinue infusion if hypotension develops, development of a prolonged QRS complex greater than 50%, if the arrhythmia resolves, or the maximum dose of 15 mg/kg has been administered.

****NOTE: Do not administer more than one antiarrhythmic to a patient. The choice of the antiarrhythmic should be predetermined by the Medical Director for your organization.**

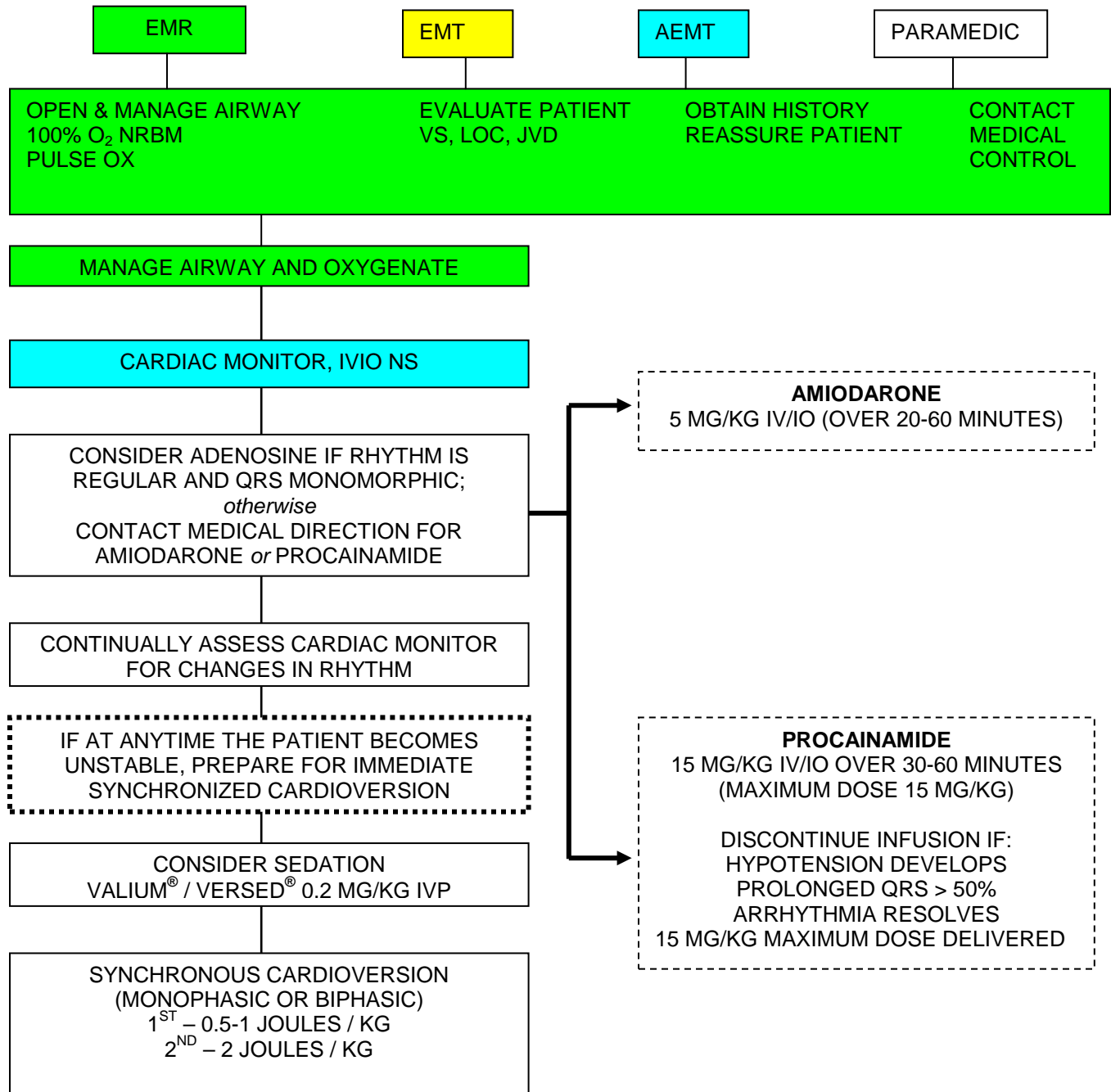


PEDIATRIC ARRHYTHMIA NARROW COMPLEX TACHYCARDIA



**PEDIATRIC ARRHYTHMIAS
STABLE WIDE COMPLEX TACHYCARDIA**

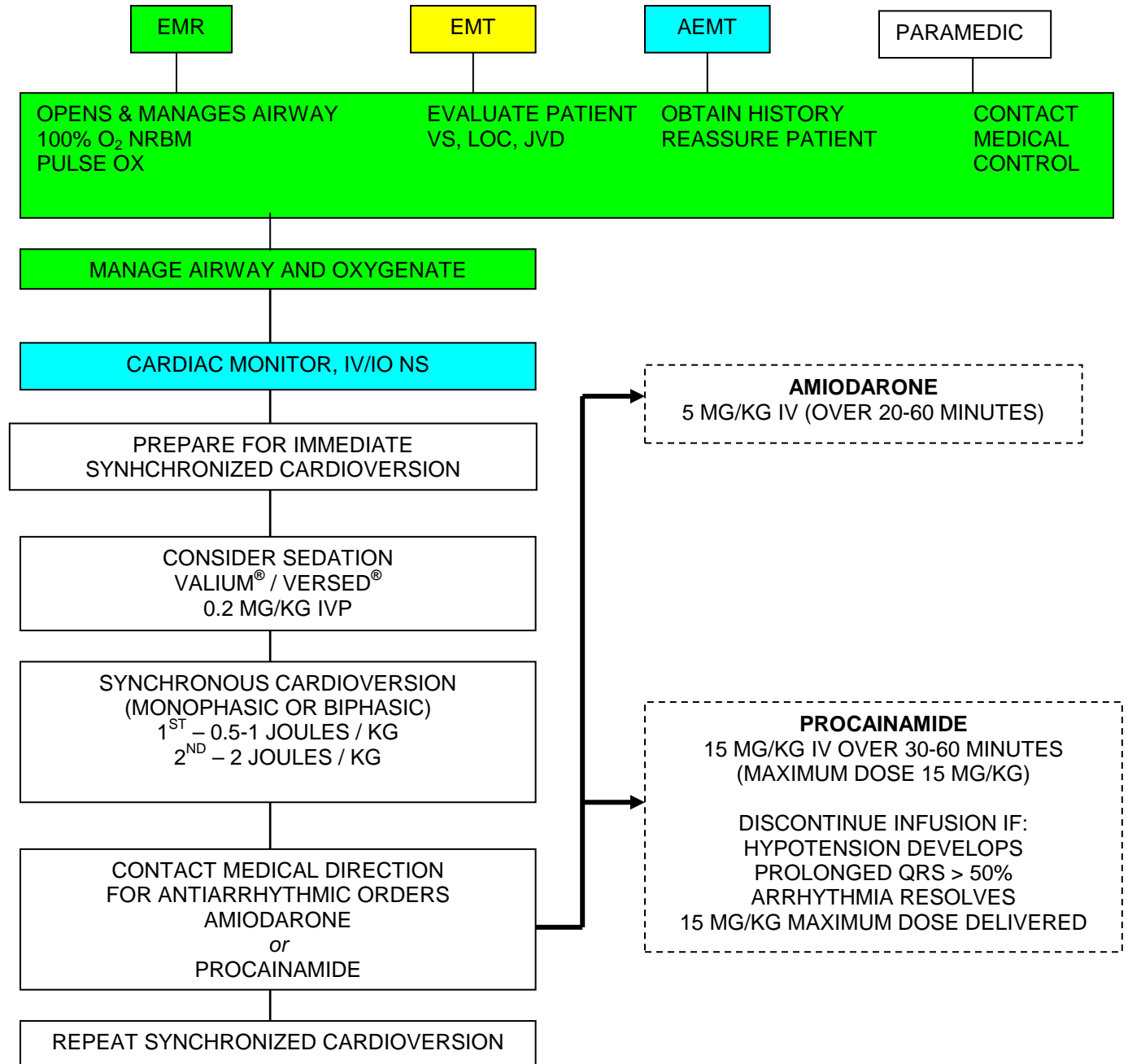
PATIENTS WITH A GOOD PULSE, FOOD PERFUSION, WHO ARE ALERT AND ORIENTED ARE CONSIDERED STABLE



DO NOT ADMINISTER MORE THAN ONE ANTIARRHYTHMIC TO A PATIENT

**PEDIATRIC ARRHYTHMIAS
UNSTABLE WIDE COMPLEX TACHYCARDIAS**

PATIENTS WITH POOR PERFUSION / SHOCK / HYPOTENSION, RESPIRATORY DIFFICULTY, PULMONARY CONGESTION, AND/OR ALTERED LOC ARE CONSIDERED UNSTABLE



DO NOT ADMINISTER MORE THAN ONE ANTIARRHYTHMIC TO A PATIENT

PEDIATRIC CARDIAC ARREST

GENERAL CONSIDERATIONS

- A. Cardiac arrest in children is primarily due to lack of an adequate airway, resulting in hypoxia
- B. All EMS professionals must concentrate on opening and maintaining the airway and providing 100% oxygen
- C. Quality CPR consists of pushing hard with compression of the chest to $\geq 1/3$ of the anteroposterior diameter of the chest, compressions of at least 100 per minute, and allowing complete chest recoil.
- D. For two-person CPR, the rate of chest compressions without the presence of an advanced airway is 3:1 in newborns with a suspected primary etiology of respiratory compromise, and 15:2 in children and newborns in arrest with a suspected cardiac etiology. If an advanced airway is in place, 8-10 breaths per minute should be administered with continuous chest compressions.
- E. During BVM ventilation or endotracheal intubation, routine cricoid pressure to prevent aspiration is no longer recommended.
- F. Transport IMMEDIATELY when excessive hemorrhage or hypothermia is present. ALS measures should be carried out during transport
- G. If peripheral IVs cannot be established, venous access should be obtained by the intraosseous route
- H. If IV or IO access cannot be established, administer appropriate medications through the ET tube
- I. **NOTE:** AEDs should not be used on patients under one year of age. Pediatric AED pads are preferred for patients between the ages of 1 and 8 years of age. Adult AED pads should be used for patients greater than 8 years of age, but they may be used in patients between the ages of 1 and 8 years of age if pediatric AED pads are unavailable.
- J. If Sudden Infant Death Syndrome (SIDS) is suspected:
 - 1. Initiate basic and advanced life support, unless apparent rigor mortis or signs of lividity are present
 - 2. Communicate with and reassure the parents
 - 3. Encourage family to have friends or neighbors accompany them to the hospital
 - 4. If infant is not resuscitated, refer parents to social services at the nearest appropriate emergency department to initiate counseling
- K. Refer to BROSELOW[®] PEDIATRIC EMERGENCY TAPE when unsure about patient weight, age and/or drug dosage

EMT

- A. Open and maintain airway in sniffing position
- B. Ventilate with 100% oxygen via BVM with oxygen reservoir
- C. Initiate quality CPR in accordance with American Heart Association guidelines
- D. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY unless ALS unit is en route and has an ETA of less than 5 minutes

CARDIAC ARREST (cont'd)

- E. If an Automated External Defibrillator (AED) is available:
1. Assess patient for respirations and cardiac arrest
 2. Apply AED and activate the device.
 3. Start documentation that must include:
 - EMS unit delivering care and ID of EMS professionals
 - Initial call information (i.e. accidental ingestion, drowning, etc.)
 - Initial patient assessment, findings, and impression
 - Care given to this point
 - Ongoing outcomes of care delivered to patient
 - a. "No Shock Advised"
 - i. Continue quality CPR for two minutes
 - ii. Continue ventilation with 100% oxygen via BVM with oxygen reservoir
 - iii. Contact medical control and transport IMMEDIATELY
 - b. "Shock Advised"
 - i. Deliver a single shock
 - ii. Resume quality CPR for two minutes
 - iii. Contact medical control, advise of cardiac arrest, and transport IMMEDIATELY
 - iv. After each two minute cycle of quality CPR, activate AED to assess rhythm and deliver a single shock if indicated
 - v. Resume quality CPR

"TURN AED OFF DURING MOVEMENT OF PATIENT"

AEMT

- A. Assume charge and confer with EMS professionals to patient condition and circumstances
- B. Apply cardiac monitor
- C. If monitor shows ventricular fibrillation or pulseless ventricular tachycardia:
 1. Defibrillate at 2 joules/kg
 2. If no response, Five cycles of quality CPR
 3. Defibrillate at 4 joules/kg
 4. If no response, resume quality CPR and TRANSPORT
- D. Start IV or IO of saline and give 20 ml/kg NS IV bolus. IV access should be accomplished en route to hospital.

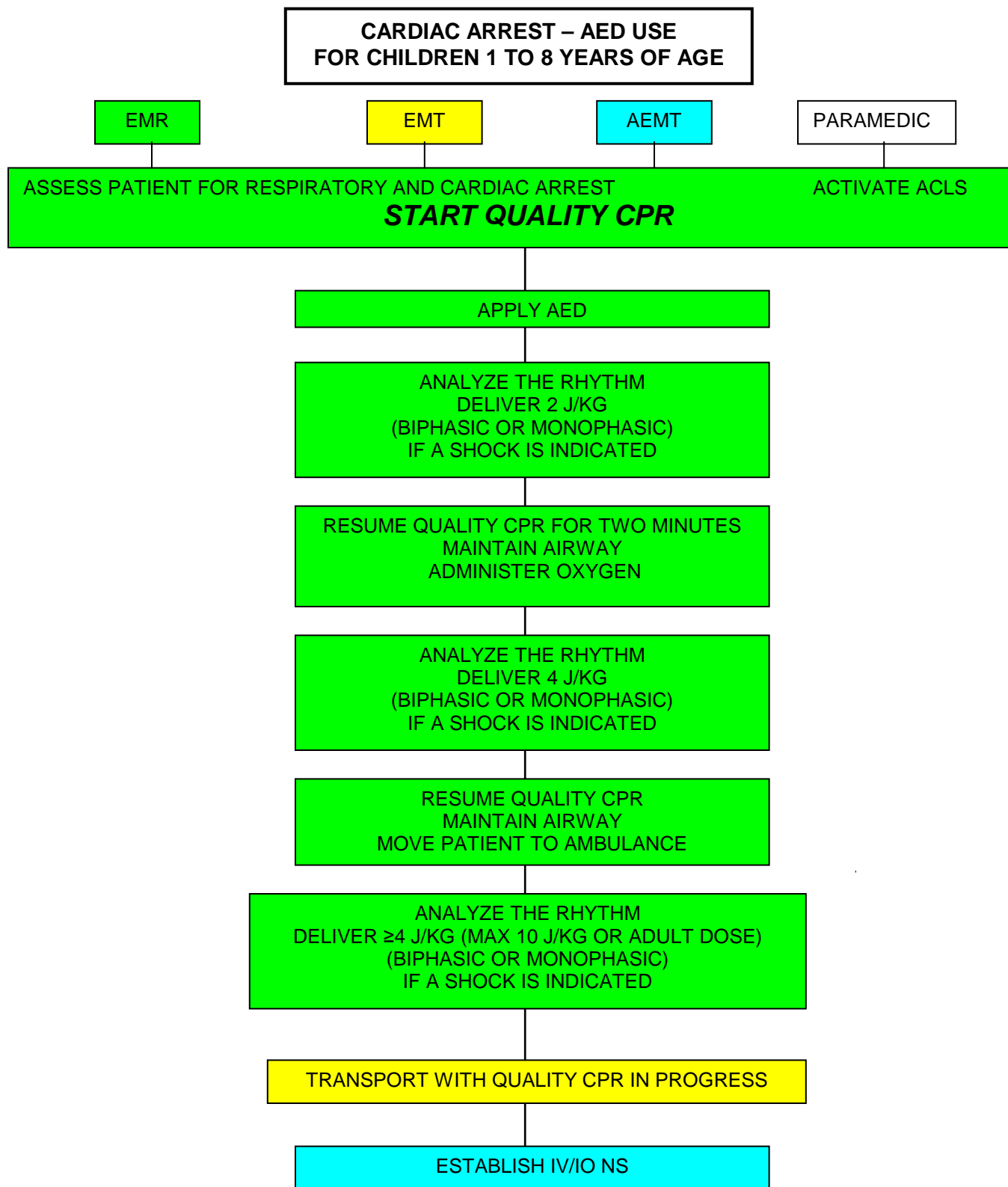
DO NOT DELAY TRANSPORT

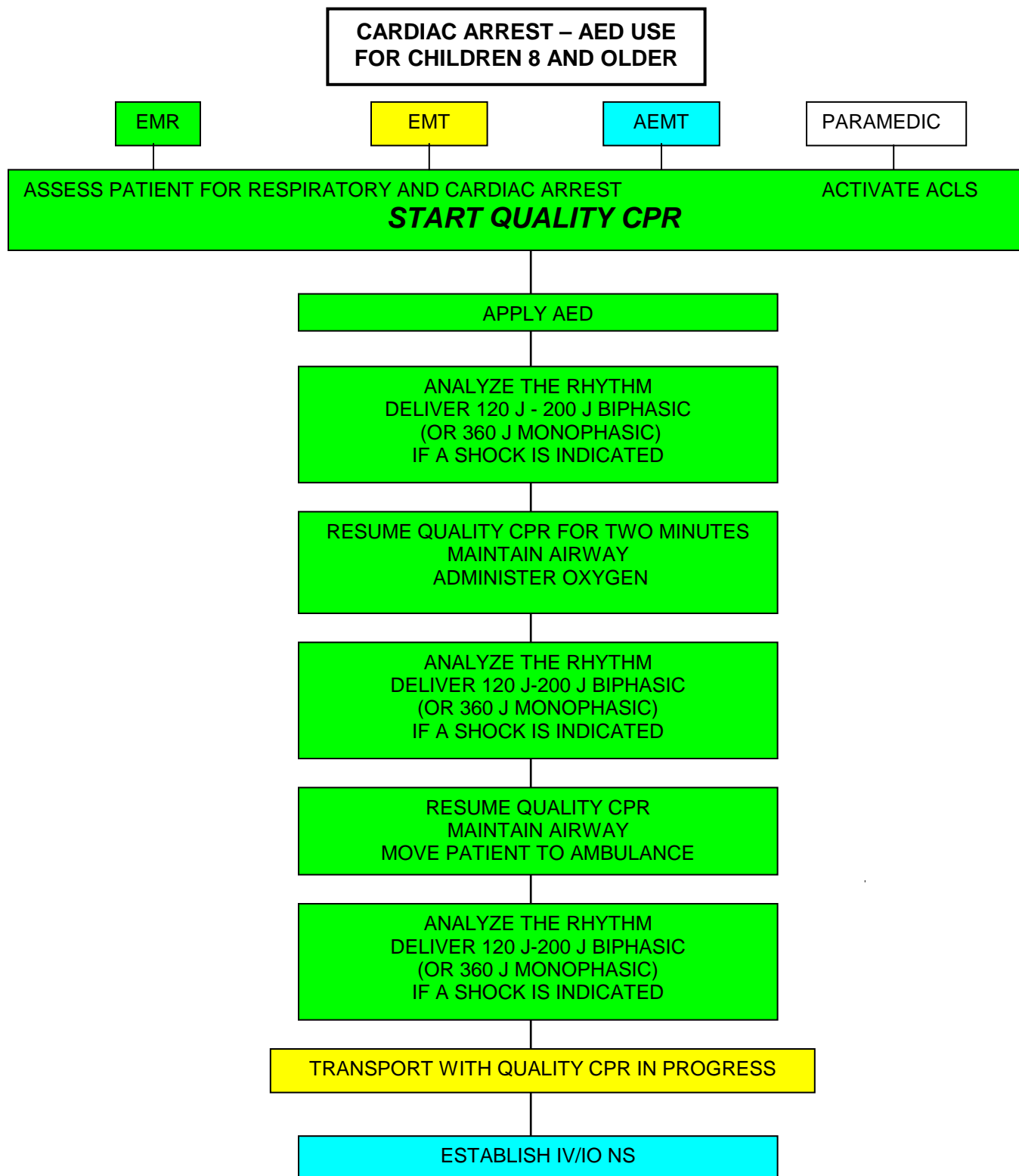
EMT-P

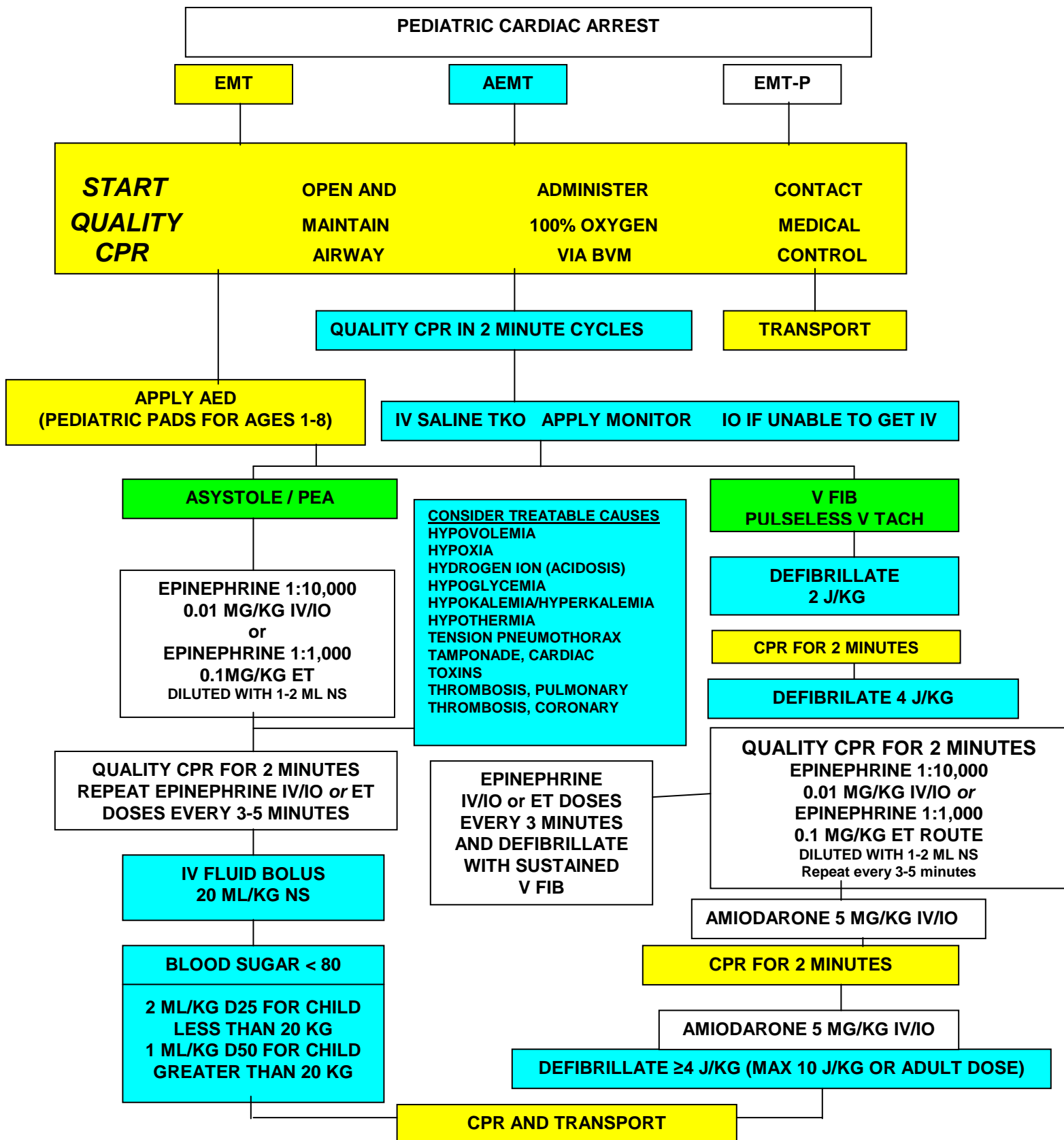
- A. Assume charge and confer with EMS professionals as to patient condition and circumstances
- B. If an AEMT is in a cycle of defibrillation, allow to complete cycle
- C. Assess airway and intubate if needed
- D. Establish IV or IO, whichever is quickest
- E. Apply monitor. If one of the following conditions exists, treat as follows:
 1. Ventricular fibrillation or pulseless ventricular tachycardia
 - a. Defibrillate at 2 joules/kg
 - b. If no response, quality CPR for two minutes
 - c. Defibrillate at 4 joules/kg
 - d. If no response, continue quality CPR for two minutes
 - e. Administer epinephrine IV, IO or ET every 3-5 minutes
 - IV / IO doses – 0.01 mg/kg of 1:10,000 (0.1 ml/kg)
 - ET tube doses – 0.1 mg/kg of 1:1,000 (0.1 ml/kg) diluted with 1-2 ml of saline
 - f. If no response, defibrillate at ≥ 4 joules/kg to a maximum of 10 joules/kg or the adult dose
 - g. If no response, continue quality CPR for two minutes
 - h. Administer one antiarrhythmic
 - Amiodarone 5 mg/kg IV/IO, may repeat dose up to 2 times for refractory ventricular fibrillation or pulseless ventricular tachycardia
 - i. If no response, continue quality CPR and TRANSPORT
 - j. Consider the treatment of reversible causes
 - Hypovolemia: administer 20 ml/kg NS IV fluid boluses
 - Hypoxia
 - Hydrogen ion (acidosis)
 - Hypoglycemia: administer 2 ml/kg of D25 IV/IO for children under 20 kg or 1 ml/kg of D50 IV/IO for children over 20 kg if the blood glucose is less than 80
 - Hypokalemia/hyperkalemia
 - Hypothermia
 - Tension pneumothorax
 - Tamponade, cardiac
 - Toxins
 - Thrombosis, pulmonary
 - Thrombosis, coronary
 2. Asystole / Pulseless Electrical Activity (PEA)
 - a. Begin quality CPR immediately
 - b. Obtain IV/IO access

CARDIAC ARREST (cont'd)

- c. Continue quality CPR for two minutes and administer epinephrine IV, IO or ET every 3-5 minutes
 - i. IV/IO doses – 0.01 mg/kg of 1:10,000 (0.1 ml/kg)
 - ii. ET tube doses – 0.1 mg/kg of 1:1,000 (0.1 ml/kg) diluted with 1-2 ml of saline
- c. Confirm asystole in two different leads
- d. If rhythm is unclear and possibly ventricular fibrillation, follow ventricular fibrillation/pulseless ventricular tachycardia guideline
- e. Consider treatable causes:
 - Hypovolemia: administer 20 ml/kg NS IV boluses
 - Hypoxia
 - Hydrogen ion (acidosis)
 - Hypoglycemia: administer 2 ml/kg of D25 IV/IO for children under 20 kg or 1 ml/kg of D50 IV/IO for children over 20 kg if the blood glucose is less than 80
 - Hypokalemia/hyperkalemia
 - Hypothermia
 - Tension Pneumothorax
 - Tamponade, cardiac
 - Toxins
 - Thrombosis, pulmonary
 - Thrombosis, coronary
- f. If no response, continue quality CPR and TRANSPORT







AFTER AN ADVANCED AIRWAY IS PLACED
 RESCUERS NO LONGER DELIVER "CYCLES"
 OF CPR. GIVE CONTINUOUS CHEST
 COMPRESSIONS WITHOUT PAUSES FOR
 BREATHS. GIVE 8 TO 10 BREATHS/MINUTE.
 CHECK RHYTHM EVERY TWO MINUTES.

CHILD ABUSE / NEGLECT

GENERAL CONSIDERATIONS

- A. Child abuse or neglect are widespread enough that nearly all EMS professionals will see these problems at some time. The first step in recognizing abuse or neglect is to accept that they exist and to learn the signs and symptoms.
- B. Initiate treatment as necessary for situation using established protocols.
- C. If possible remove child from scene, transporting to hospital even if there is no medical reason for transport.
- D. If parents refuse permission to transport, notify law enforcement for appropriate disposition. If patient is in immediate danger, let law enforcement handle scene.
- E. Advise parents to go to hospital. **AVOID ACCUSATIONS** as this may delay transport. Adult with child may not be the abuser.
- F. Carefully document findings and report to physicians at the hospital. An EMS professional must also report or assure that actual or suspected child abuse/neglect is reported to the local law enforcement agency or the Children's Services Board.

DOCUMENT THIS NOTIFICATION

DO NOT JEOPARDIZE YOUR SAFETY

SIGNS AND SYMPTOMS

The incidence of child abuse and neglect has no socioeconomic, racial, cultural, or religious boundaries. Child abuse and neglect occurs in all segments of our population. Prehospital personnel are in a unique position in their ability to make the initial identification of these victims. EMS professionals should always believe what the child says, document the exact statements on the prehospital care report, and communicate them clearly to the healthcare providers upon arriving to the receiving facility.

The signs and symptoms of child abuse and neglect may include the following:

Physical Abuse

- A. Bruises
 - i. Infants rarely bruise accidentally
 - ii. Active children normally sustain bruises on the front of the body (knees, shins, elbows, foreheads)
 - iii. Bruises in recognizable shape of an object are suspicious
 - iv. Multiple bruises in different stages of healing are suspicious
- B. Skin injuries-cuts, scrapes, bruises, burns, bites, redness, swelling

C. Burns

- i. Scald burns are common
- ii. Immersion burns characterized by clear lines of demarcation (accidental burns are more likely to have a splash pattern due to the child's withdrawal from the heat source)
- iii. Inflicted contact burn (recognizable by a shape of the object used to produce it)
- iv. Burns in less exposed or unexposed areas, deeper or larger burns

D. Bites

- i. Adult human bite marks
- ii. Multiple, random, or well-defined bite marks
- v. Multiple defined tooth marks (differ from animal bites)

E. Fractures

- i. Suspected fractures discovered "accidentally" by the guardian
- ii. Skeletal injury inconsistent with history
- iii. Multiple fractures in different stages of healing
- iv. Suspected fractures accompanied by other injuries

F. Reported or alleged falls

- i. Falls from a standing position or low object (less than child's height) rarely result in serious injuries
- ii. Falls from greater than child's height are usually required to sustain serious injury

G. Injuries to face and head

- i. Unintentional injuries usually involve the front of body
- ii. Injuries to the side of the face, the cheeks, or the ears are suspicious for abuse
- iii. Direct blows to the mouth usually results in lip injuries, possibly with fractures to the jaw or teeth
- iv. Considerable force is required to cause severe head trauma

H. Hair loss

- i. Can be sign of child abuse from dragging by the hair
- ii. May simply be the result of excessive force during hair brushing or from certain types of hair braiding
- iii. May be self-inflicted to relieve stress
- iv. Blood may be seen at the surface or beneath the scalp

I. Shaken baby syndrome

- i. Most common in children less than 2 years old
- ii. There may be no external evidence of trauma
- iii. Possible signs include decreased consciousness, seizures, vomiting,
- iv. other signs of head injury, unusual cry
- v. Altered mental status may be the only sign
- vi. Recognition of the possibility of this syndrome should trigger suspicion of abuse

Sexual Abuse

- A. Signs of recent abuse may include pain, bleeding, or discharge from urethra, vagina, or rectum
- B. Signs of chronic or concealed abuse occurring over weeks or months may include nonspecific abdominal pain, vaginal inflammation, or painful urination
- C. The physical examination is normal in most cases

Emotional Abuse

- A. A component of all forms of child abuse
- B. Most cases are mild, but early recognition is important
- C. Signs
 - i. Encouragement of destructive or antisocial behaviors
 - ii. Verbal assault of the child or verbal attacks on the child's development of self and social competence
 - iii. Humiliation of the child
 - iv. Ignoring the child

CHILD ABUSE/NEGLECT (cont'd)

- v. Isolation of the child
- vi. Rejection of the child's needs and requests

Neglect

- A. Most common form of child abuse, yet it is the most under-recognized and under-reported form of child abuse
- B. Signs
 - i. Inadequate care, including inadequate provision of food, clothing, or shelter
 - ii. Inadequate medical attention, including delay in seeking care for known illness
 - iii. Poor personal hygiene
 - iv. Unsanitary conditions
 - v. Inadequate sleeping arrangements
 - vi. Lack of supervision
 - vii. Evidence of substance abuse
 - viii. Structural, fire, environmental hazards

FEVER

GENERAL CONSIDERATIONS

- A. If febrile, remove excess clothing, but take great care to avoid shivering. Consider environment and temperature of vehicle.
- B. DO NOT sponge child unless treating for heat exposure. (This includes use of moist towels to “cool” the child)
- C. Transport all infants < 8 weeks of age with a reported temperature > 100.4° F (38° C) or < 96° F (35.5° C)

PEDIATRIC FLUID AND DRUG ADMINISTRATION

AEMT

- A. Peripheral venous access, in the form of an IV or an IO, will be the first route for fluid and drug administration for any life or limb threatening emergency situation.
- B. Unless there are compelling factors, no more than two attempts at peripheral access should be made in the pediatric patient.
- C. In a **life-threatening situation** where venous access appears futile, immediately establish intraosseous access.
- D. Intraosseous Infusion
 - 1. The following are guidelines for the UNSTABLE child requiring alternative vascular access AFTER insuring that the airway and ventilations are established:
 - a. **Indications:** Intraosseous access should be established if you cannot rapidly achieve venous access in a patient in decompensated shock or cardiopulmonary arrest.
 - c. **Contraindications:** Recently fractured bone, known bone disorder, previous unsuccessful attempt of IO placement at site.
 - d. **Relative contraindications:** cellulitis or infected burn at site.
 - c. **Equipment:** Bone marrow aspiration needle, iodine and alcohol preps, 5 ml syringe.
- E. Fluid of choice is normal saline or Lactated Ringers, utilizing a macrodrip administration set. If child is less than 2 years old a microdrip set should be used if available.

PARAMEDIC

- A. When peripheral or IO access is not available for administering medications:
 - 1. If an ET tube is in place, the ET tube should be the route of administration for
 - Lidocaine
 - Atropine
 - Narcan[®]
 - Epinephrine
 - 2. Intramuscular (IM) route may be used for Versed[®] or morphine.
 - 3. Rectal route may be used for Valium[®] (diazepam).

MULTIPLE TRAUMA

GENERAL CONSIDERATIONS

- A. The basics of trauma care apply to pediatric patients and should primarily follow the general adult trauma protocol.
- B. Drowning is classified as trauma in Ohio. Victims of drowning or near drowning that could require admission to a hospital should be transferred to the appropriate trauma center.
- C. Areas where special focus should occur:
 - 1. May involve both respiratory failure and shock.
 - 2. Assessment and support of cardiopulmonary function is fundamental.
- D. Common errors of pediatric trauma resuscitation are:
 - 1. Failure to open and maintain the airway.
 - 2. Failure to provide appropriate fluid resuscitation to children with head injury.
 - 3. Failure to recognize and treat internal hemorrhage.
- E. An IO infusion is indicated in the trauma setting when shock needs to be treated and rapid venous access is unobtainable.
- F. The proper size equipment is very important to resuscitation care. Refer to length based drug treatment guide (e.g. BROSELOW® PEDIATRIC EMERGENCY TAPE OR SIMILAR GUIDE) when unsure about patient weight, age and/or drug dosage and when choosing equipment size.

****NOTE: FOLLOW APPLICABLE REGIONAL
PEDIATRIC TRAUMA TRIAGE PROTOCOL**

NEWBORN RESUSCITATION

GENERAL CONSIDERATIONS

A. The five initial questions to assess in every newborn are as follows:

- Is the baby full term and how many babies are expected?
- Is there THICK meconium present?
- Is the baby breathing or crying?
- Does the baby have good muscle tone?
- Is the baby's color pink?

These questions will help determine the amount of intervention needed. Most term healthy infants do not require ALS intervention. This initial assessment should be completed within 30 seconds.

- B. Body heat must always be maintained. As soon as the baby is born, wipe the baby dry and place in a warm environment. Cover the infant's head, place against mother's skin, and cover both. Use indirect heated, humidified oxygen, if available. Avoid direct application of cold oxygen to infant's face as this may cause respiratory depression. Avoid inducing hyperthermia (elevated body temperature) in babies who may have had a hypoxic-ischemic event.
- C. Position infant in sniffing position (with a 1 inch towel under the shoulders). This will provide an optimally opened airway and adequate drainage of secretions.
- D. Suction secretions with a bulb syringe from the mouth and then nose for newborns who have obvious obstruction to spontaneous breathing or who require positive pressure ventilation.
- E. Open and manage airway
- F. Meconium aspiration is a major cause of death and morbidity among infants. If thick meconium is present and not removed, 60% of these infants will aspirate the meconium. If meconium staining of the amniotic fluid is present, *routine intrapartum oropharyngeal and nasopharyngeal suctioning for infants is not advised*. Endotracheal suctioning for the presence of meconium or meconium staining should be reserved for infants who are not vigorous and should be performed immediately after birth. If thick meconium is present, it may be necessary to visualize the trachea and suction the lower airway. Lower airway suction is achieved by intubating the infant and suctioning directly through the ET tube. Each time this suctioning is done, the infant will have to be re-intubated with a new tube if available. If a new ETT of the appropriate size is not available, the ETT should be flushed with normal saline or sterile water and reused. Watery or thin meconium does not require suctioning of the lower airway. Prolonged and/or unsuccessful attempts at intubation may result in bradycardia. Ventilation with BVM should be considered, particularly if there is persistent bradycardia.
- G. If drying and suctioning has not provided enough stimulation, try rubbing the infant's back or flicking their feet. If the infant still has poor respiratory effort, poor tone or central cyanosis, consider them to be distressed. Most distressed infants will respond quickly to 100% oxygen via BVM or T-piece. Continuous positive airway pressure (CPAP) should be considered for persistent labored breathing, cyanosis, or low pulse oximetry.
- H. The APGAR score should be used in the initial assessment of normal newborns and is a measure of the effectiveness of interventions for the distressed newborn. Scoring must not delay intervention in the distressed newborn. The score is completed at 1 and 5 minutes after delivery. If the 5-minute score is less than 7, repeat every 5 minutes for the next 20 minutes.

APGAR SCORE

Sign	0	1	2
Color	Blue / Pale	Pink Body, Blue Extremities	Completely Pink
Heart Rate	Absent	Below 100	Above 100
Irritability (response to stimulation)	No Response	Grimace	Cries
Muscle Tone	Limp	Flexion of Extremities	Active Motion
Respiratory Effort	Absent	Slow and Regular	Strong Cry

- I. Refer to length-based drug treatment guide (e.g. Broselow[®] Pediatric emergency tape or similar device) when unsure about patient weight or drug dosage.

EMR

- A. The EMR may assist in the management of emergency childbirth.
- B. After delivery of the infant, assess airway and breathing while drying and positioning head down. If thick meconium is present or the infant is not vigorous, suction the oropharynx and nasopharynx with a bulb syringe prior to ventilation and stimulation. Keep infant warm. Wrap in dry blankets.
- C. If infant not breathing, assist ventilations via mouth to mouth using barrier device or a bag valve mask.
- D. If no pulse or pulse < 60 bpm, begin quality CPR.
- E. Keep infant warm. Wrap in dry blankets.

EMT

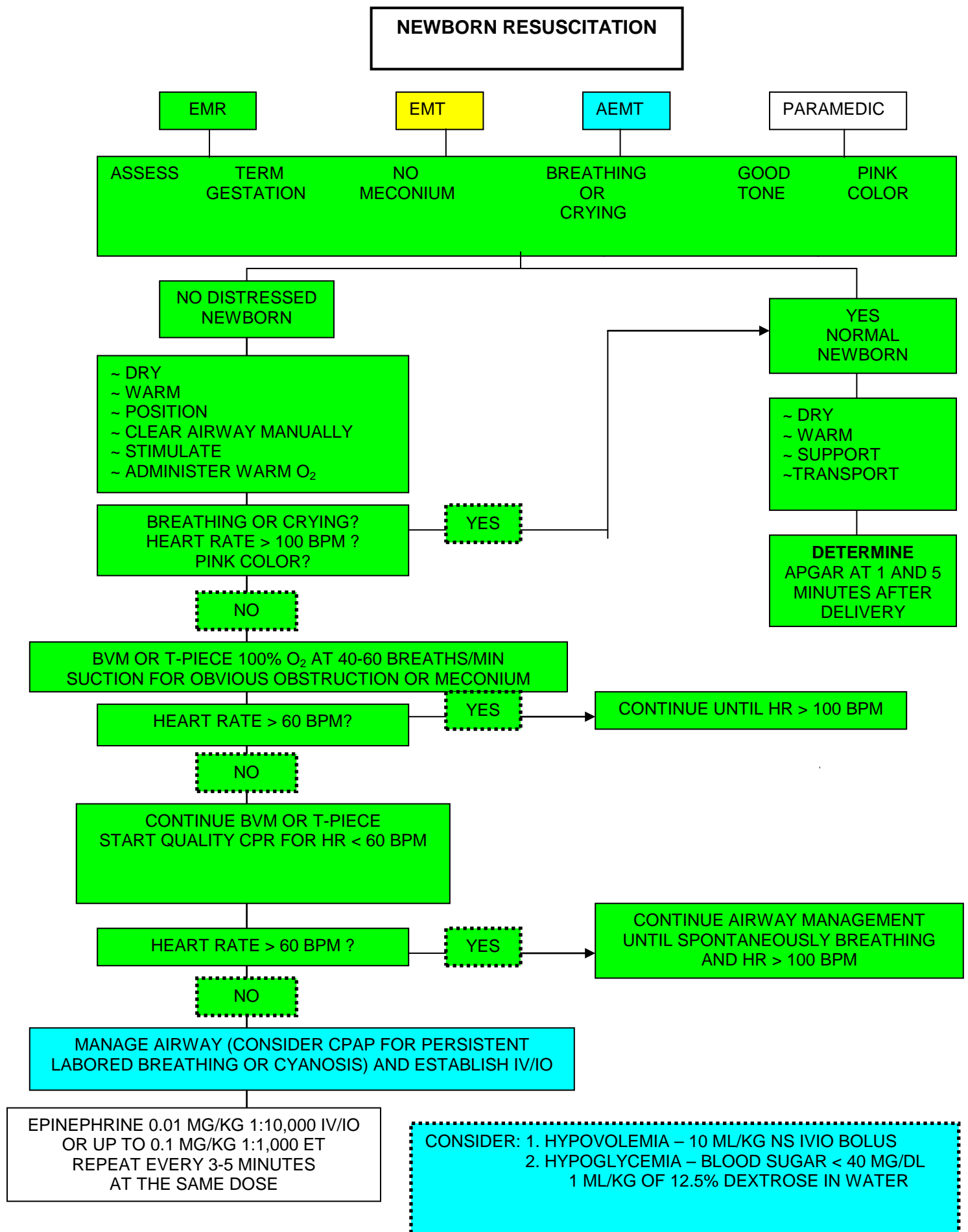
- A. If heart rate is < 100 bpm, BVM or T-piece ventilation is necessary to increase heart rate.
- B. If heart rate is < 60 bpm despite adequate ventilation, quality CPR should be initiated.
- C. BVM or T-piece ventilation is also indicated for apnea and persistent central cyanosis.
- D. BVM or T-piece ventilation rate should be between 40 and 60 breaths per minute. Cardiac compression rate should be at a rate of 120 times per minute with a compression to breath ratio of 3:1.
- E. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.

AEMT

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Intubate patient if thick meconium is present in lower airway; suction through ET tube using a meconium aspirator and re-intubate with new tube.
- C. Apply monitor and check rhythm.
- D. Establish IV or IO.
- E. If infant shows signs of hypovolemia, administer normal saline 10 ml/kg IV/IO over 5 minutes
- F. Narcan[®] administration should not be administered during the initial resuscitation and should be avoided in babies whose mothers are suspected of having had long-term exposure to opiates. Heart rate and oxygenation should be resorted by supporting ventilation.
- G. Check blood sugar level and administer 1 ml/kg of 12.5% dextrose the blood sugar is < 40.
- H. Transport to hospital.

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Intubate patient if thick meconium is present in lower airway; suction through ET tube using a meconium aspirator and re-intubate with new tube.
- C. Apply monitor and check rhythm.
- D. Establish IV or IO.
- E. If asystole or spontaneous heart rate is < 60 bpm despite adequate ventilation:
 - 1. Administer epinephrine 0.01-0.03 mg/kg (0.1-0.3 ml/kg) of 1:10,000 via IV/IO or up to 0.1 mg/kg (0.1 mg/kg) of 1:1,000 ET.
 - 2. If no response, repeat epinephrine administration every 3-5 minutes.
- F. If infant shows signs of hypovolemia, administer normal saline 10 ml/kg IV/IO over 5 minutes
- G. Narcan[®] administration should not be administered during the initial resuscitation and should be avoided in babies whose mothers are suspected of having had long-term exposure to opiates. Heart rate and oxygenation should be resorted by supporting ventilation.
- H. Check blood sugar level and administer 1 ml/kg of 12.5% dextrose if level is < 40.
- I. Transport to hospital.



PEDIATRIC RESPIRATORY DISTRESS

GENERAL CONSIDERATIONS

- A. In children, open airway by using the sniffing position.
- B. In suspected cases of upper airway obstructions, DO NOT attempt to visualize the airway; unless a foreign body is suspected. Keep patient calm and transport upright.
- C. If BVM ventilation is necessary, cricoid pressure can be applied to minimize gastric distention until airway is secured.
- D. Refer to length based drug treatment guide (e.g. BROSELOW® PEDIATRIC EMERGENCY TAPE) when unsure about patient weight, age and/or drug dosage.
- E. Evaluate patient's general appearance, relevant history of condition and determine:

Allergies

Medication

Past Medical History – especially RESPIRATORY

Last Meal

Events leading to present illness

UPPER AIRWAY OBSTRUCTION

Stridor, gagging or choking in the breathing patient with respiratory distress may indicate upper airway obstruction.

EMR

- A. Quickly obtain history and non-invasive respiratory assessment.
 - 1. Total Airway Obstruction/History of foreign body airway.
 - a. Manual clearing only if foreign body is visible - NO BLIND FINGER SWEEP
 - b. Backblows and chest thrust in children less than 1 year of age.
 - c. Abdominal and/or chest thrusts in children over 1 year of age.
 - d. If airway cannot be cleared in 60 seconds:
 - i) Activate the emergency response system for immediate transport immediately to the nearest hospital.
 - ii) Do not take history.
 - iii) Do not make further physical assessment.
 - 2. Partial Airway Obstruction
 - a. DO NOT AGITATE CHILD, DO NOT EXAMINE THROAT.
 - b. Administer oxygen by NRB if tolerated or by “blow-by”.

PEDIATRIC AIRWAY OBSTRUCTION (cont'd)

- B. Allow the child to assume a position of comfort. The child may assume the tripod position. Encourage parent to hold the child in a secure position. Keep child and parent (or caregiver) CALM. Do not agitate child.

EMT

- A. Transport the child in a secure upright position immediately to the nearest appropriate hospital.

AEMT

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Reassess breath sounds and treat as follows:
1. Do not establish IV access unless child is in arrest. DO NOT agitate child.
 2. If foreign body in airway is suspected in unconscious patient with complete obstruction and basic procedures are unsuccessful, try to visualize obstruction with laryngoscope.
 3. Do not attempt invasive airway unless child has respiratory arrest. Bag-valve mask ventilation is acceptable.
 4. If foreign body in airway is suspected in unconscious patient with complete obstruction, and basic procedures are unsuccessful, try to visualize obstruction with laryngoscope and remove with Magill forceps.

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation
- B. Reassess breath sounds and treat as follows:
1. If cause of upper airway obstruction is unknown and child is calm, a normal saline aerosol may be administered. DO NOT further agitate child.
 2. Do not attempt invasive airway unless child has respiratory arrest. Bag-valve mask ventilation is acceptable.
 3. If foreign body in airway is suspected in unconscious patient with complete obstruction, and basic procedures are unsuccessful, try to visualize obstruction with laryngoscope and remove with Magill forceps.
 4. If airway is completely obstructed, a needle, or surgical cricothyrotomy may be life saving. Contact medical control. If patient has a tracheostomy tube, see page 40.

LOWER AIRWAY OBSTRUCTION

Wheezing in the breathing patient with respiratory distress indicates lower airway disease, which may come from a variety of causes. The patient with severe lower airway disease may have altered LOC, be unable to talk, may have absent or markedly decreased breath sounds and severe retractions with accessory muscle use.

EMR

- A. Place child in position of comfort, encourage parent to hold child secure position. Keep child and parent CALM.
- B. Quickly obtain history and non-invasive respiratory assessment.
- C. Administer 100% oxygen in the least threatening manner.
- D. If respiratory effort is insufficient or patient is becoming unconscious, assist ventilations with bag-valve-mask.
 - 1. If allergic reaction is suspected:
 - a. Secure airway and support with oxygen.
 - b. If the patient has been prescribed an epinephrine auto-injector for these situations and requests assistance, assist with the administration of the epinephrine auto-injector or verbally contact on-line medical direction for orders to administer EMS-provided epinephrine.
 - c. Activate the emergency response system immediately.

EMT

- A. IF MEDICATION IS NOT AVAILABLE- Transport immediately, unless ALS unit is enroute and has an ETA of less than 5 minutes
- B. Ask patient or bystanders if a bronchial dilator by inhaler has been prescribed for these situations. If they have the medication with them, assist with the administration of medication per protocol, then transport patient.

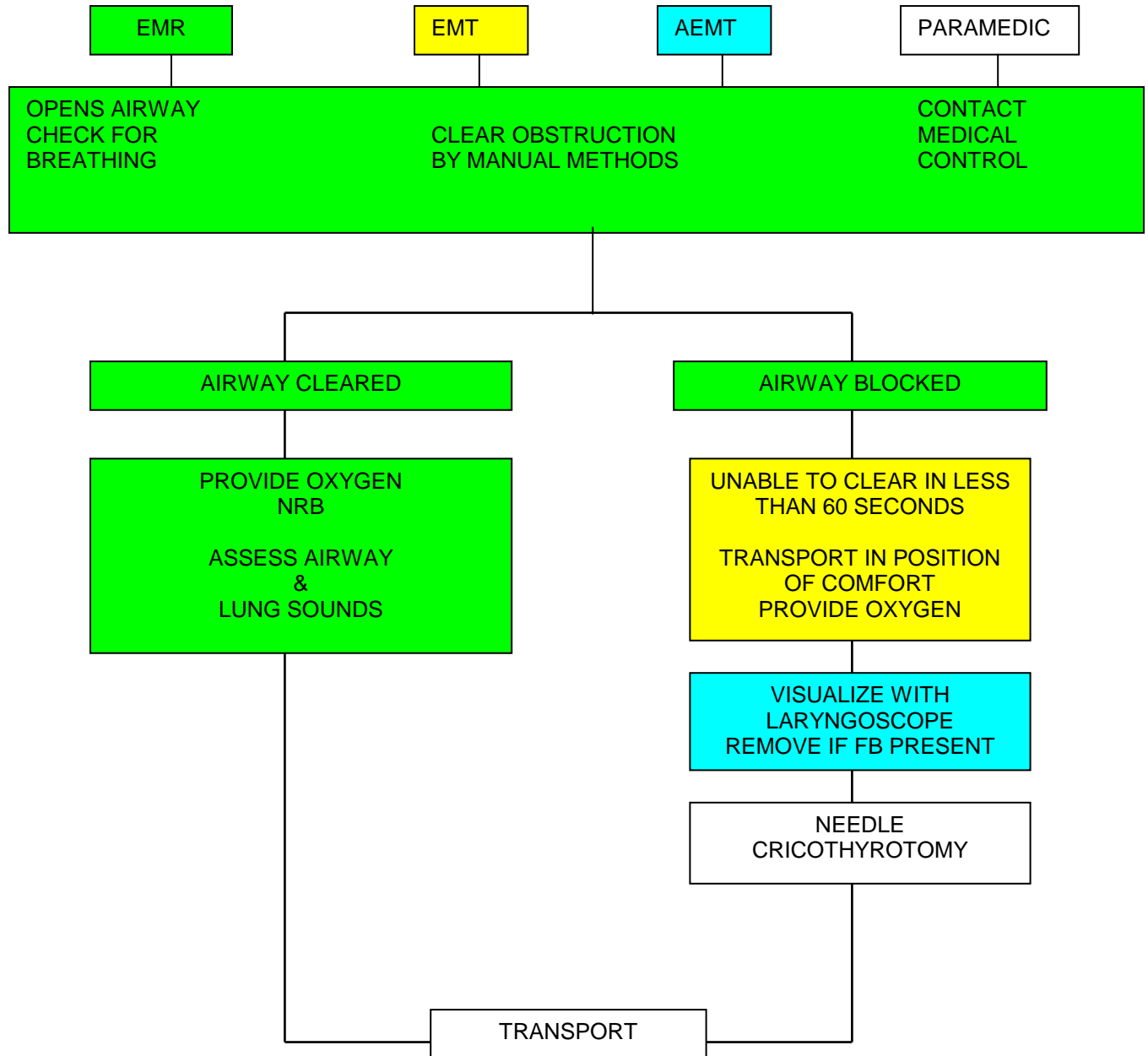
AEMT

- A. Assume charge of situation.
- B. Reassess breath sounds.
- C. DO NOT establish IV access unless child is in arrest. Do not agitate child.
 - 1. If allergic reaction is suspected.
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml))
 - 2. For other causes of wheezing:
 - a. Administer 2.5 mg albuterol aerosol with 6 l/min oxygen over 10-15 minutes. Observe and document child's response. If no improvement, notify receiving facility or Medical Control.
 - b. DO NOT attempt invasive airway unless child has respiratory arrest.

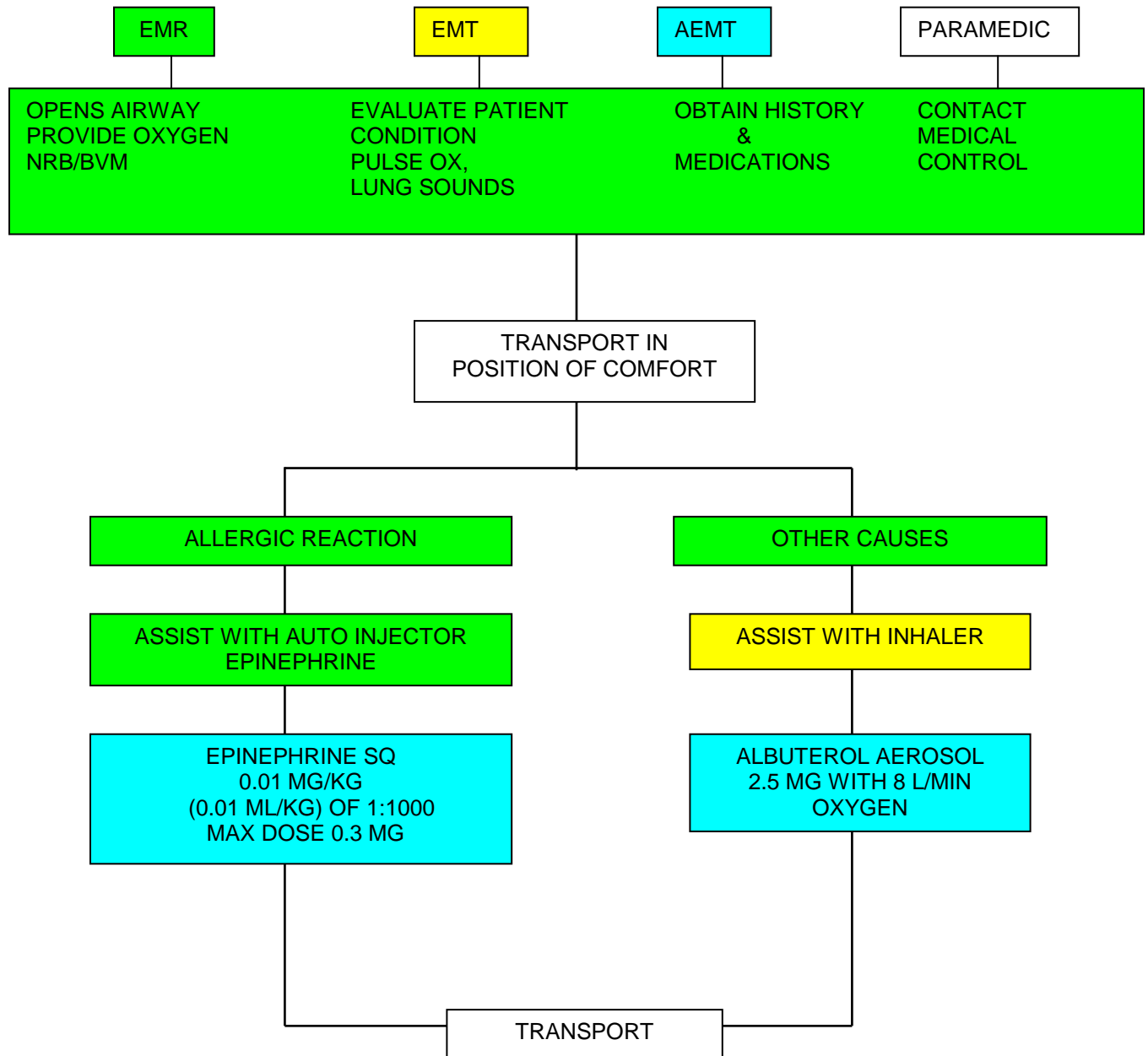
PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situations.
- B. Reassess breath sounds and treat as follows
 - 1. If allergic reaction is suspected:
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose 0.3 mg (0.3 ml)) as the primary treatment of symptoms of anaphylaxis or as the secondary treatment following Benadryl[®] administration for worsening symptoms of an allergic reaction
 - b. Administer Benadryl[®] (diphenhydramine) 1 mg/kg IM or IV (maximum dose 50 mg)
NOTE: This is especially indicated when drug reactions are suspected.
 - 2. For other causes of wheezing:
 - a. Administer 2.5 mg albuterol aerosol with 6 l/min oxygen over 10-15 minutes. Observe and document child's response. If no improvement, notify receiving facility or Medical Control.
 - b. DO NOT attempt invasive airway unless child has respiratory arrest.

**PEDIATRIC RESPIRATORY DISTRESS
UPPER AIRWAY OBSTRUCTION**



**PEDIATRIC RESPIRATORY DISTRESS
LOWER AIRWAY DISEASE**



PEDIATRIC SEIZURE

GENERAL CONSIDERATIONS

- A. The seizure may be stopped by the time the EMS professionals arrive. The patient will normally be in the postictal state.
- B. The basic rule with seizures is to "protect and support" the patient.
- C. Aspiration precautions should include:
 - 1. Coma position: a left side-lying position with the head lowered 15 to 30 degrees.
 - 2. Suction readily available.
 - 3. Clear mouth of foreign bodies (food, gum, etc.)
- D. Febrile Seizures (seizures with fever) are common in children and should be treated like other seizures.

EMR

- A. Place patient away from objects on which they might injure themselves; protect but do not restrain them.
- B. Clear and maintain airway; consider cervical spine injury.
- C. Administer 100% oxygen with NRB as needed for ventilation.
- D. Obtain history from family and/or bystanders:
 - 1. Seizure history
 - 2. Description of onset of seizure
 - 3. Medication
 - 4. Other known medical history, especially fever, head trauma, diabetes, drugs
- E. Evaluate any evidence of injury, especially head trauma.

EMT

- A. Bring any medications with child to the hospital.
- B. Establish communications with medical control and advise of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.
- C. Check blood sugar level.

AEMT

- A. Assist EMS professionals, obtain patient condition and circumstances.
- B. Apply cardiac monitor and check rhythm.
- C. If seizure activity persists:
 - 1. Establish airway
 - 2. Start IV

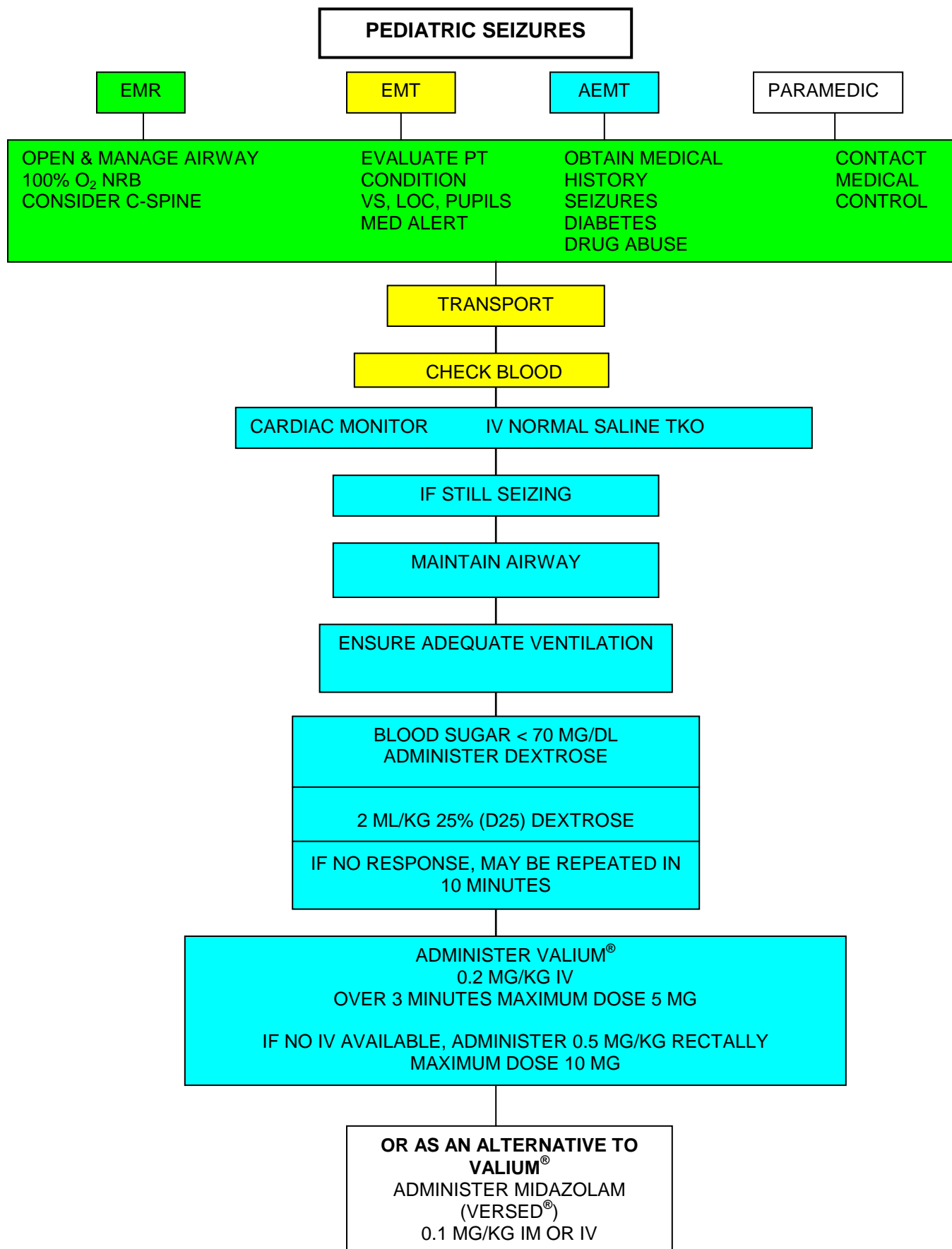
PEDIATRIC SEIZURE (cont'd)

D. Check blood sugar level.

1. If the blood sugar less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose for children
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl
2. Administer Valium[®], 0.2 mg/kg, slow IV push over three minutes, to a maximum dosage of 5 mg.
 - a. If no IV is available, administer Valium[®] rectally, 0.5 mg/kg, to a maximum dose of 10 mg.

PARAMEDIC

- A. Assume charge of the situation and confer with EMS professionals about patient and situation
- B. Make sure patient has good airway. In some cases intubation may be necessary.
- C. If seizure activity persists, determine blood sugar level and treat accordingly
 1. Blood sugar less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose for children
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl
 2. Administer midazolam (Versed[®]) 0.1 mg/kg IM **OR**, administer Valium[®], 0.2 mg/kg, slow IV push over three minutes, to a maximum dosage of 5 mg.
 - a. If no IV is available, administer Valium[®] rectally, 0.5 mg/kg, to a maximum dose of 10 mg.



PEDIATRIC SHOCK

GENERAL CONSIDERATIONS

- A. Shock is not only caused by blood loss. The EMS professional must evaluate for fluid loss from other causes such as excessive vomiting and/or diarrhea, heat exposure, severe infection, severe allergic reaction (anaphylaxis), spinal trauma, and heart failure.
- B. Do not use only the patient's blood pressure in evaluating shock; also look for lower body temperature, poor capillary refill, decreased level of consciousness, increased heart rate, and/or poor skin color or turgor. **Tachycardia is often the first sign of shock.**

NOTE: Do NOT depend on blood pressure.

- C. Transport should not be delayed. The airway must be secured and then transport immediately. It is preferable IVs and/or IOs be done during transportation.

EMR

- A. Open and maintain the airway with sniffing position and the use of an oral airway if needed.
- B. Control all external bleeding and evaluate for internal hemorrhage and/or dehydration.
- C. Provide 100% oxygen through NRB mask, and if needed assist ventilations with a BVM.
- D. Obtain vital signs: pulse and respirations.
- E. For anaphylactic shock, the EMR may assist the patient with the administration of an epinephrine auto-injector prescribed for the patient with a written protocol upon request of the patient or the patient's legal guardian. The EMR may assist with the administration of an EMS-provided epinephrine auto-injector with verbal medical direction.

EMT

- A. Establish communications with Medical Control and advise of patient condition. Transport IMMEDIATELY unless an advanced life support unit is enroute and has an ETA of less than 5 minutes to the scene.

AEMT

- A. Assist EMS professionals, obtain patient condition and circumstance.
- B. Hypovolemic, neurogenic or septic shock:
 - 1. Start IV of normal saline and apply cardiac monitor during transport to the hospital.

DO NOT DELAY TRANSPORT FOR IV

- 2. Administer IV fluid bolus of 20 ml/kg of NS if signs of hypoperfusion or dehydration are present

PEDIATRIC SHOCK (cont'd)

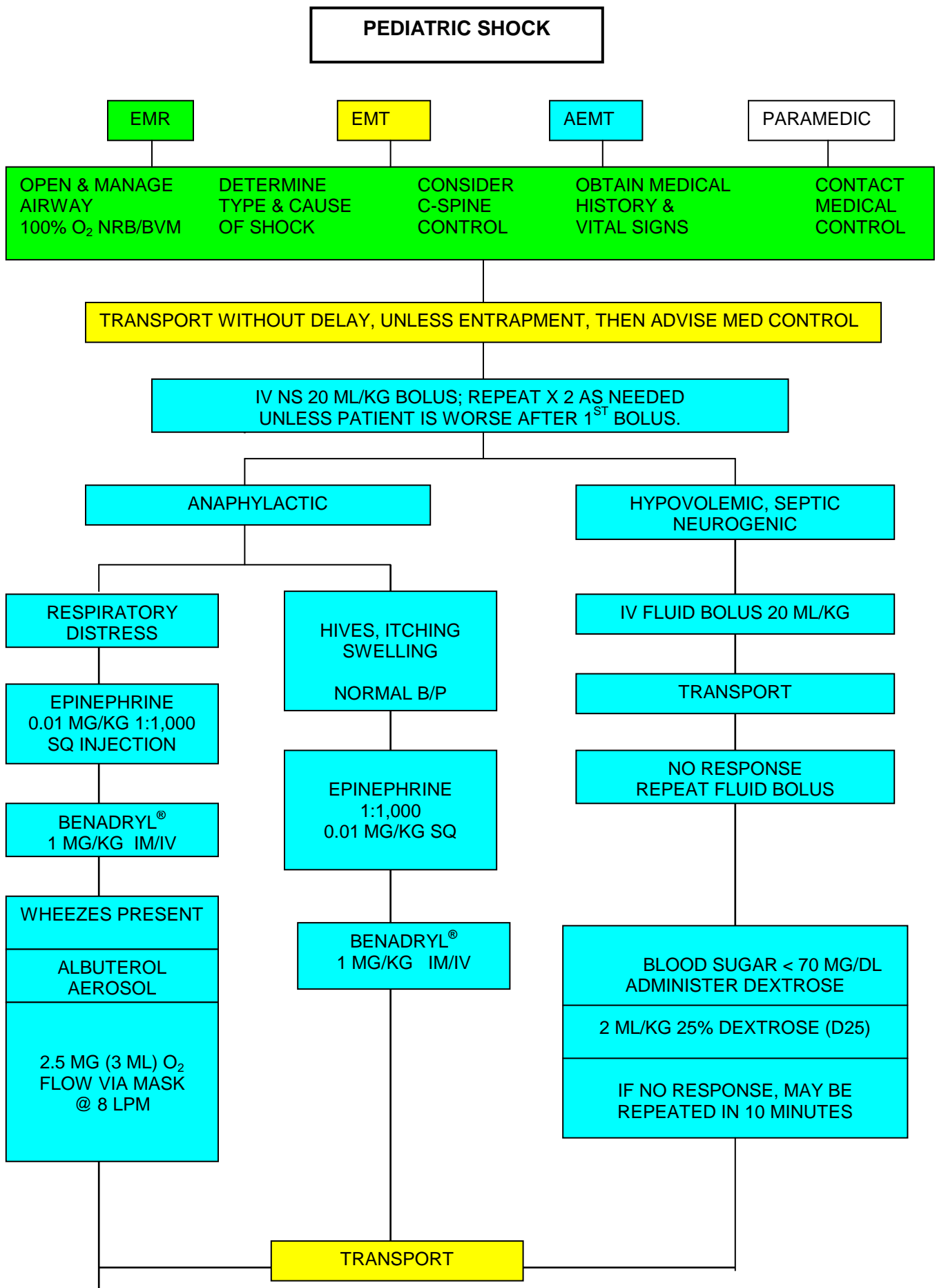
3. Transport. Repeat bolus during transport if patient does not respond to first bolus.
 4. Check blood sugar; if less than 70 mg/dl, administer IV bolus:
 - a. 2 ml/kg of 25% dextrose (D25).
 - b. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl.
- C. Anaphylactic shock:
1. Respiratory distress
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
 - b. Administer Benadryl® (diphenhydramine) to be administered 1 mg/kg IM or IV (maximum dose 50 mg). NOTE: This is especially indicated when drug reactions are suspected.
 - c. When wheezes are present and not cleared by epinephrine, provide albuterol breathing treatment: 1 unit dose, 2.5 mg (3 ml), by child aerosol mask over 10-15 minutes.
 2. Hives, itching, and/or swelling with normal blood pressure:
 - a. Administer epinephrine 1:1,000 0.01 ml/kg (0.01 mg/kg) SQ (maximum dose 0.3 mg (0.3 ml)).
 - b. Administer Benadryl® (diphenhydramine) to be administered 1 mg/kg IM or IV (maximum dose 50 mg). NOTE: This is especially indicated when drug reactions are suspected.
 3. If breathing difficulty with low blood pressure establish IV saline during transport.
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
 4. Hives, itching, and/or swelling:
 - a. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
- D. Apply monitor and check rhythm.

PARAMEDIC

- A. Assume charge of situation and confer with EMS professionals about condition of patient and situation.
- B. Apply monitor and follow protocol for arrhythmias.
- C. Identify type of shock and treat as follows:
 1. Hypovolemic, neurogenic, septic:
 - a. Start IV or IO and administer NS fluid bolus of 20 ml/kg if sign of hypoperfusion or dehydration are present (low BP, tachycardia, poor capillary refill, poor skin turgor)
 - b. Repeat bolus during transport

PEDIATRIC SHOCK (cont'd)

- c. Check blood sugar; if less than 70 mg/dl , administer IV bolus:
 - i. 2 ml/kg of 25% dextrose (D25).
 - ii. May be repeated in 10 minutes if blood sugar remains below 70 mg/dl.
- 2. Anaphylactic:
 - a. Respiratory distress
 - i. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
 - ii. Administer Benadryl® (diphenhydramine) to be administered 1 mg/kg IM or IV (maximum dose 50 mg). NOTE: This is especially indicated when drug reactions are suspected.
 - iii. When wheezes are present and not cleared by epinephrine, provide albuterol breathing treatment: 1 unit dose, 2.5 mg (3 ml), by child aerosol mask over 10-15 minutes.
 - b. Hives, itching, and/or swelling with normal blood pressure:
 - i. Administer epinephrine 1:1,000 0.01 mg/kg (0.01 ml/kg) SQ (maximum dose of 0.3 mg (0.3 ml)).
 - ii. Administer Benadryl® (diphenhydramine) to be administered 1 mg/kg IM or IV (maximum dose 50 mg). NOTE: This is especially indicated when drug reactions are suspected.



EMS and Children with Special Health Care Needs: The TEAM APPROACH

The medically fragile child is one who depends on some form of technology assistance. This can be anything from a nasal cannula to a child who requires total ventilatory support. While such a child may not meet one's definition of "normal", he/she is loved and valued by parents and family. Even though the days are filled with uncertainties and the ride on the emotional roller coaster is unending, we count every day as a gift to enjoy the blessing of these special children.

Caring for a medically fragile child requires a full **TEAM** = **T**rust **E**very **A**vailable **M**ember. Do not be concerned about removing the family from the crisis situation but *inform* them about what you are doing and *include* them in your plan of care. In most cases, the parents and/or home care providers can be of great assistance to the EMS providers. It is vitally important that their knowledge and experience is utilized when treating the child. Parents/caregivers can supply valuable and time saving information. When given direction, they can provide an often needed extra pair of hands (e.g. hold the IV bag, bag ventilate, etc.). Most importantly, they can console, comfort and calm their child.

If at all possible, arrange to meet with families of medically fragile children before an emergency arises. This will allow you to become familiar with the child's needs, baseline condition and the parents' capabilities to provide care prior to your arrival. You will know what to expect and will feel more prepared and confident to treat the child in a crisis situation. This will enhance the **TEAM** approach.

This **TEAM** approach produces an outcome that will always be positive for everyone – the EMS providers, the parents, and most importantly, the child.

Thank you for the privilege of being a part of the EMSC team by serving as the parent advocate for the State of Ohio.

*Linda Eckfeld
Ohio EMSC Parent Advocate*

CHILDREN WITH SPECIAL NEEDS (CSHCN)

SPECIAL CONSIDERATIONS

- A. Treat the ABCs first. Treat the child, not the equipment. If the emergency is due to an equipment malfunction, manage the child appropriately using your own equipment.
- B. Children formerly cared for in hospitals or chronic care facilities are often cared for in homes by parents or other caretakers. These children may have self limiting or chronic diseases. There are a multitude of underlying medical conditions that may categorize children as having special needs. Many are often unstable and may frequently involve the EMS system for evaluation, stabilization, and transport. Special needs children include technology-assisted children such as those with tracheostomy tubes with or without assisted ventilation, children with gastrostomy tubes, and children with indwelling central lines. The most serious complications are related to tracheostomy problems due to the high risk of airway compromise and resultant hypoxia.
- C. CSHCN have many allergies. Children with spina bifida are often allergic to latex. Before treating a patient, ask the caregivers if the children are allergic to latex or have any other allergies. If possible, keep latex-free equipment. (Some regularly used equipment that contains latex includes gloves, oxygen masks, IV tubing BVM, blood pressure cuff, IV catheters, etc.)
- D. Knowing which children in a given area have special needs and keeping a log book is encouraged.
- E. Parents and caretakers are usually trained in emergency management and can be of assistance to EMS personnel. Listen carefully to the caregiver and follow his/her guidance regarding the child's treatment.
- F. Children with chronic illnesses often have different physical development from well children. Therefore, their baseline vital signs may differ from normal standards. The size and developmental level may be different from age-based norms and length based tapes used to calculate drug dosages. Ask the caregiver if the child normally has abnormal vital signs. (i.e. a fast heart rate or a low pulse oxymeter reading)
- G. Some CSHCN may have sensory deficits (i.e. they may be hearing impaired or blind) yet may have age-appropriate cognitive abilities. Follow the caregivers' lead in talking to and comforting a child during treatment and transport. Do not assume that a CSHCN is developmentally delayed.
- H. When moving a special needs child, a slow careful transfer with two or more people is preferable. Do not try to straighten or unnecessarily manipulate contracted extremities as it may cause injury or pain to the child. Certain medical conditions will require special care. Again, consult the child's caregiver.
- I. Caregivers of CSHCN often carry "go bags" or diaper bags that contain supplies to use with the child's medical technologies and additional equipment such as extra tracheostomy tubes, adapters for feeding tubes, suction catheters, etc. Before leaving the scene, ask the caregivers if they have a "go bag" and carry it with you.
- J. Caregivers may also carry a brief medical information form or card. The child may be enrolled in a medical alert program whereby emergency personnel can get quick access to the child's medical history. Ask the caregivers if they have an emergency information form or some other form of medical information for their child.
- K. Caregivers of CSHCN often prefer that their child be transported to the hospital where the child is regularly followed or the "home" hospital. When making the decision as to where to transport a CSHCN, take into account: local protocols, the child's condition, capabilities of the local hospital, caregivers' request, ability to transport to certain locations and the ability to request helicopter transport for distant home hospitals.

EMERGENCIES IN CHILDREN WITH TRACHEOSTOMIES

GENERAL CONSIDERATIONS

- A. The child should be examined for other possible problems. Do not assume the problem is with the tracheostomy tube.

EMR

- A. Examine the child quickly for possible causes of distress which may be easily correctable, such as a detached oxygen source.
- B. Try to establish the child's baseline: the child may never look normal.
- C. If on a ventilator, remove the child from the ventilator and bag the child with a secure oxygen source; there may be a problem with the ventilator or oxygen source.

EMT

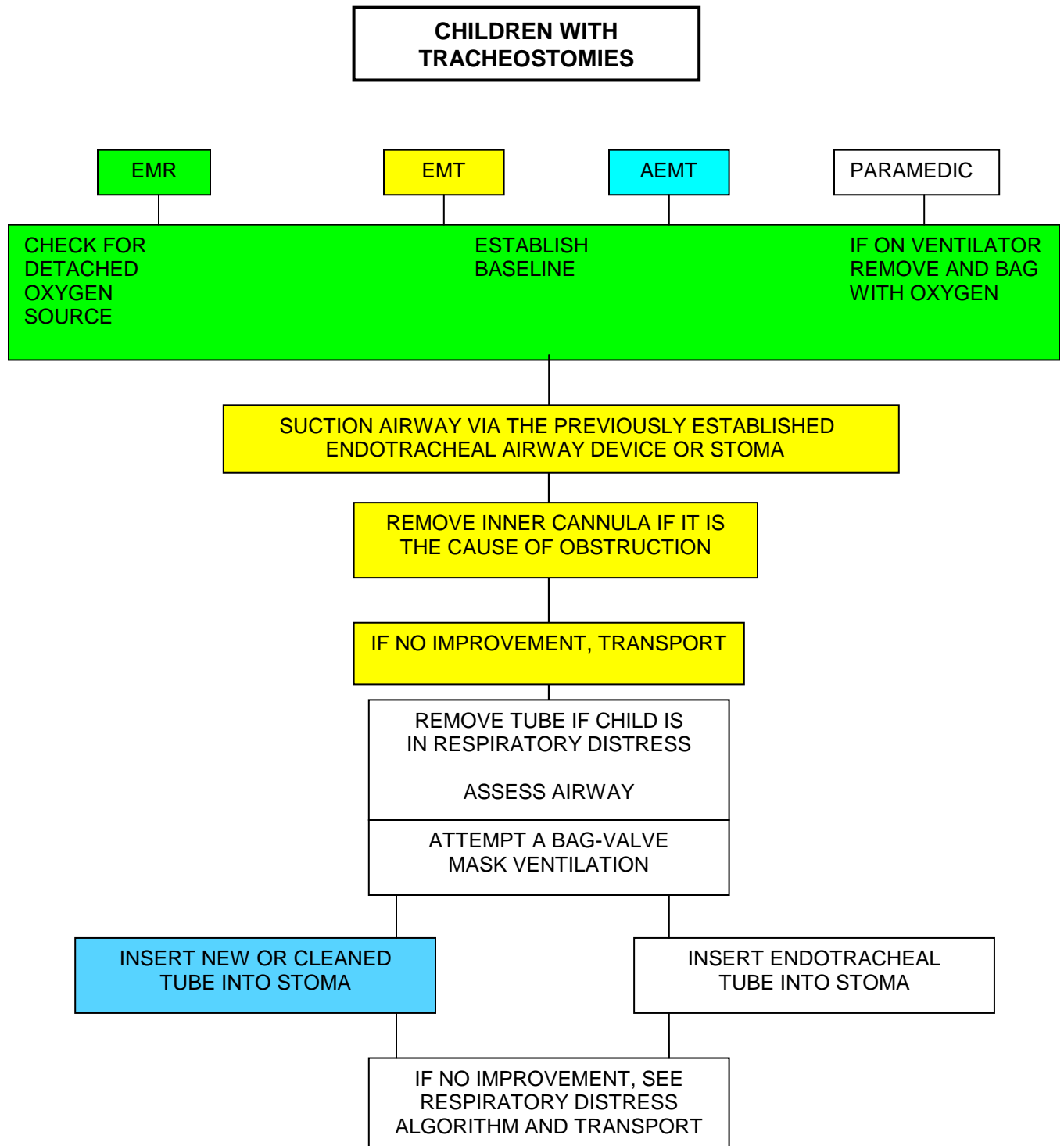
- A. If still no improvement immediately transport to the nearest medical facility; initiate appropriate resuscitation as needed. Suction the child through the previously established endotracheal airway device or stoma as accumulation of debris is a common cause of obstruction.

AEMT

- A. If suctioning does not relieve the obstruction and the tracheostomy tube has a cannula, remove it. If it is the cause of obstruction, there should be immediate improvement. A tracheostomy tube that has been previously removed may be replaced after ensuring that the lumen has been cleaned and all obstructive debris has been cleared from the lumen.

PARAMEDIC

- A. If there is no improvement after suctioning and/or removal of the inner cannula and the child is in severe respiratory distress, an occluded tracheostomy tube should be removed and ventilation via bag valve mask and should be attempted. The removal of endotracheal devices following recent surgical placement should be avoided due to increased potential of airway collapse and resultant respiratory compromise. If an endotracheal or tracheostomy tube is available, insert it into the stoma and resume ventilation (a previously used tracheostomy tube following cleansing and removal of any obstructive debris from the lumen can be inserted.)
- B. If there is still no improvement see the respiratory distress protocol.



EMERGENCIES IN CHILDREN WITH IN-DWELLING CENTRAL LINES

GENERAL CONSIDERATIONS

- A. Children may have central lines in several locations and some complications are due to location; some central lines are located under the skin and can be felt but not seen.
- B. The most common emergencies with central lines include, blockage of the line, complete or partial accidental removal, complete or partial laceration of the line, or possible infection in the central line which may lead to sepsis.

EMR

- A. Always evaluate child for cardiovascular stability as some complications may be life threatening.
- B. Children may be experiencing complications from their underlying medical condition; ask caretakers about the child's condition.

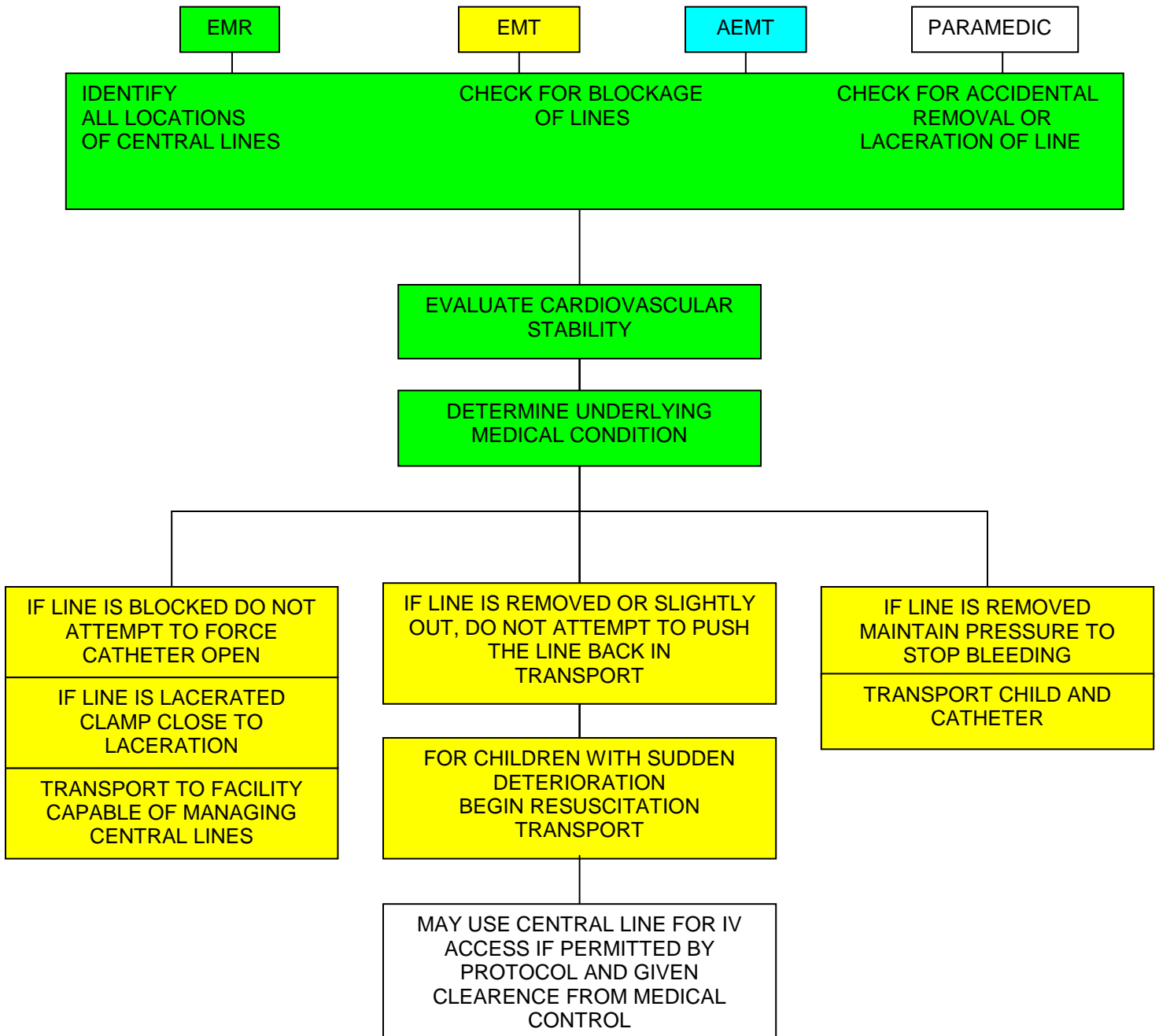
EMT

AEMT

PARAMEDIC

- A. If line is blocked, do not attempt to force the catheter open, transport to a facility capable of managing central lines.
- B. For complete removal, do not attempt to reinsert; transport to the nearest emergency department. Infections are a common complication; don't try to push a line back in, even if it is only slightly out.
- C. For complete removal, maintain pressure on site until bleeding has stopped; transport child and catheter to nearest emergency department (part of the catheter may have broken off.) Always bring the line with you to the hospital.
- D. For partial or complete laceration of the line, clamp proximally to laceration utilizing a padded clamp and transport child and catheter to nearest emergency department.
- E. For children with sudden deterioration begin basic resuscitation and transport to nearest emergency facility (child may have pneumothorax or internal bleeding.)
- F. If there are fluids infusing through the central line, determine the nature of the fluid and the time that the fluid was started.
- G. For paramedic only: May use central line for IV access if permitted by protocol, and given clearance by medical control

EMERGENCIES IN CHILDREN WITH IN-DWELLING CENTRAL LINES



EMERGENCIES IN CHILDREN WITH GASTROSTOMY TUBES

GENERAL CONSIDERATIONS

- A. Children with gastrostomy tubes may have complications of obstruction or dislodgment; obstruction is usually not an emergency but the child may require transport; dislodgment is not life threatening but the tube should be replaced as soon as possible. Both conditions are easily recognized.
- B. The child should be examined for any other possible problems.

EMR

- A. Children who have problems with their tubes may have problems with regurgitation or aspiration.
- B. Be aware of and address any other possible problems from their underlying medical condition.

EMT

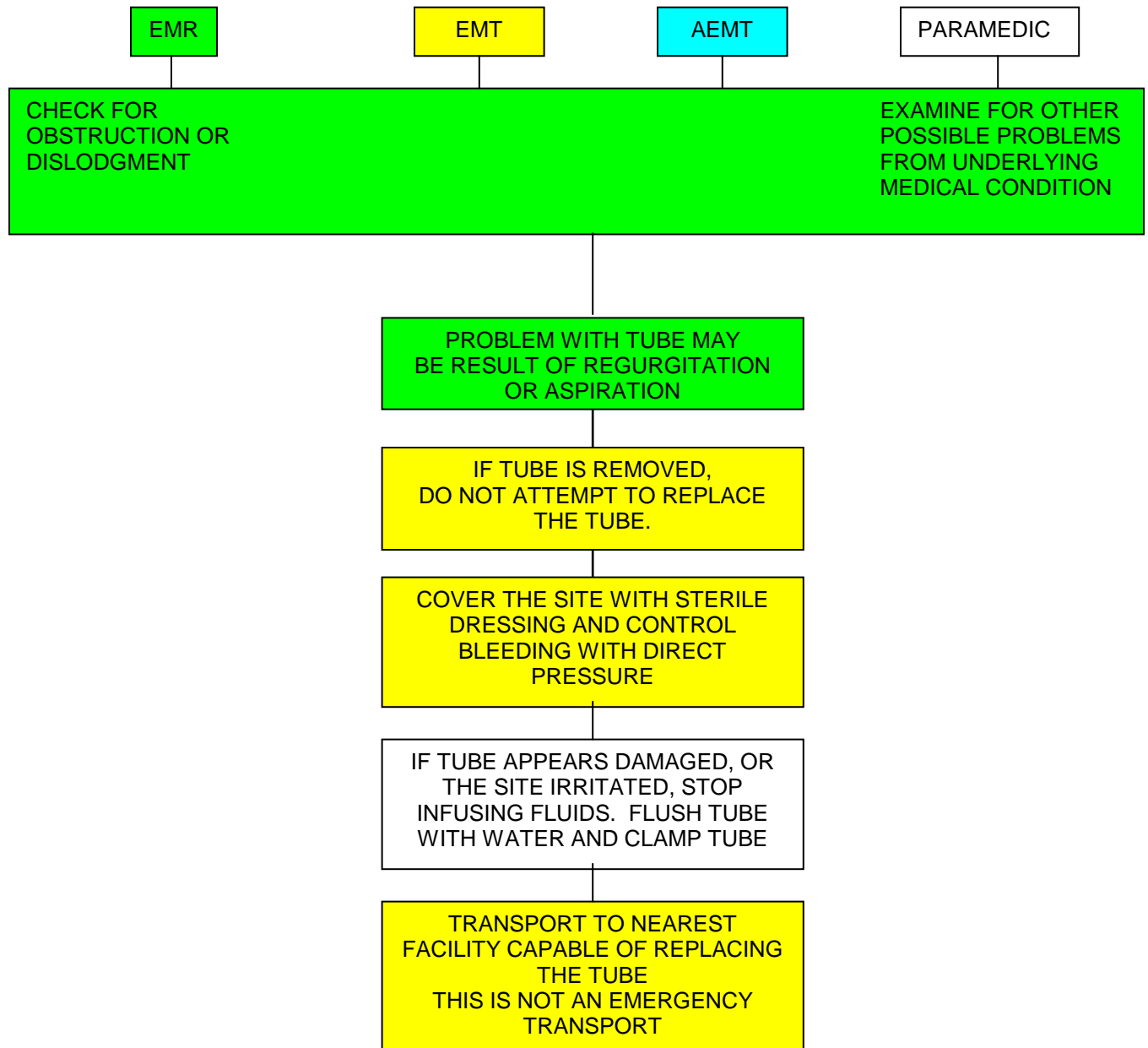
AEMT

- A. Transport the child and the tube to the nearest facility capable of replacing the tube; this is not an emergency transport.
- B. Do not attempt to replace the tube; it is not as easy as it seems and there may be other complications.
- C. Cover the site with a sterile dressing and control any bleeding with direct pressure.

PARAMEDIC

If there are fluids infusing through the feeding tube, determine the nature of the fluids and the time that the fluids were started. If the tube appears damaged, or the site is irritated, stop all infusing fluids, flush the tube with water, and clamp the tube.

EMERGENCIES IN CHILDREN WITH GASTROSTOMY TUBES



EMERGENCIES IN CHILDREN ON VENTILATORS

GENERAL CONSIDERATIONS

- A. Children on mechanical ventilation may exhibit sudden or gradual deterioration, cardiac arrest, increased oxygen demand, increased respiratory rate, retractions, or change in mental status.
- B. Examine the child quickly for possible causes of distress which may be easily correctable (e.g. detached oxygen source) the caretakers will often have done this but double check.
- C. Medications the child is presently taking may be the cause of deterioration.
- D. Try to establish the child's baseline; the child may never look normal.

EMR

- A. Remove the child from the ventilator and bag the child with a secure oxygen source; if the child improves there may be a problem with the ventilator or oxygen source.

EMT

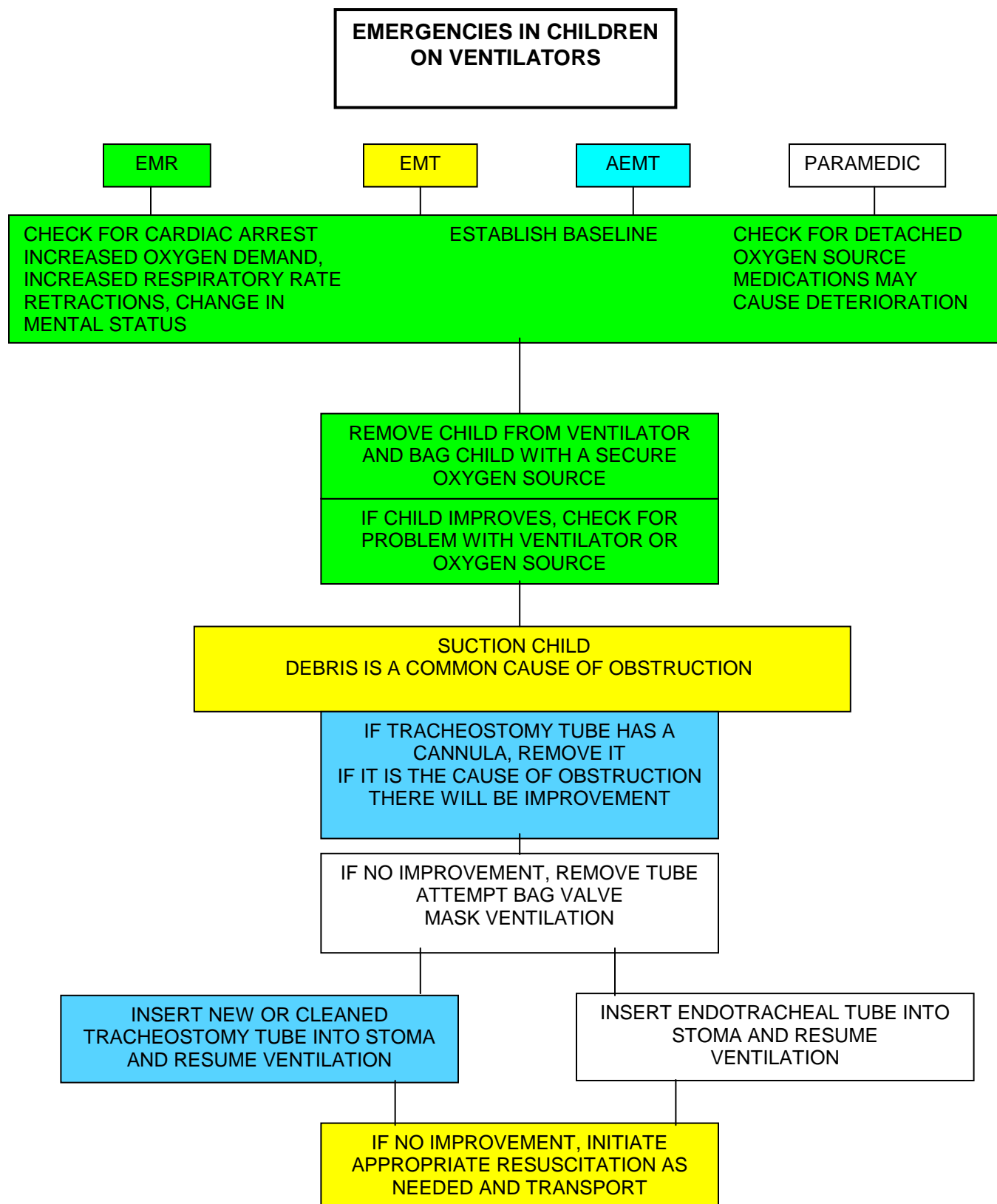
- A. If there is no improvement immediately transport to the nearest medical facility; initiate appropriate resuscitation as needed. Suction the child through a previously established endotracheal device as accumulation of debris is a common cause of obstruction.

AEMT

- A. If suctioning does not relieve the obstruction and the patient has a tracheostomy tube, remove the inner cannula. If it is the cause of obstruction, there should be immediate improvement. A tracheostomy tube that has been previously removed may be replaced after ensuring that the lumen has been cleaned and all obstructive debris has been cleared from the lumen.

PARAMEDIC

- A. If there is no improvement after suctioning and/or removal of the inner cannula and the child is in severe respiratory distress, an occluded endotracheal or tracheostomy tube should be removed and ventilation via bag valve mask and should be attempted. The removal of endotracheal devices following recent surgical placement should be avoided due to increased potential of airway collapse and resultant respiratory compromise. If another endotracheal or tracheostomy tube is available, insert into the stoma and resume ventilation (a previously used tracheostomy tube following cleansing and removal of any obstructive debris from the lumen can be inserted.)
- B. If there is still no improvement see the respiratory distress protocol.



NORMAL PEDIATRIC VITAL SIGNS¹

Age	Pulse	Respiratory Rate	Systolic BP*
Preterm < 1 kg	120-160	30-60	36-58
Preterm 1 kg	120-160	30-60	42-66
Preterm 2 kg	120-160	30-60	50-72
Newborn	126-160	30-60	60-70
Up to 1 year	100-140	30-60	70-80
1-3 years	100-140	20-40	76-90
4-6 years	80-120	20-30	80-100
7-9 years	80-120	16-24	84-110
10-12 years	60-100	16-20	90-120
13-14 years	60-90	16-20	90-120
15 years and older	60-90	14-20	90-130

- Blood pressure is a late and unreliable indicator of shock in children

PEDIATRIC COMA SCORING²

	<u>Glasgow</u>	<u>Glasgow Modified for Infant</u>	
Eye opening	Spontaneous To voice To pain None	Spontaneous To voice To pain None	4 3 2 1
Verbal response	Oriented Confused Inappropriate Garbled speech None	Coos, babbles Irritable cry, inconsolable Cries to pain, Moans to pain None	5 4 3 2 1
Motor response*	Obeys commands Localizes pain Withdraws to pain Flexion Extension Flaccid	Normal movements Withdraws to touch Withdraws to pain Flexion Extension Flaccid	6 5 4 3 2 1

*** NOTE: MOTOR RESPONSE IS MOST INDICATIVE OF LEVEL OF INJURY**

¹ Reference: Children's Hospital Pediatric Reference Code Card, Columbus, Ohio, 1999

² A score of < 8 is generally an indication to hyperventilate the child.

PEDIATRIC PREHOSPITAL MEDICATIONS

<u>Medication</u>	<u>Dose</u>	<u>Route</u>	<u>Remarks</u>
• Acetaminophen (Tylenol®)	10 mg/kg	PO	Useful for musculoskeletal pain and fever control
• Activated charcoal	1 gm/kg	PO	Do not give to child with altered level of consciousness
• Adenosine	0.1 mg/kg	IV, IO	Indicated for SVT. First dose 6mg, second dose 6mg. Max dose 12mg
• Albuterol	2.5 mg	Aerosol	Indicated for wheezing as per protocol
• Amiodarone	5 mg/kg	IV, IO	Over 20-60 minutes, maximum 15 mg/kg per day. For shock-refractory pulseless VT/VF: 5 mg/kg rapid IV/IO
• Atropine	0.02 mg/kg	IV, IO, ET	Minimum dose 0.1 mg; max dose for child 0.5 mg; max dose for adolescent 1.0 mg; may repeat x1; Also useful before intubating children < 5 years old, blocks bradycardia due to vagal nerve stimulation
• Dextrose 25%	2 ml/kg	IV, IO	Try to obtain bedside glucose level before administering ----administer if blood glucose < 60; dilute 50% 1:1 with sterile water; consult Medical Control if infant < 1 month as solution may need to be further diluted.
• Diazepam (Valium®)	0.2-0.3 mg/kg	IV	Indicated for uncontrolled seizure activity; anticipate respiratory depression. Max. dose 10 mg.
• Diazepam (Valium®)	0.5 mg/kg	Rectal	Indicated for uncontrolled seizure activity; anticipate respiratory depression. Max. dose 10 mg.
• Diphenhydramine (Benadryl®)	1 mg/kg	IV	Useful in allergic reactions and anaphylaxis. Max dose 50 mg
• Epinephrine (1:10,000)	0.1 ml/kg (0.01 mg/kg)	IV, IO	Commonly used in cardiac arrest rhythms as first dose. Increase second dose 10 X (may use 1:1,000 solution).
• Epinephrine (1:1,000)	0.1 ml/kg (0.1 mg/kg)	ET, IV, IO	Commonly used in cardiac arrest rhythms. Use for all ET doses, and second and subsequent IV/IO doses. *The ET route has limited absorption, use IV/IO route whenever possible
	0.01ml/kg	IM or SQ	Used for anaphylaxis. Max dose is 0.3 ml
• Morphine	0.1 mg/kg	IV/IM	Useful for moderate pain, may cause respiratory depression. Hypotension and reflex bradycardia may develop from histamine release
• Midazolam (Versed®)	0.1 mg/kg	IV/IO/IM	Indicated for uncontrolled seizure activity; anticipate respiratory depression Useful to facilitate advanced airway management in combative patients
• Naloxone (Narcan®)	0.1 mg/kg	IV, IO, ET	Useful for unknown unconscious, known narcotic overdoses
• Procainamide	15 mg/kg	IV	Over 30-60 minutes. Alternative treatment for recurrent or refractory VT, SVT.

ET = endotracheal IM = intramuscular injection IO = intraosseous IV = Intravenous SQ = subcutaneous injection

Notice of changes to trauma triage rules

This document details the changes have been made to the portions of the Ohio Administrative Code (OAC) that cover trauma triage. These changes, based on research performed by the State Board of Emergency Medical Services, create a definition of ‘geriatric trauma patient’ and create specific criteria for the triaging of geriatric trauma patients.

Summary of changes to trauma triage rules (OAC 4765-14)

4765-14-01 Definitions

- Added (H), definition of “body regions”
- Added (I), definition of “evidence of traumatic brain injury”

4765-14-02 Determination Of A Trauma Victim

- Changed (A) to define “adult trauma victim” as being between 16 and 69 years of age
- Added (C) to define “geriatric trauma victim”

4765-14-03 Enforcement Of State Or Regional Trauma Triage Protocols

- No changes or additions

4765-14-04 Education Of State And Regional Trauma Triage Protocols

- No changes or additions

4765-14-05 Exceptions To Mandatory Transport

- No changes or additions

4765-14-06 Amendments Affecting Regional Protocols

- New rule describing how amendments to triage rules affect regional triage variants

Note on formatting of this document:

New language added to this rule is in underline format.
Geriatric criteria that are different from adult criteria are in **bold** format.

4765-14-01 Definitions.

(A) As used in this chapter and section 4765.01 of the Revised Code, "trauma" or "traumatic injury" means severe damage to or destruction of tissue that satisfies both of the following conditions:

(1) It creates a significant risk of any of the following:

- (a) Loss of life;
- (b) Loss of a limb;
- (c) Significant, permanent disfigurement;
- (d) Significant, permanent disability; and

(2) It is caused by any of the following:

- (a) Blunt or penetrating injury;
- (b) Exposure to electromagnetic, chemical, or radioactive energy;
- (c) Drowning, suffocation, or strangulation;
- (d) A deficit or excess of heat.

(B) "Evidence of poor perfusion" means physiologic indicators of hemorrhage or decreased cardiovascular function, which may include any of the following symptoms:

- (1) Weak, distal pulse;
- (2) Pallor;
- (3) Cyanosis;
- (4) Delayed capillary refill;
- (5) Tachycardia.

(C) "Evidence of respiratory distress or failure" means physiologic indicators of decreased ventilatory function, which may include any of the following symptoms:

- (1) Stridor;
- (2) Grunting;
- (3) Retractions;
- (4) Cyanosis;
- (5) Hoarseness;
- (6) Difficulty speaking.

(D) "Evidence of hemorrhagic shock" means physiologic indicators of blood loss that may include any of the following symptoms:

- (1) Delayed capillary refill;
- (2) Cool, pale, diaphoretic skin;
- (3) Decreased systolic blood pressure with narrowing pulse pressure;
- (4) Altered level of consciousness.

(E) "Seatbelt sign" means abdominal or thoracic contusions and abrasions resulting from the use of a seatbelt during a motor vehicle collision.

(F) "Signs or symptoms of spinal cord injury" means physiologic indicators that the spinal cord is damaged, including, but not limited to, paralysis, weakness, numbness, or tingling of one or more extremities.

(G) "Evidence of neurovascular compromise" means physiologic indicators of injury to blood vessels or nerves including, but not limited to, pallor, loss of palpable pulses, paralysis, paraesthesia, or severe pain.

(H) “Body region” means a portion of the trauma victim’s body divided into the following areas:

- (1) Brain
- (2) Head, face and neck
- (3) Chest
- (4) Abdomen and pelvis
- (5) Extremities
- (6) Spine

(I) “Evidence of traumatic brain injury” means signs of external trauma and physiologic indicators that the brain has suffered an injury caused by external force including, but not limited to:

- (1) Decrease in level of consciousness from the victim’s baseline
- (2) Unequal pupils
- (3) Blurred vision
- (4) Severe or persistent headache
- (5) Nausea or vomiting
- (6) Change in neurological status

4765-14-02 Determination Of A Trauma Victim.

Emergency medical service personnel shall use the criteria in this rule, consistent with their certification, to evaluate whether an injured person qualifies as an adult trauma victim, geriatric trauma victim, or pediatric trauma victim, in conjunction with the definition of trauma in section 4765.01 of the Revised Code and this chapter.

(A) An adult trauma victim is a person between the ages of sixteen and sixty-nine years of age inclusive exhibiting one or more of the following physiologic or anatomic conditions:

(1) Physiologic conditions

- (a) Glasgow coma scale less than or equal to thirteen;
- (b) Loss of consciousness greater than five minutes;
- (c) Deterioration in level of consciousness at the scene or during transport;
- (d) Failure to localize to pain;
- (e) Respiratory rate less than ten or greater than twenty-nine;
- (f) Requires endotracheal intubation;
- (g) Requires relief of tension pneumothorax;
- (h) Pulse greater than one hundred twenty in combination with evidence of hemorrhagic shock;
- (i) Systolic blood pressure less than ninety, or absent radial pulse with carotid pulse present;

(2) Anatomic conditions

- (a) Penetrating trauma to the head, neck, or torso;
- (b) Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;
- (c) Injuries to the head, neck, or torso where the following physical findings are present:
 - (i) Visible crush injury;
 - (ii) Abdominal tenderness, distention, or seatbelt sign;
 - (iii) Pelvic fracture;
 - (iv) Flail chest;
- (d) Injuries to the extremities where the following physical findings are present:

- (i) Amputations proximal to the wrist or ankle;
- (ii) Visible crush injury;
- (iii) Fractures of two or more proximal long bones;
- (iv) Evidence of neurovascular compromise;

- (e) Signs or symptoms of spinal cord injury;
- (f) Second degree or third degree burns greater than ten per cent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway.

(B) A pediatric trauma victim is a person under sixteen years of age exhibiting one or more of the following physiologic or anatomic conditions:

(1) Physiologic conditions

- (a) Glasgow coma scale less than or equal to thirteen;
- (b) Loss of consciousness greater than five minutes;
- (c) Deterioration in level of consciousness at the scene or during transport;
- (d) Failure to localize to pain;
- (e) Evidence of poor perfusion, or evidence of respiratory distress or failure.

(2) Anatomic conditions

- (a) Penetrating trauma to the head, neck, or torso;
- (b) Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;
- (c) Injuries to the head, neck, or torso where the following physical findings are present;

- (i) Visible crush injury;
- (ii) Abdominal tenderness, distention, or seatbelt sign;
- (iii) Pelvic fracture;
- (iv) Flail chest;

- (d) Injuries to the extremities where the following physical findings are present:

- (i) Amputations proximal to the wrist or ankle;
- (ii) Visible crush injury;
- (iii) Fractures of two or more proximal long bones;
- (iv) Evidence of neurovascular compromise.

- (e) Signs or symptoms of spinal cord injury;
- (f) Second or third degree burns greater than ten per cent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway.

(C) A geriatric trauma victim is a person seventy years of age or older exhibiting one or more of the following causes of injury or physiologic or anatomic conditions:

(1) Physiologic conditions

(a) Glasgow coma scale less than or equal to fourteen in a trauma patient with a known or suspected traumatic brain injury

- (b) Glasgow coma score less than or equal to thirteen;
- (c) Loss of consciousness greater than five minutes;
- (d) Deterioration in level of consciousness at the scene or during transport;
- (e) Failure to localize to pain;
- (f) Respiratory rate less than ten or greater than twenty-nine;
- (g) Requires endotracheal intubation;

- (h) Requires relief of tension pneumothorax;
- (i) Pulse greater than one hundred twenty in combination with evidence of hemorrhagic shock;
- (j) **Systolic blood pressure less than one-hundred**, or absent radial pulse with carotid pulse present;

(2) Anatomic conditions

- (a) Penetrating trauma to the head, neck, or torso;
- (b) Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;

(c) Injuries to the head, neck, or torso where the following physical findings are present:

- (i) Visible crush injury;
- (ii) Abdominal tenderness, distention, or seatbelt sign;
- (iii) Pelvic fracture;
- (iv) Flail chest;

(d) Injuries to the extremities where the following physical findings are present:

- (i) Amputations proximal to the wrist or ankle;
- (ii) Visible crush injury;
- (iii) Fracture of one proximal long bone sustained as a result of a motor vehicle crash;**
- (iv) Fractures of two or more proximal long bones;
- (v) Evidence of neurovascular compromise.

- (e) Signs or symptoms of spinal cord injury;
- (f) Second degree or third degree burns greater than ten per cent total body surface area, or other significant burns involving the face, feet, hands, genitalia, or airway;
- (g) Injury sustained in two or more body regions.**

(3) Cause of injury

- (a) Pedestrian struck by a motor vehicle**
- (b) Fall from any height, including standing falls, with evidence of a traumatic brain injury**

(D) Emergency medical service personnel shall also consider mechanism of injury and special considerations, as taught in the EMT-basic, EMT-intermediate, or EMT-paramedic curriculum, when evaluating whether an injured person qualifies as a trauma victim.

4765-14-03 Enforcement Of State Or Regional Trauma Triage Protocols.

(A) EMS medical directors shall be responsible for enforcing state or regional trauma triage protocols for EMS personnel under their medical direction through a performance improvement or peer review process.

(B) EMS medical directors may request assistance from the RPABs to address issues related to quality improvement and peer review of state or regional trauma triage protocols.

(C) The board shall investigate all complaints regarding violations of state or regional trauma triage protocols consistent with its current procedures for investigations.

4765-14-04 Education of State and Regional Trauma Triage Protocols.

The board shall consult with the state trauma committee, emergency medical service organizations and personnel, regional directors and regional physician advisory boards, emergency medical service instructors, and persons who regularly provide medical direction to emergency medical service personnel in this state for assistance in developing and implementing educational opportunities regarding state and regional trauma triage protocols. The board may also enlist the assistance of the division of EMS or direct the division of EMS to participate in developing and implementing educational opportunities regarding state and regional trauma triage protocols in a manner to be determined by the board.

4765-14-05 Exceptions to Mandatory Transport.

(A) Emergency medical service personnel shall transport a trauma victim, as defined in section 4765.01 of the Revised Code and this chapter, directly to an adult or pediatric trauma center that is qualified to provide appropriate adult or pediatric care, unless one or more of the following exceptions apply:

- (1) It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an adult or pediatric trauma center;
 - (2) It is unsafe or medically inappropriate to transport the victim directly to an adult or pediatric trauma center due to adverse weather or ground conditions or excessive transport time;
 - (3) Transporting the victim to an adult or pediatric trauma center would cause a shortage of local emergency medical service resources;
 - (4) No appropriate adult or pediatric trauma center is able to receive and provide adult or pediatric trauma care to the trauma victim without undue delay;
 - (5) Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than eighteen years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient.
-

4765-14-06 Amendments Affecting Regional Protocols

If the state trauma triage protocols are amended to include criteria that do not appear in a region's protocols, such amendments will automatically be applied to the region's protocols until such time as the region amends their protocols, in accordance with section 4765.40 of the Revised Code.

Statewide Emergency Services Internet Protocol Steering Committee

Created in House Bill 509 – 129th General Assembly

Effective Date September 28, 2012

- Appointments must be made no later than ten days after the effective date.
- First meeting must be held within thirty days of the effective date of the bill (October 28, 2012)
- Subsequent meeting must occur monthly and can be in person or via conference call.

Initial Report Due November 15, 2012

Report shall provide:

1. Recommendations for the state to address the development of a state emergency services internet protocol network, including a review of the current funding model for the state's 911 systems
2. Examine the readiness of the state's current technology infrastructure for statement emergency services internet protocol network
3. Research legislative authority with regard to governance and funding of a statement emergency services internet protocol network, and provide recommendations on best practices to limit duplicative efforts to ensure an effective transition to next generation 911.
4. Make recommendations for consolidation of public safety answering point operations in the is state to accommodate next generation 911 technology and to facilitate a more efficient and effective emergency services system
5. Recommend policies, procedures, and statutory or regulatory authority to effectively govern a statewide emergency services internet protocol network.
6. Designate a next generation 911 statewide coordinator to serve as the primary point of contract for federal initiatives.
7. Coordinate with statewide initiatives and association such as the State Interoperable Executive Committee, the Ohio Geographically Referenced Independent Program Council, the Ohio Multi Agency Radio Communications Systems Steering Committee and other interested parties.

Committee Members (10 members/ 9 voting members):

- The State Chief Information Office (or designee)
- Two Members of the House of Representatives (majority and minority party)
- Two Members of the Senate (majority and minority party)
- Five Members appointed by the Governor
 - 2 Representatives of CCAO
 - 2 Representative of Municipal League
 - 1 Representative of Township Association

State Chief Information Officer is the Chair and is a non-voting member.

Subcommittees:

1. Technical Standards Subcommittee
2. Public Safety Answering Point Operations Subcommittee
 - * may have additional subcommittees, if needed
 - **membership of the subcommittees will be determined by the committees.

Technical Standards Subcommittee (7 members):

1. One member representing wireline or wireless service provider that participates in the state's 911 system.
2. One representative of the Ohio Academic Resources Network
3. One representative of the Ohio multi-agency radio communications system steering committee
4. One representative of the Ohio geographically referenced information program
 - One member from each of the following associations selected by the committee from nominations received from that association:
 5. Ohio Telephone Association
 6. Ohio Chapter of the Association of Public Safety Communications Officials
 7. Ohio Chapter of the Emergency Number Association

Public Safety Answering Point Operations Subcommittee (11 members):

1. One member representing the division of emergency management of the department of public safety
2. One member representing the state highway patrol
3. Two members recommended CCAO who are managers of public safety answering points
4. Two members recommended by Ohio Municipal League who are managers of public safety answering points
 - One member from each of the following associations selected by the committee from nominations received from that association:
 5. Buckeye State Sheriffs' Association
 6. Ohio Association of Chiefs of Police
 7. Ohio Association of Fire Chiefs
 8. Ohio Chapter of the Association of Public Safety Communication Officials
 9. Ohio Chapter of the National Emergency Number Association

Ohio EMS for Children Performance Measures



EMS Agency Survey 2010-11

Pediatric Medical Direction and Pre-Hospital Equipment

Hospital Transfer Guidelines and Agreements

Performance Measures

- Requirements from HRSA for all grantees
- Include pre-hospital, hospital, and systemic measures
- Pre-hospital measures include:
 - On-line and off-line medical direction
 - Pediatric equipment on ambulances

Pre-Hospital Care Measures

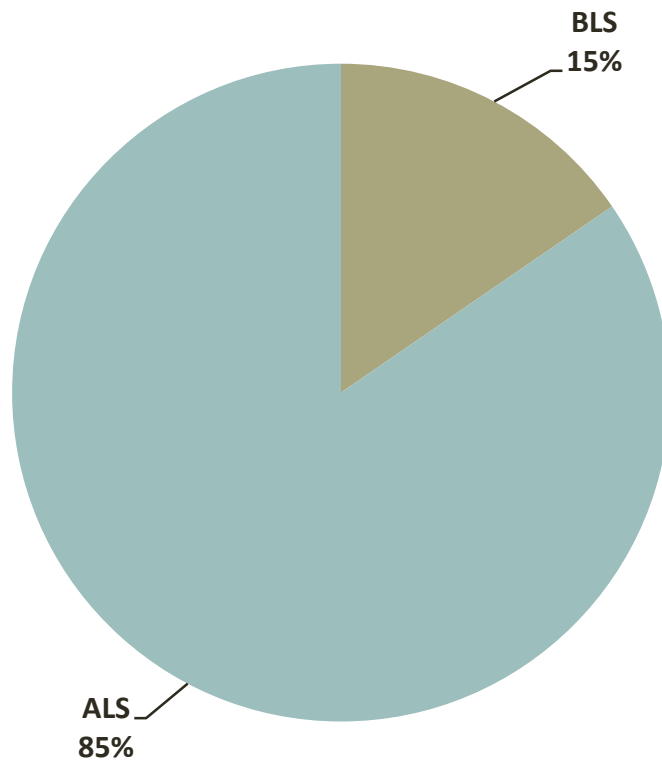
- Data collection required for measures dealing with medical direction & equipment
- 80% response rate required by HRSA
- Survey designed by NEDARC
- Sampling strategy designed by NEDARC
- Analysis designed by NEDARC

EMS Agency Survey

- 339 agencies chosen randomly from Ohio agencies
- Survey sent via mail to EMS Coordinator, follow-up done to ensure response
- Survey sent 12/1/10, available electronically on Division of EMS website
- 210 responses received by 2/28/11 (62%)
- 201 respond to 9-1-1 emergencies

Highest Level of Emergency Services Provided

n=201



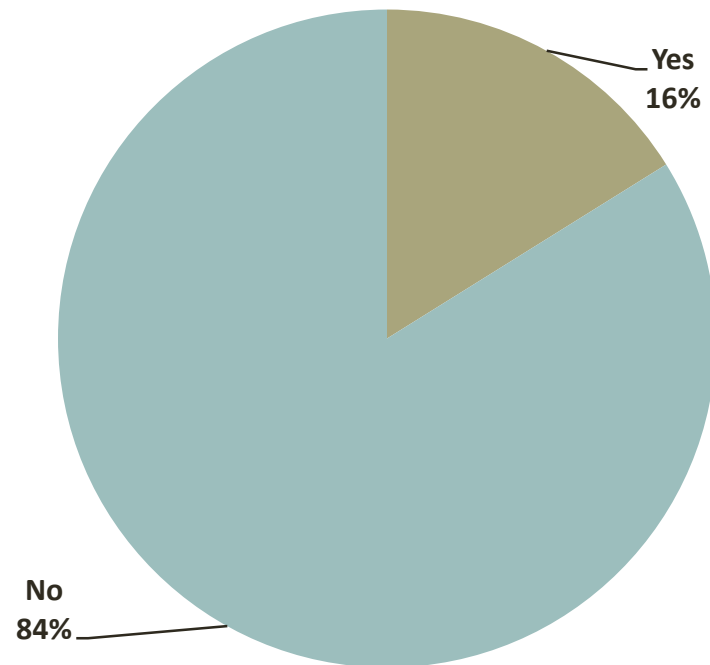
Online Medical Direction

Performance Measures

- PM 71: The percent of pre-hospital provider agencies in the State/Territory that have on-line pediatric medical direction available from dispatch through patient transport to a definitive care facility.

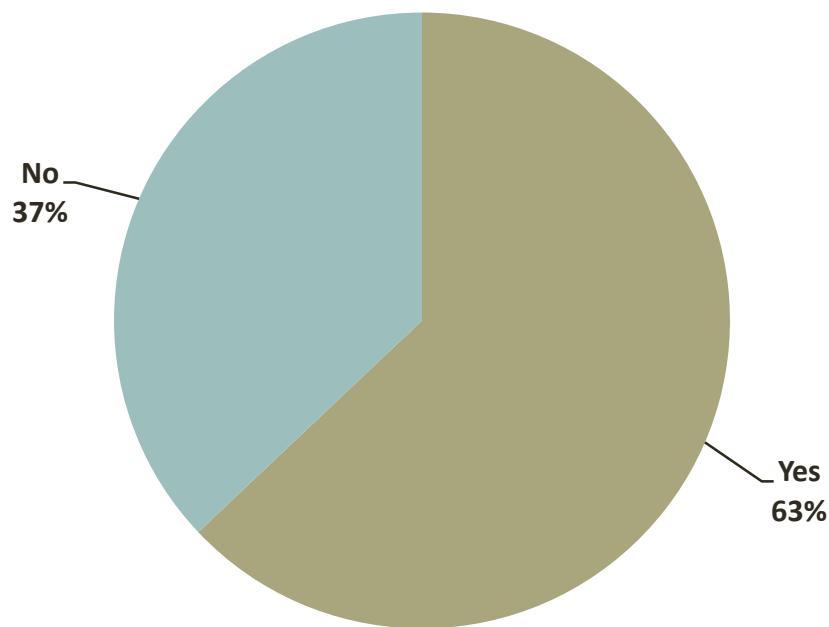
In the past year, have any of your providers attempted to contact on-line medical direction for medical advice when treating a pediatric patient, age 0-18 years?

BLS Agencies (n=31)

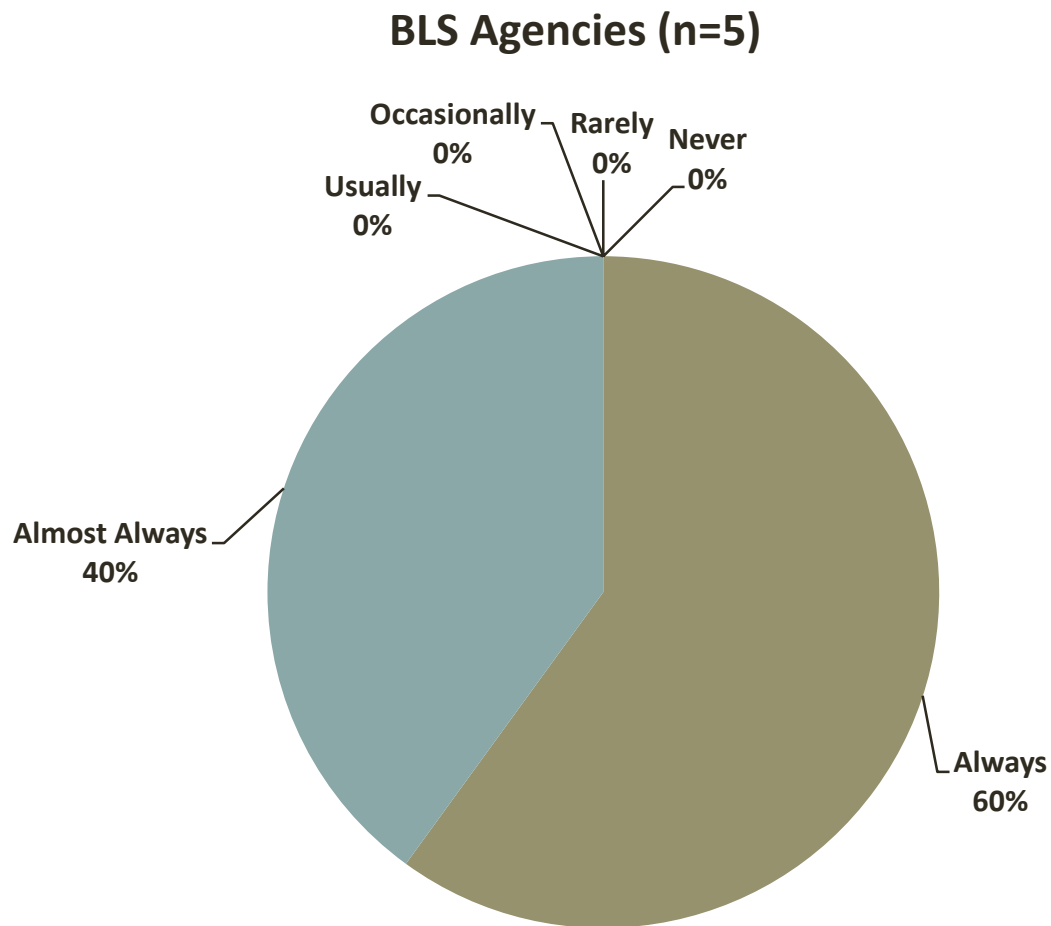


In the past year, have any of your providers attempted to contact on-line medical direction for medical advice when treating a pediatric patient, age 0-18 years?

ALS Agencies (n=170)

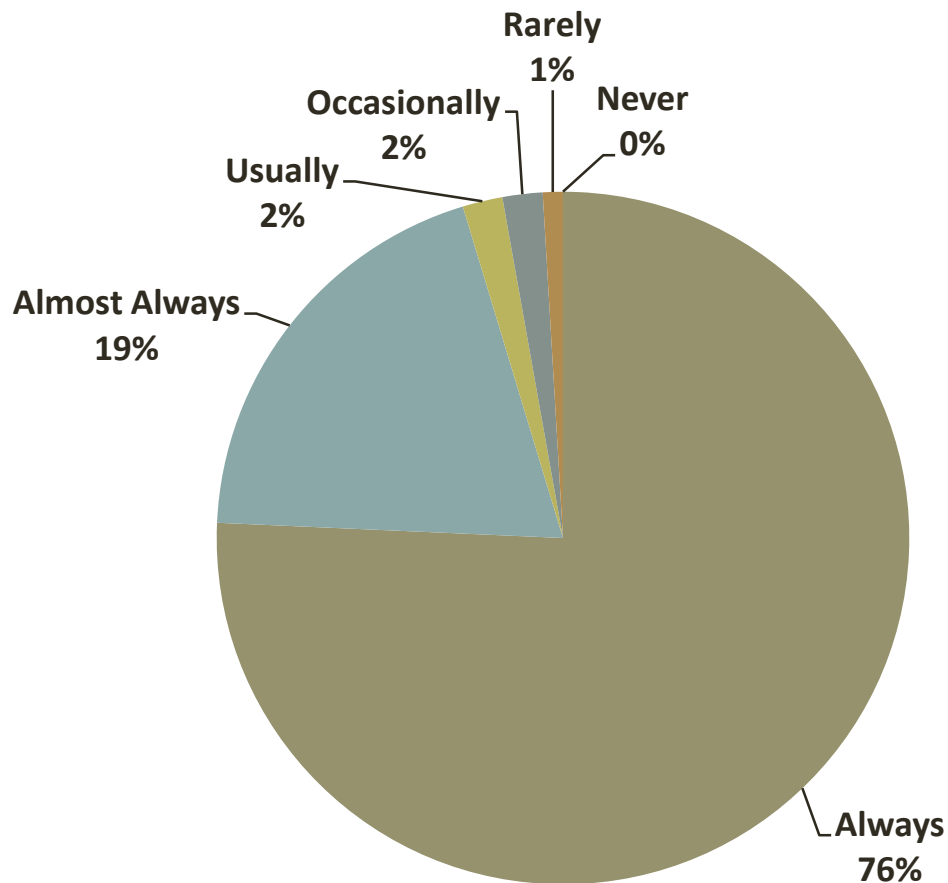


In the past year, how often was on-line medical direction available to provide medical advice to your providers when they were treating pediatric patients, age 0-18 years?



In the past year, how often was on-line medical direction available to provide medical advice to your providers when they were treating pediatric patients, age 0-18 years?

ALS Agencies (n=107)

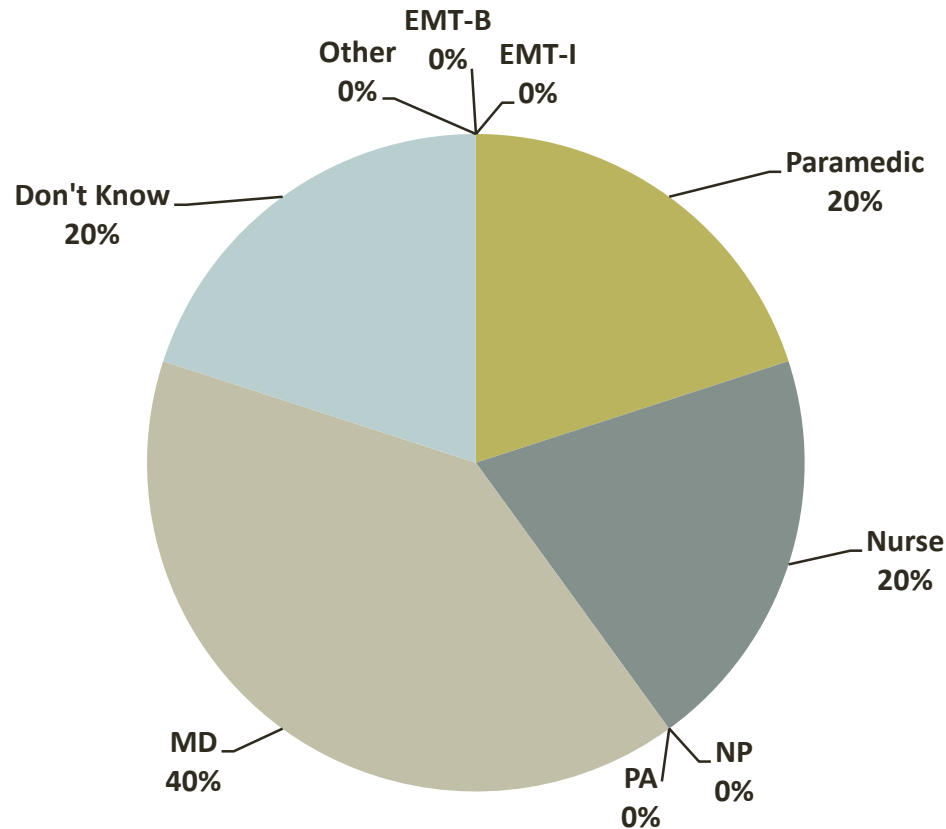


Performance Measure Results

- Defined by answering “Always” or “Almost Always”
- 100% of BLS agencies have on-line medical direction for treating pediatric patients
- 95% of ALS agencies have on-line medical direction for treating pediatric patients

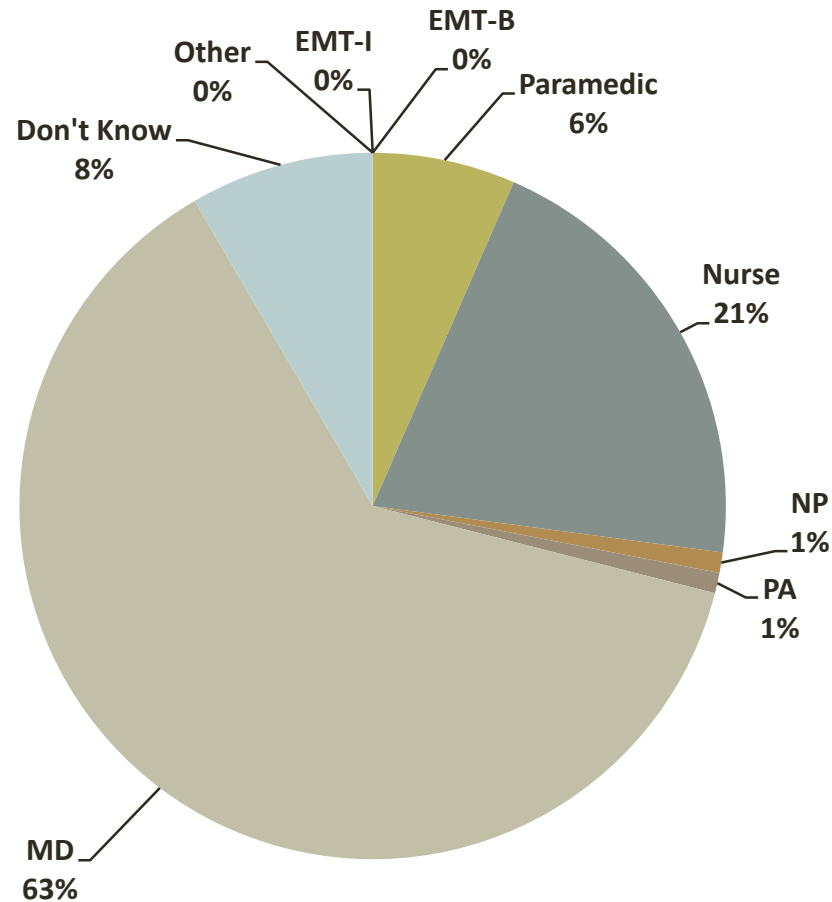
In the past year, when on-line medical direction was available, what type of medical professional PRIMARILY gave your providers medical advice when they were treating a pediatric patient, 0-18 years?

BLS Agencies (n=5)



In the past year, when on-line medical direction was available, what type of medical professional PRIMARILY gave your providers medical advice when they were treating a pediatric patient, age 0-18 years?

ALS Agencies (n=107)



Written

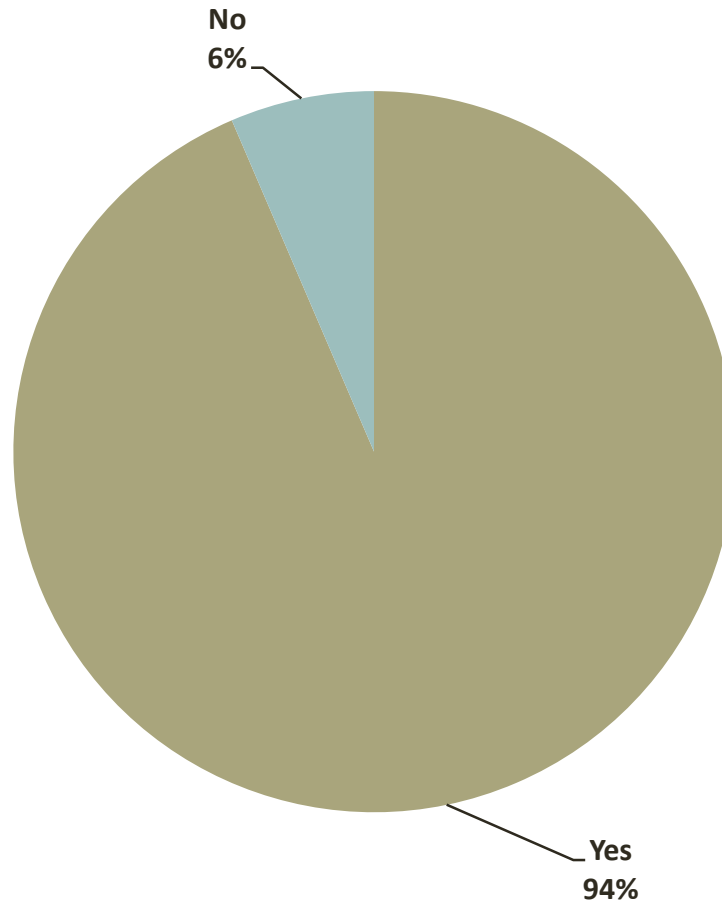
Protocols/Guidelines

Performance Measure

- PM 72: The percent of pre-hospital provider agencies in the State/Territory that have pediatric off-line medical direction available from dispatch through patient transport to a definitive care facility.

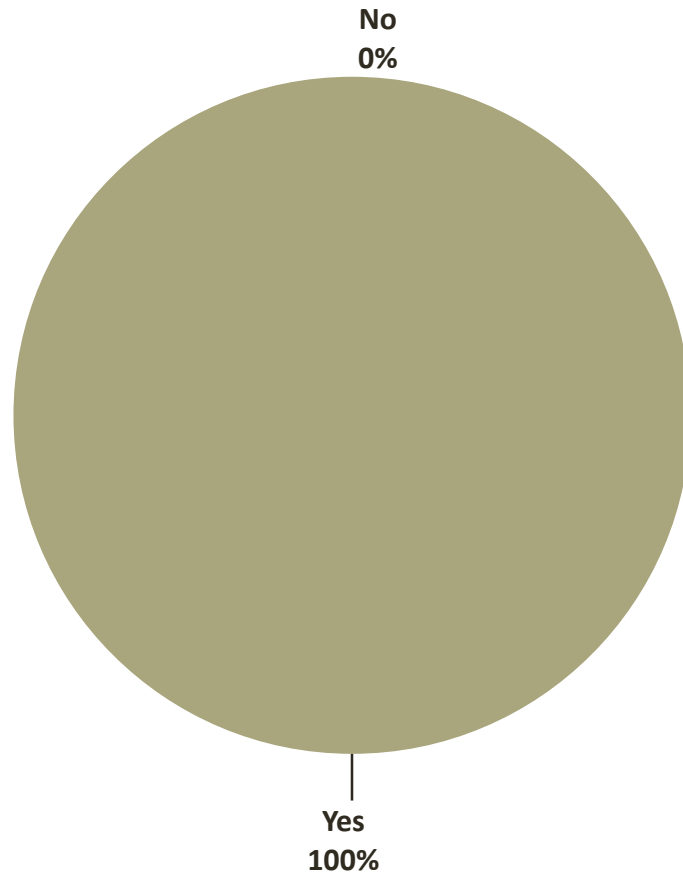
**Are written protocols or guidelines (paper or electronic)
available to your providers for the treatment of pediatric
patients, age 0-18 years?**

BLS Agencies (n=31)



**Are written protocols or guidelines (paper or electronic)
available to your providers for the treatment of pediatric
patients, age 0-18 years?**

ALS Agencies (n=170)



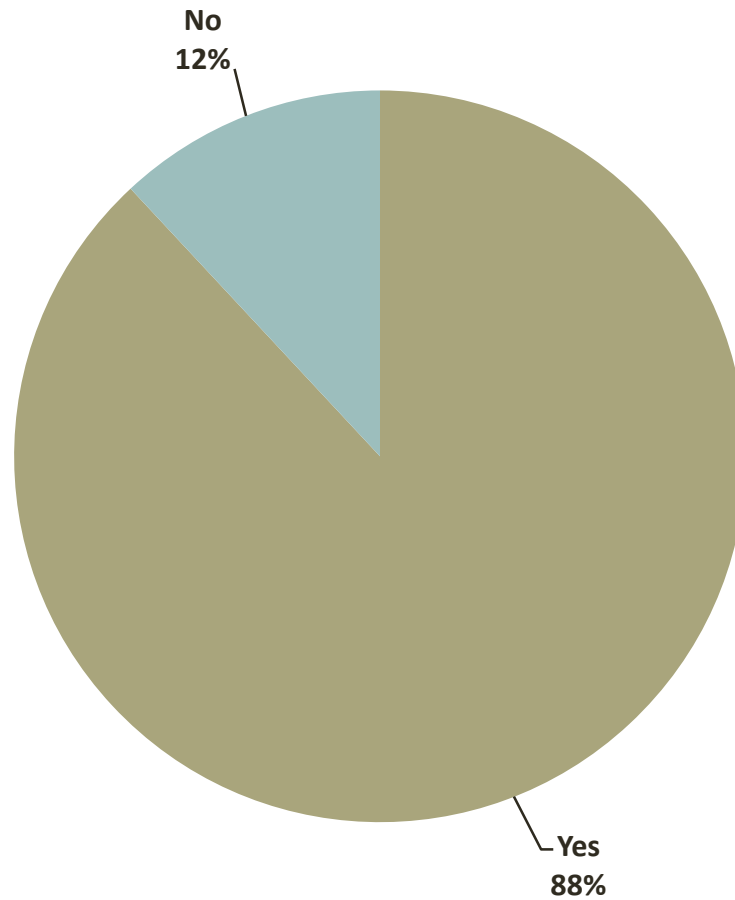
Performance Measure Results

- 18 of 31 BLS agencies (58%) responded “Always” or “Almost Always” to how often protocols were available in their vehicle
- 162 of 170 ALS agencies (95%) responded “Always” or “Almost Always” to how often protocols were available in their vehicle

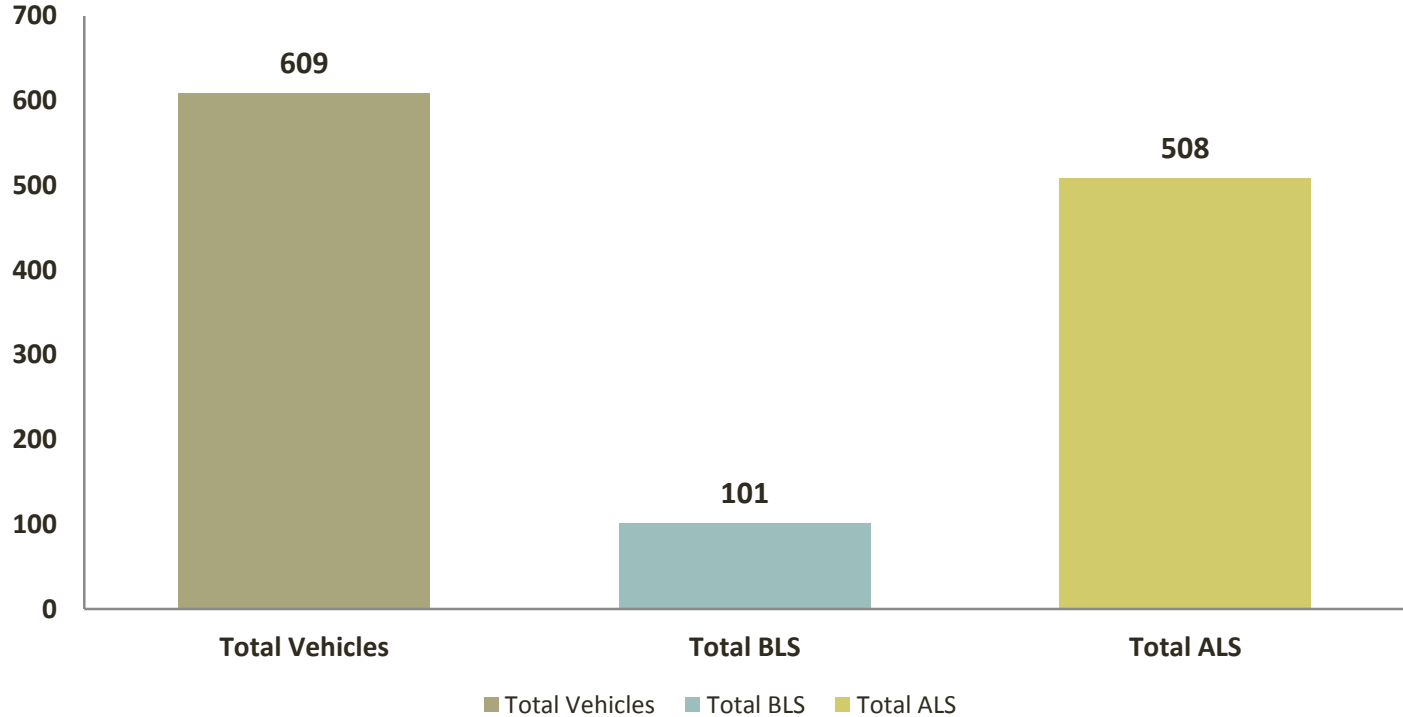
EMS Ground Vehicles

**Does your agency operate any ground vehicles that transport
patients from scene to hospital?**

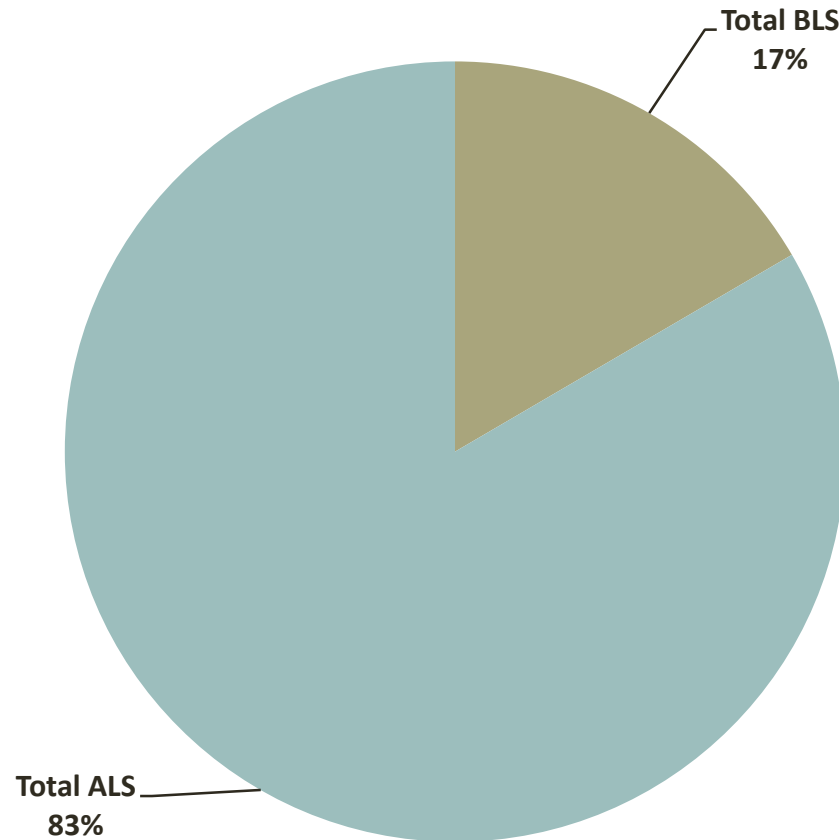
n=201



**The total number of ground vehicles that your agency
operates that transport patients from scene to hospital
n=609**



Breakdown of the level of emergency services for transporting ground vehicles
n=609

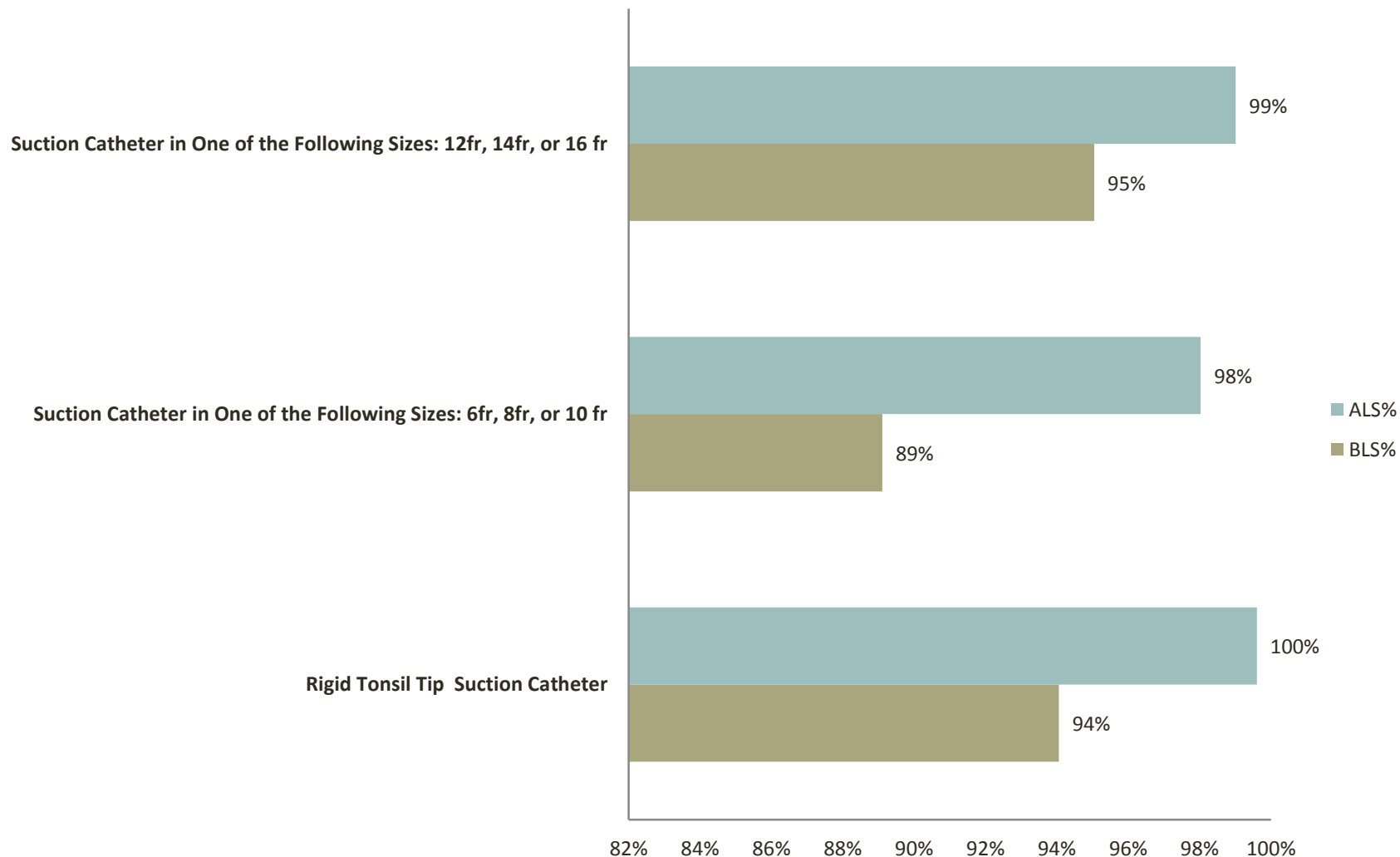


EMS Equipment

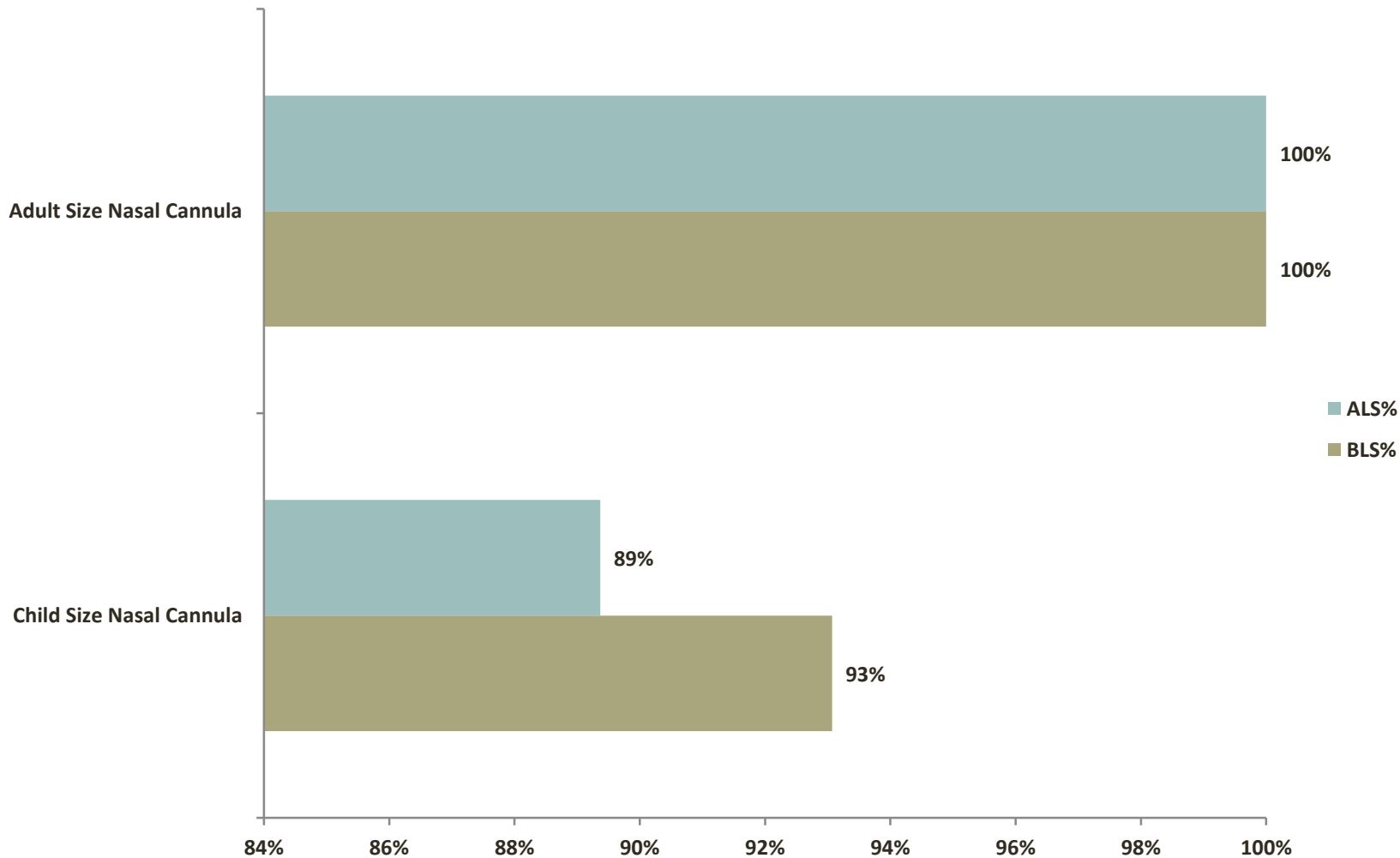
Performance Measure

- PM 73: The percent of patient care units in the State/Territory that have the essential pediatric equipment and supplies as outlined in national guidelines.

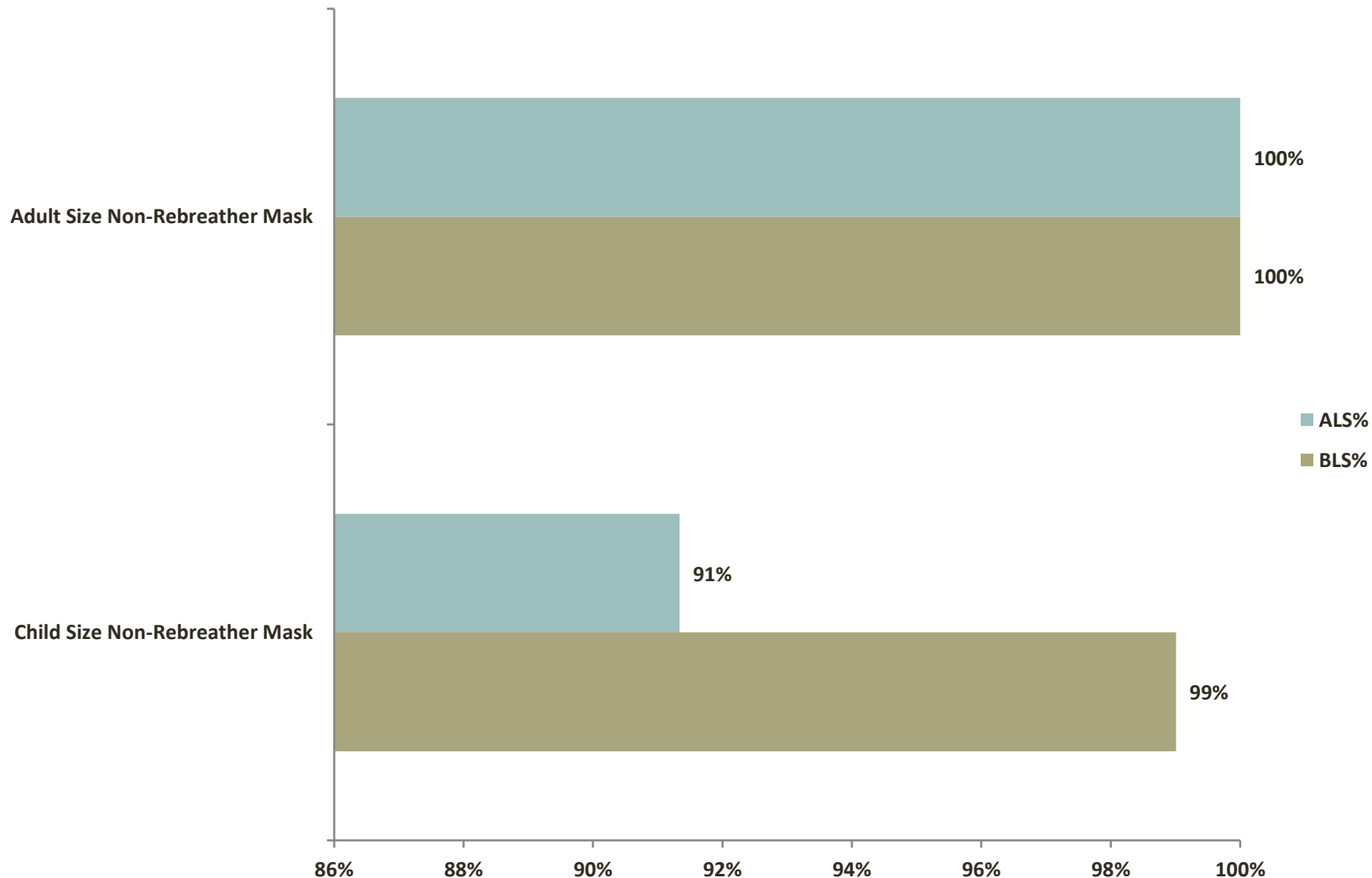
Suction Catheters: BLS (n=101) & ALS (508)



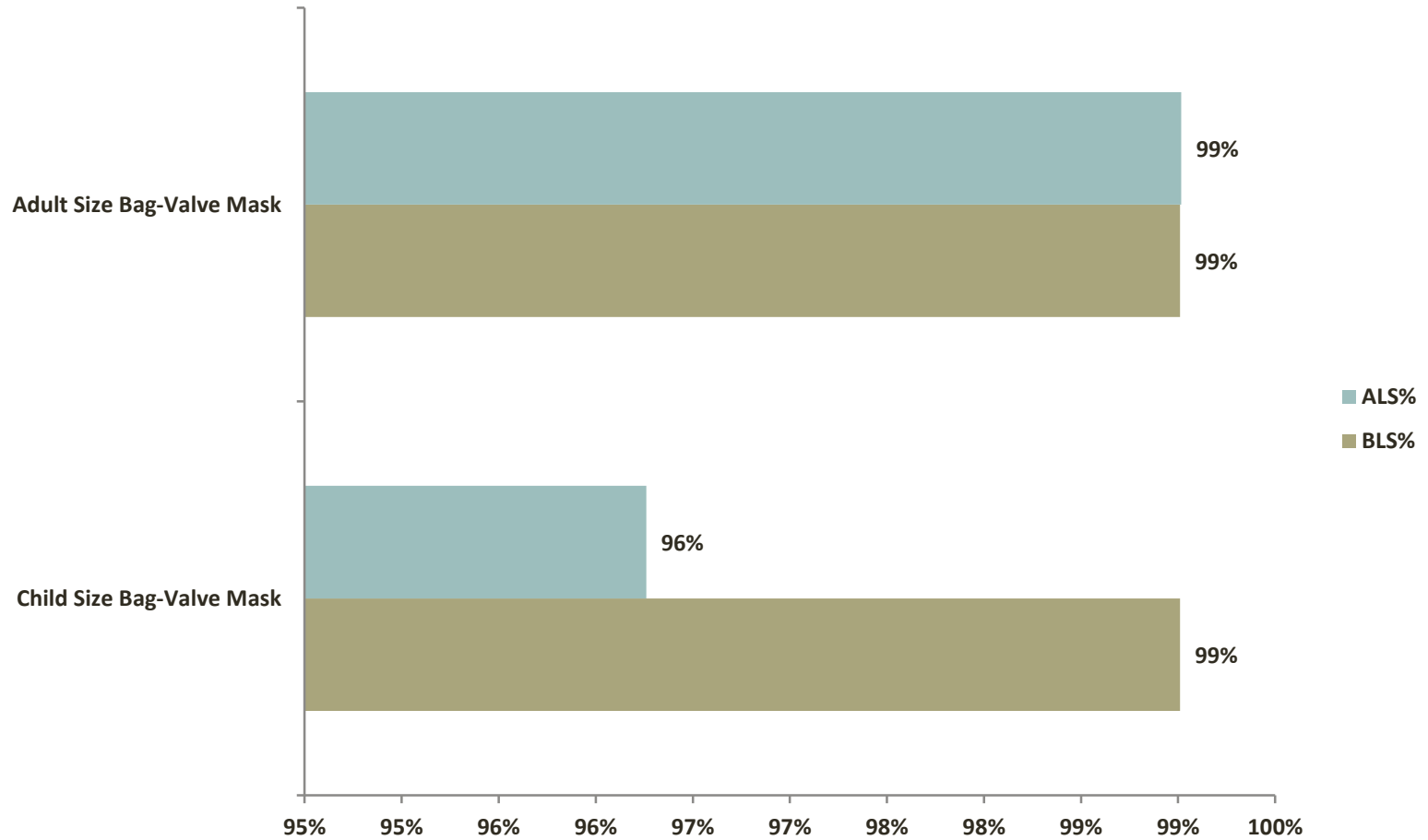
Nasal Cannulas: BLS (n=101) & ALS (n=508)



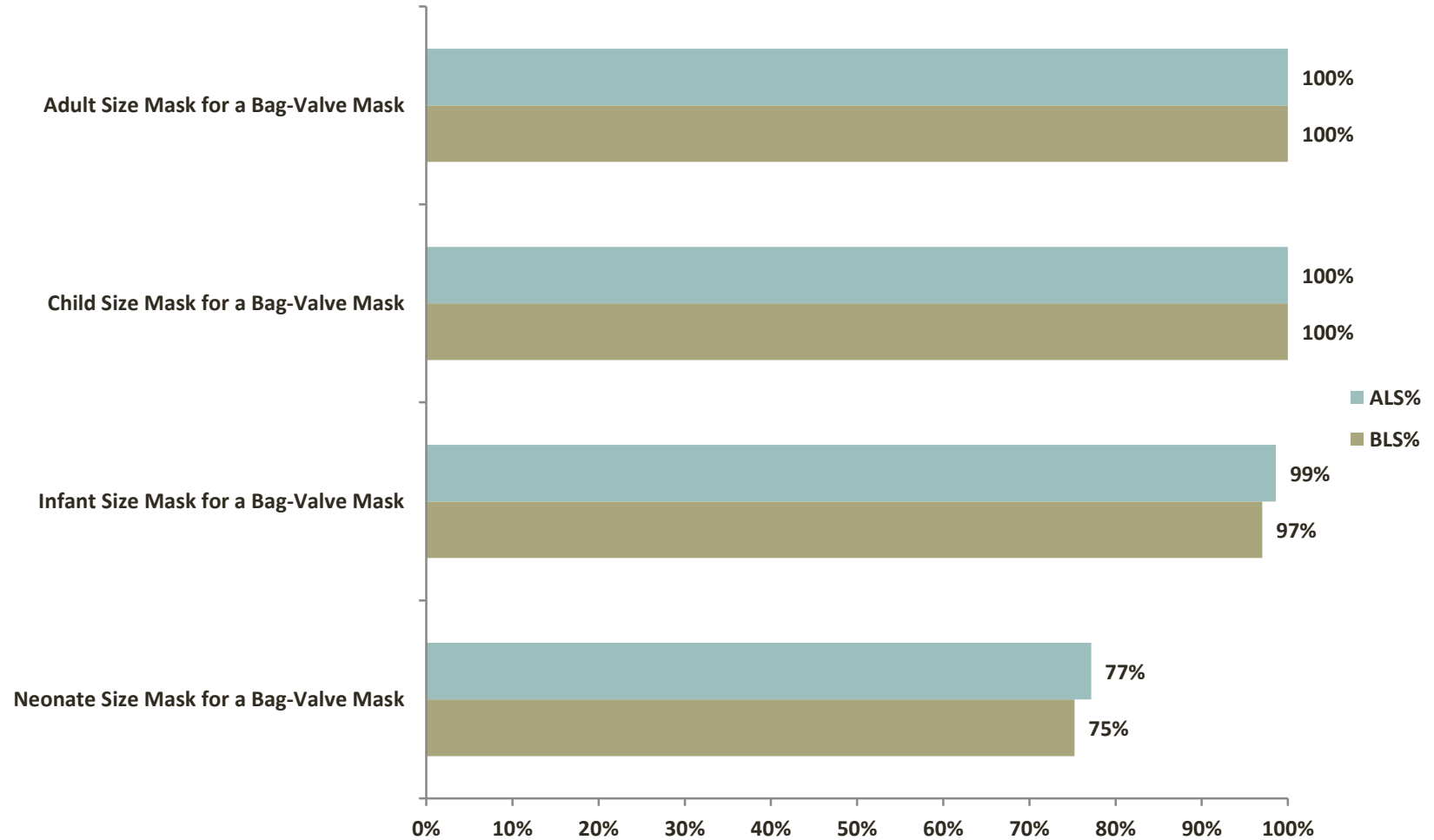
Non-Rebreather Masks: BLS (n=101) & ALS (n=508)



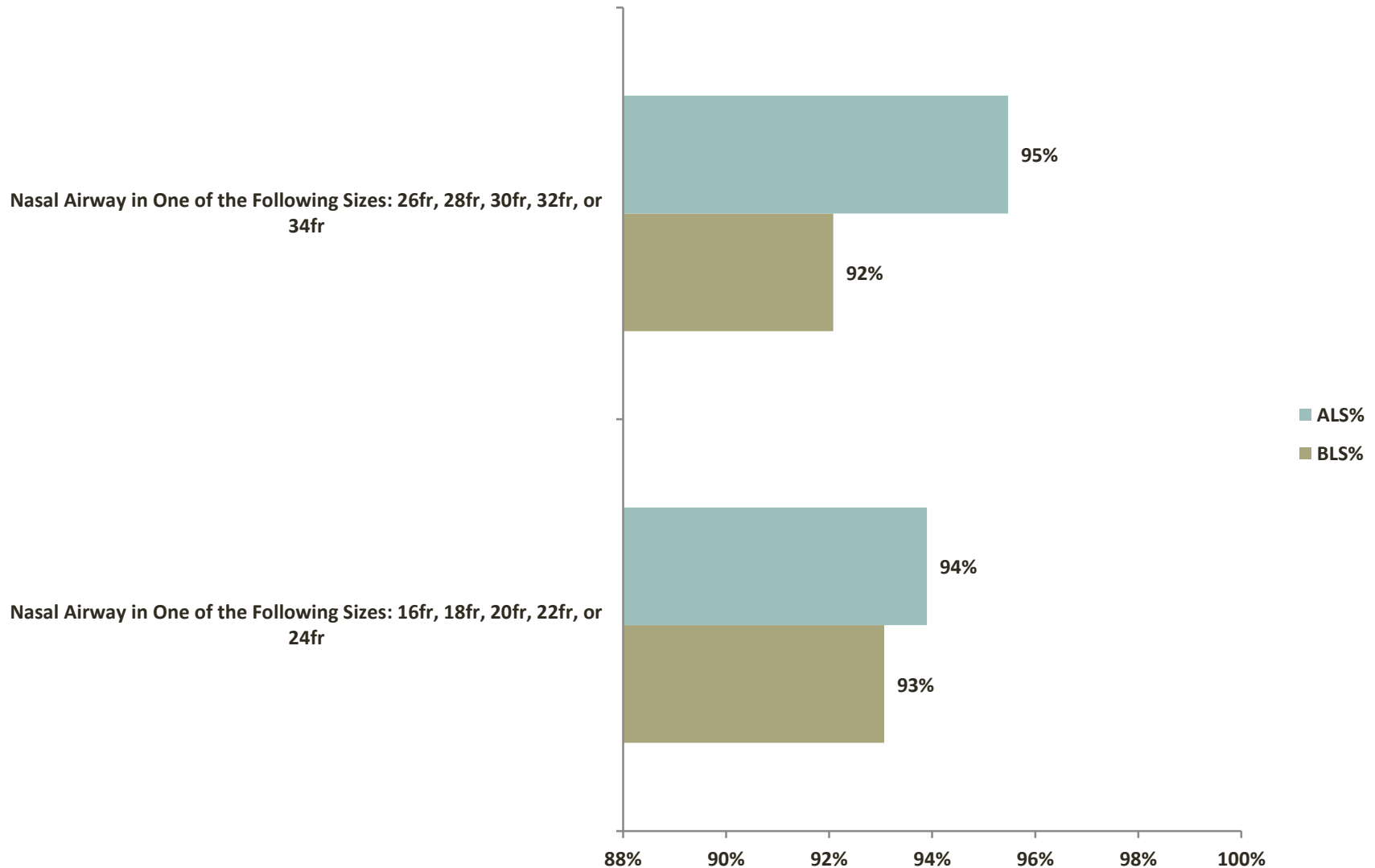
Bag-Valve Masks: BLS (n=101) & ALS (n=508)



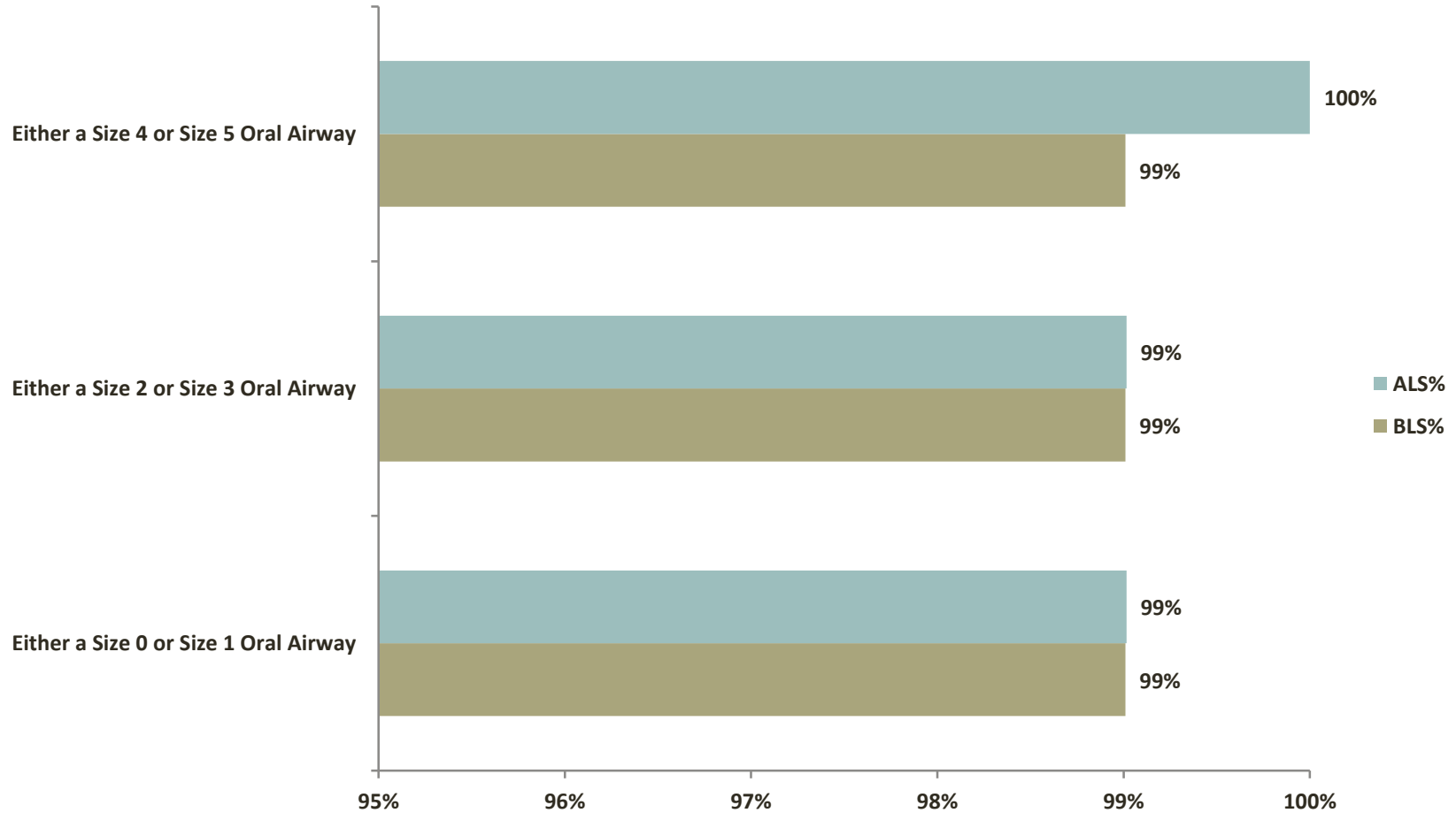
Masks for Bag-Valve Masks: BLS (n=101) & ALS (n=508)



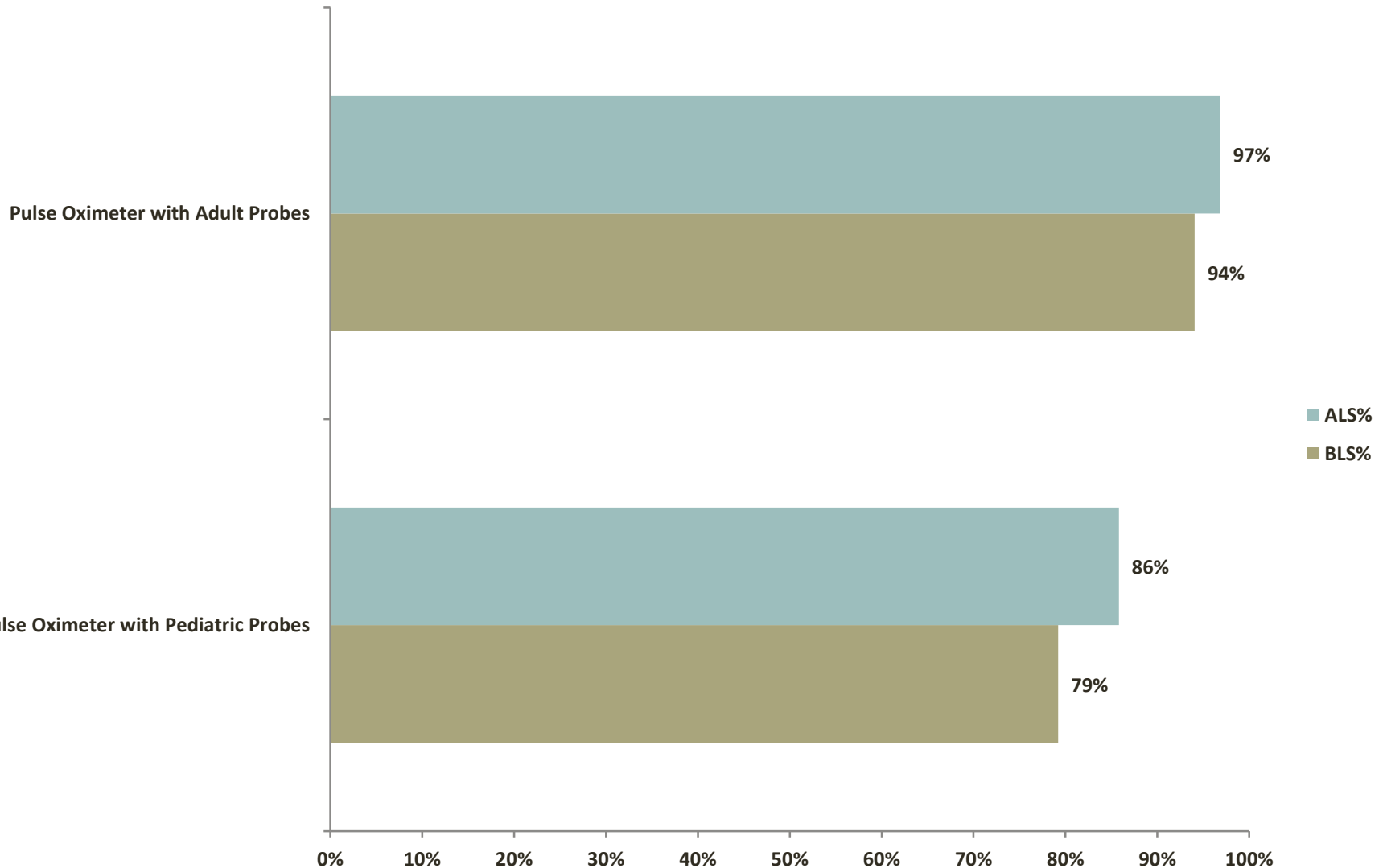
Nasal Airways: BLS (n=101) & ALS (n=508)



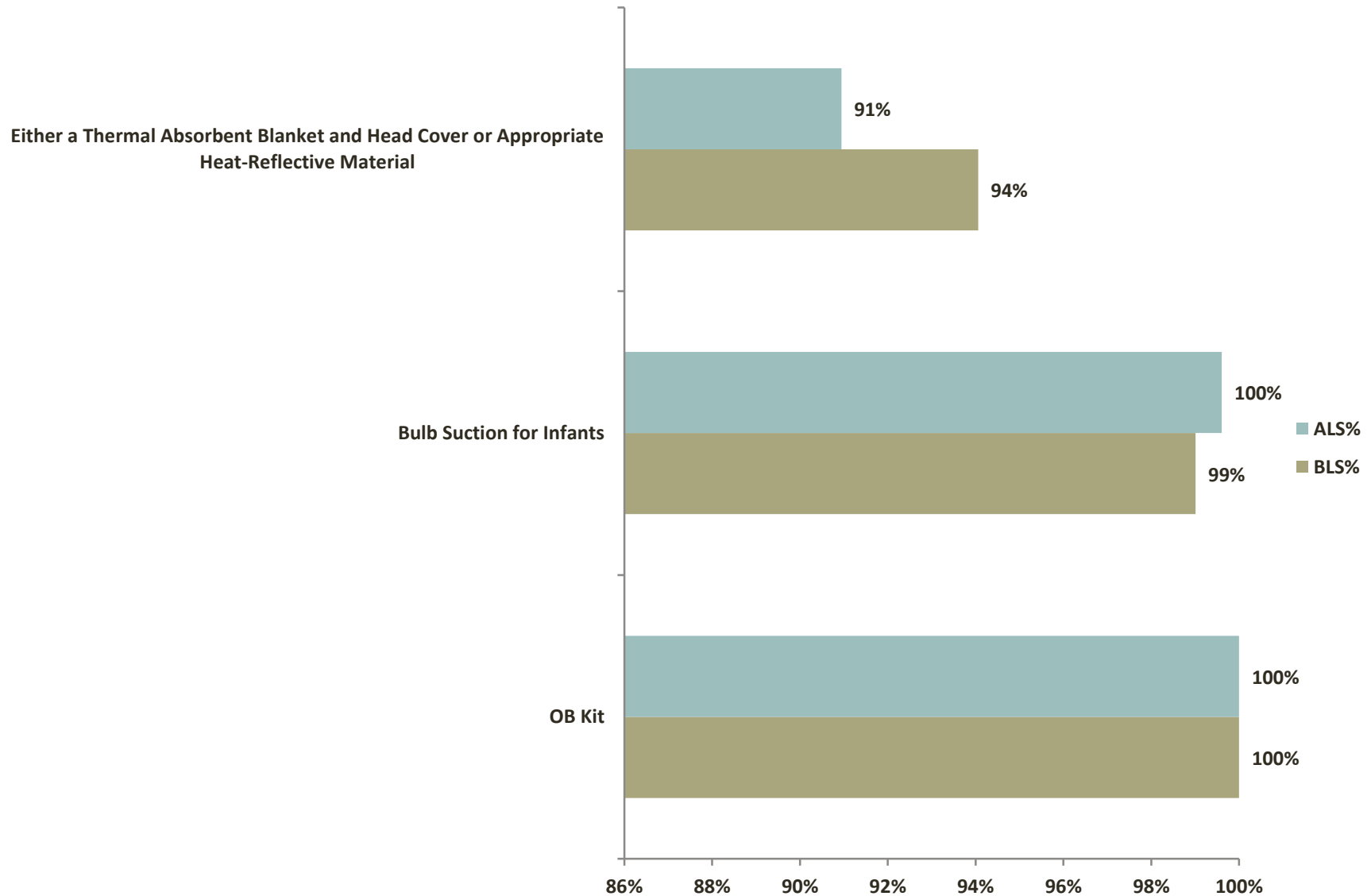
Oral Airways: BLS (n=101) & ALS (508)



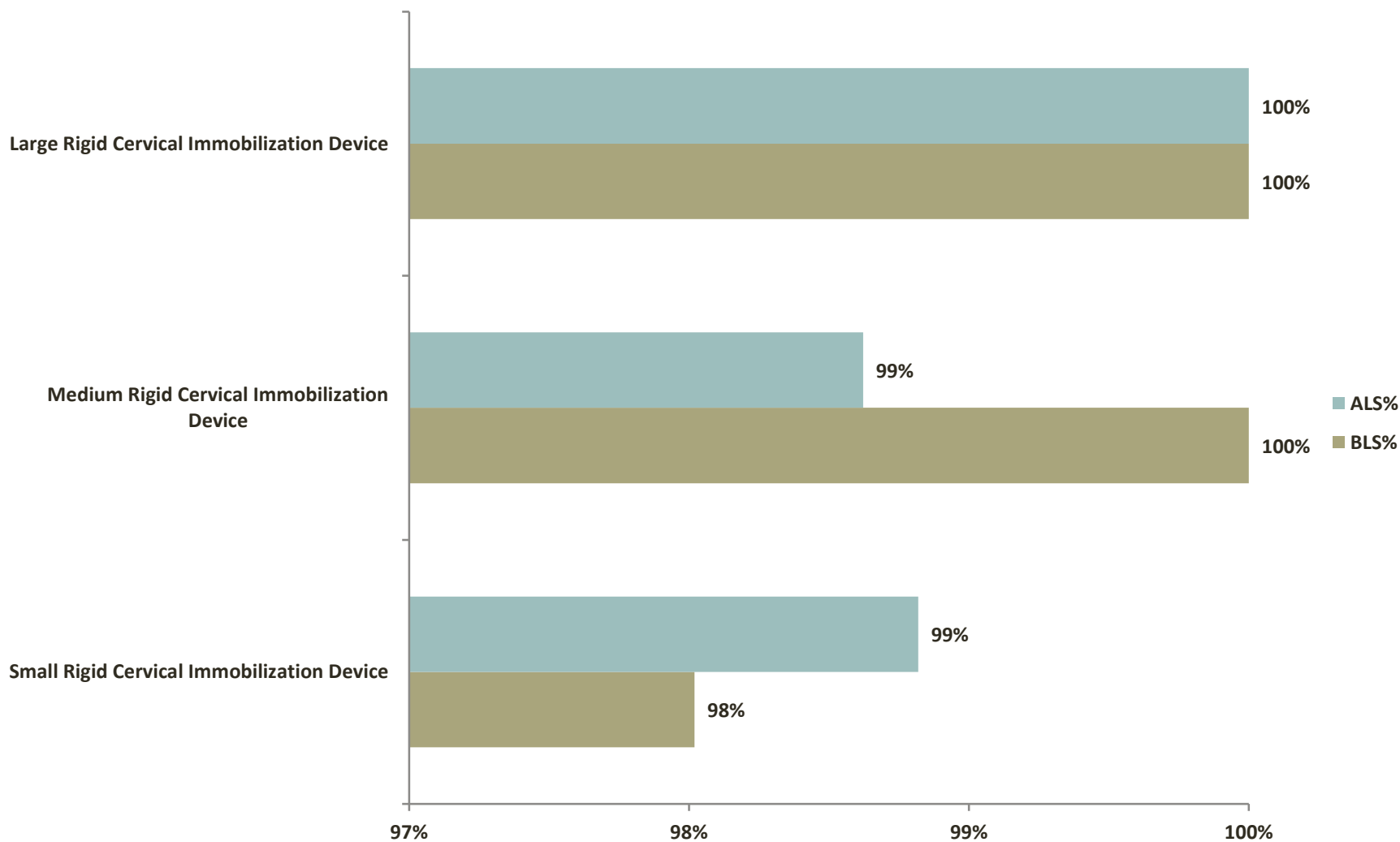
Pulse Oximeters: BLS (n=101) & ALS (n=508)



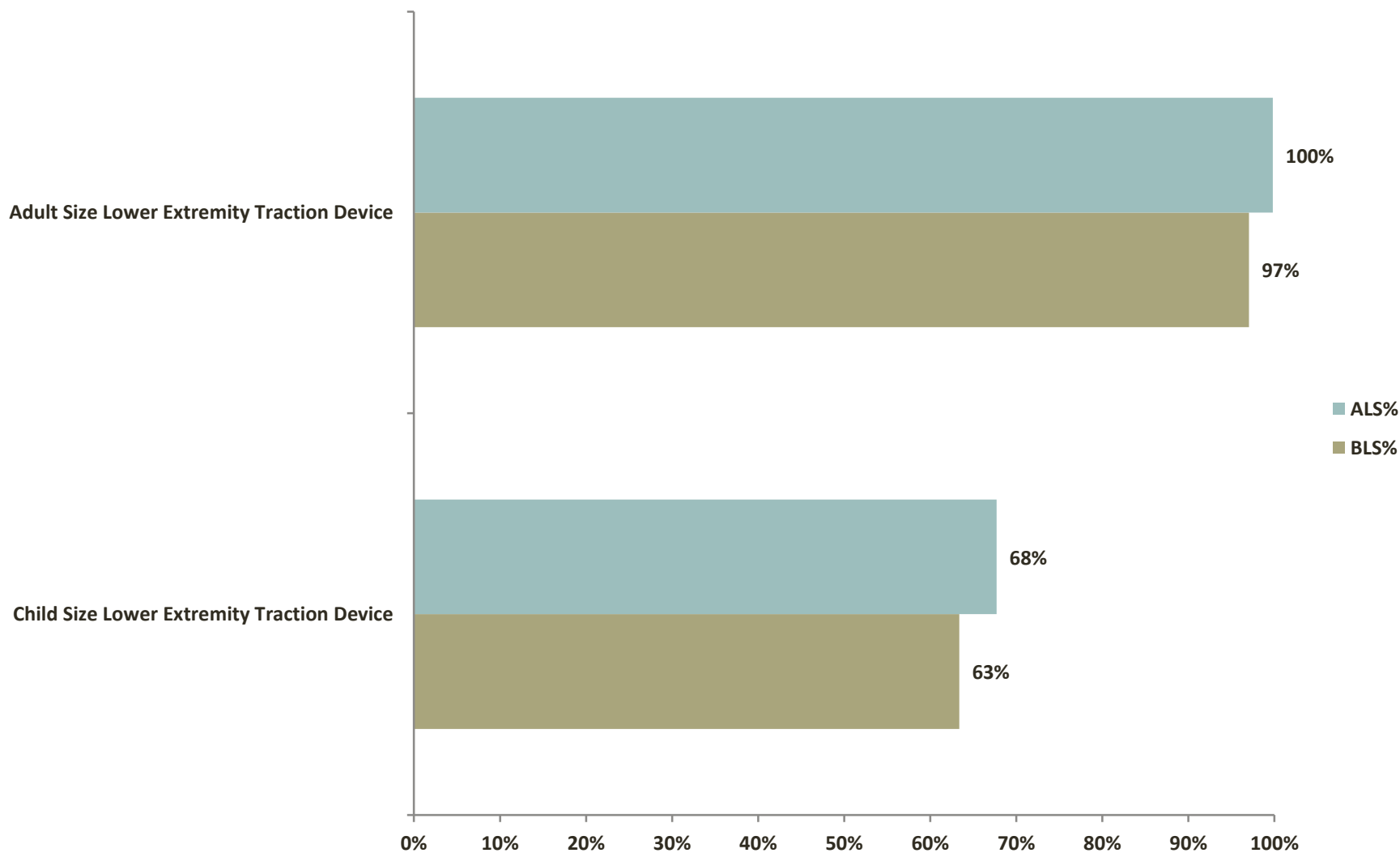
Infant Supplies: BLS (n=101) & ALS (n=508)



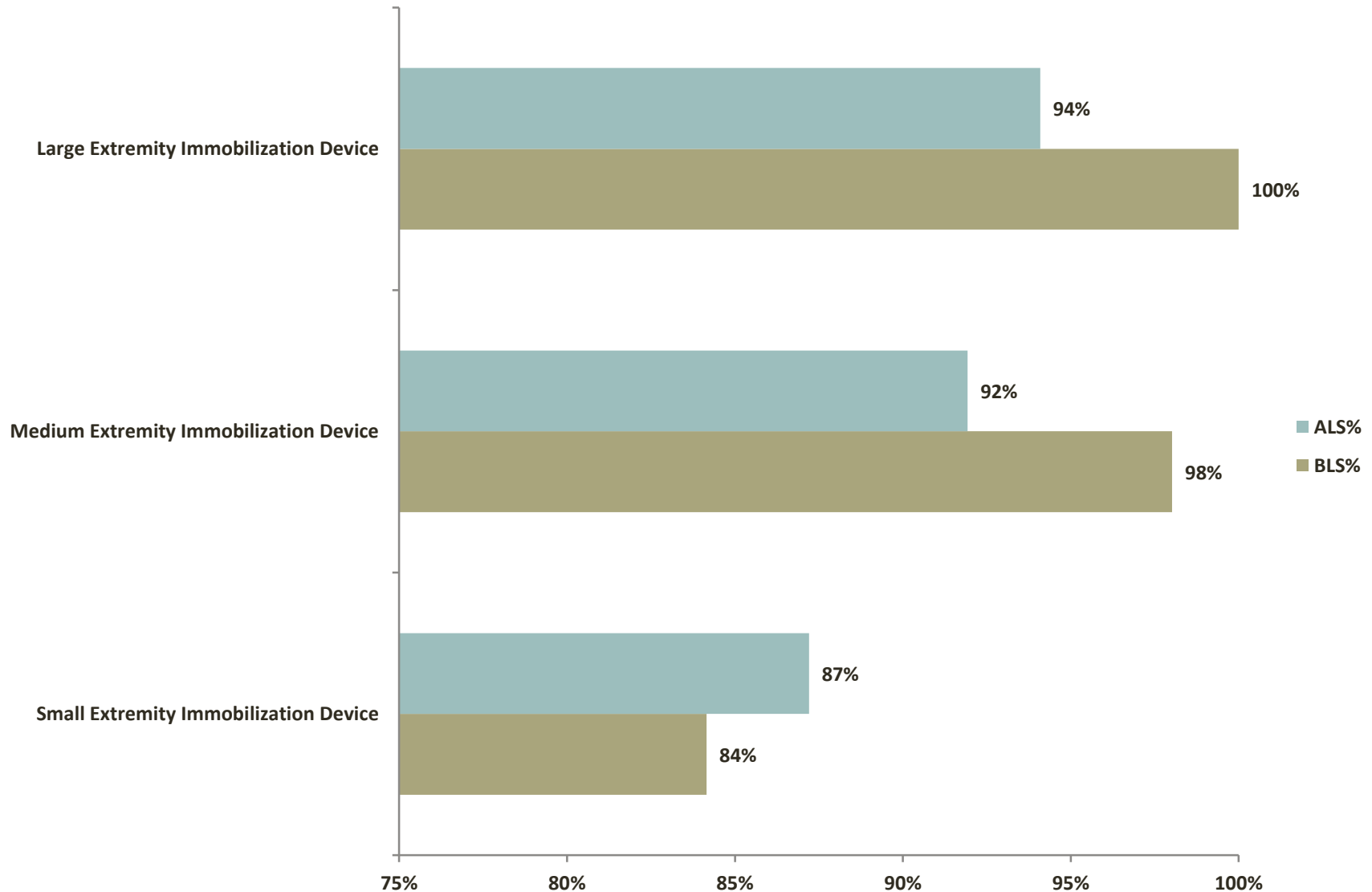
Cervical Immobilization Devices: BLS (n=101) & ALS (n=508)



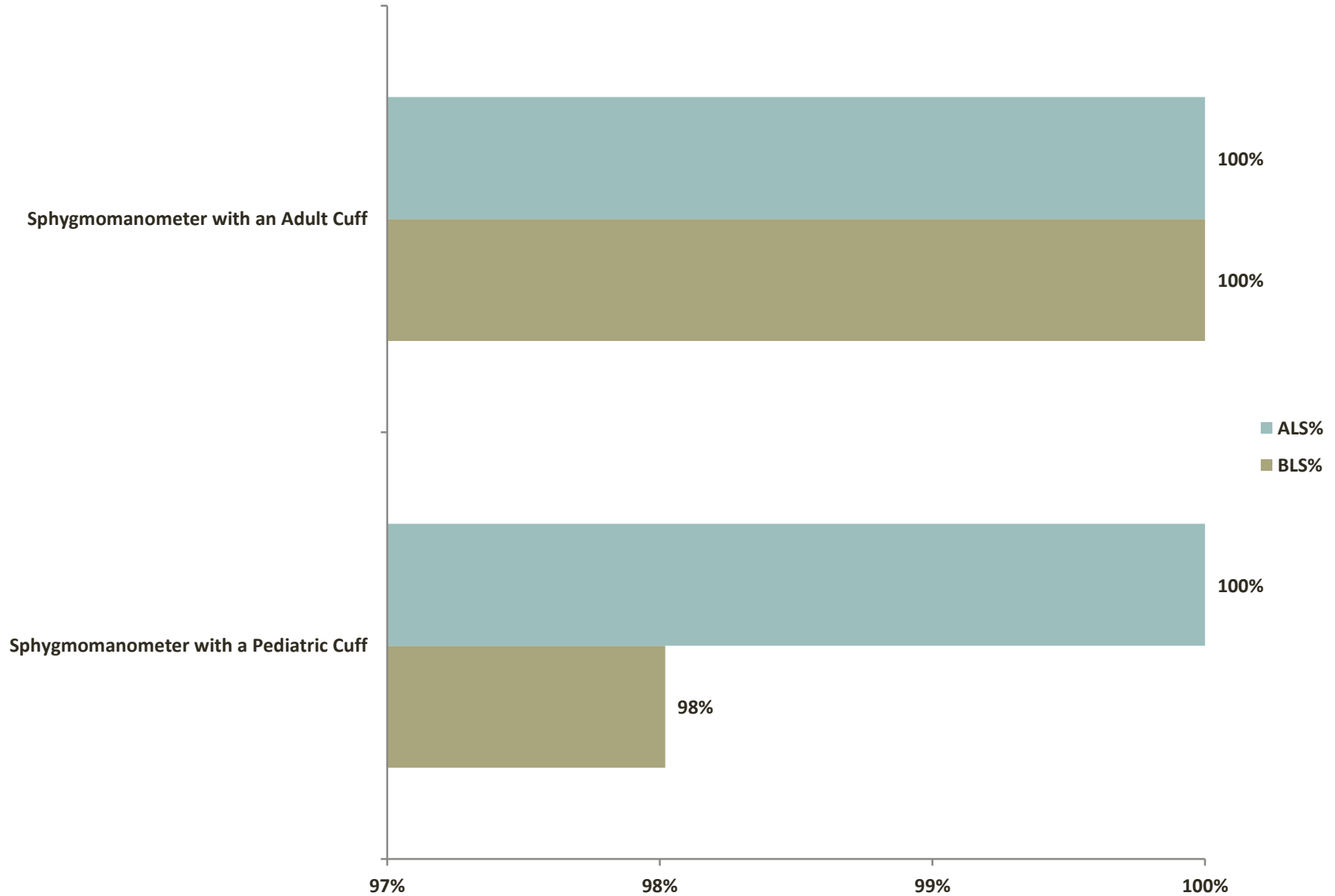
Lower Extremity Traction Devices: BLS (n=101) & ALS (n=508)



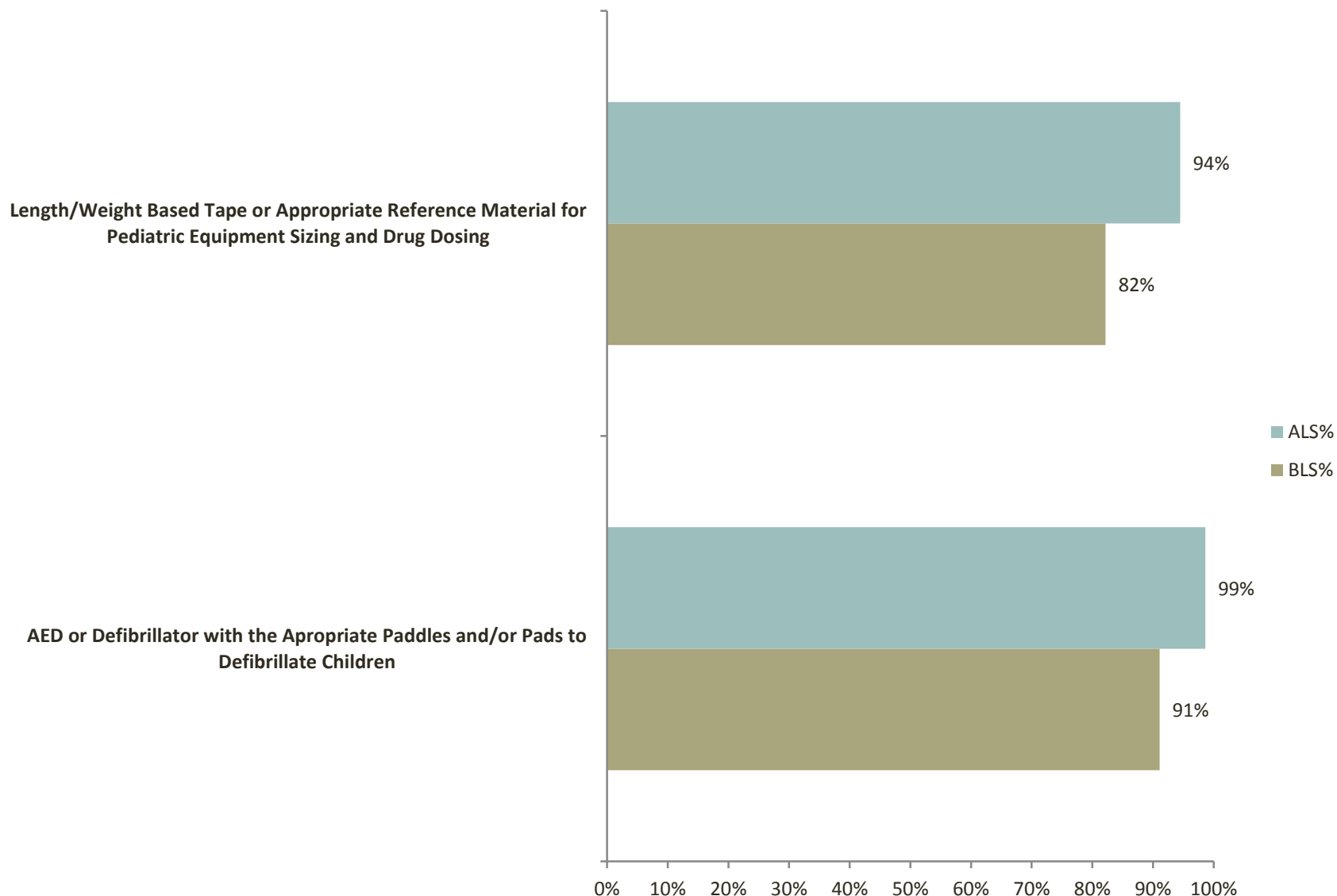
Extremity Immobilization Devices: BLS (n=101) & ALS (n=508)



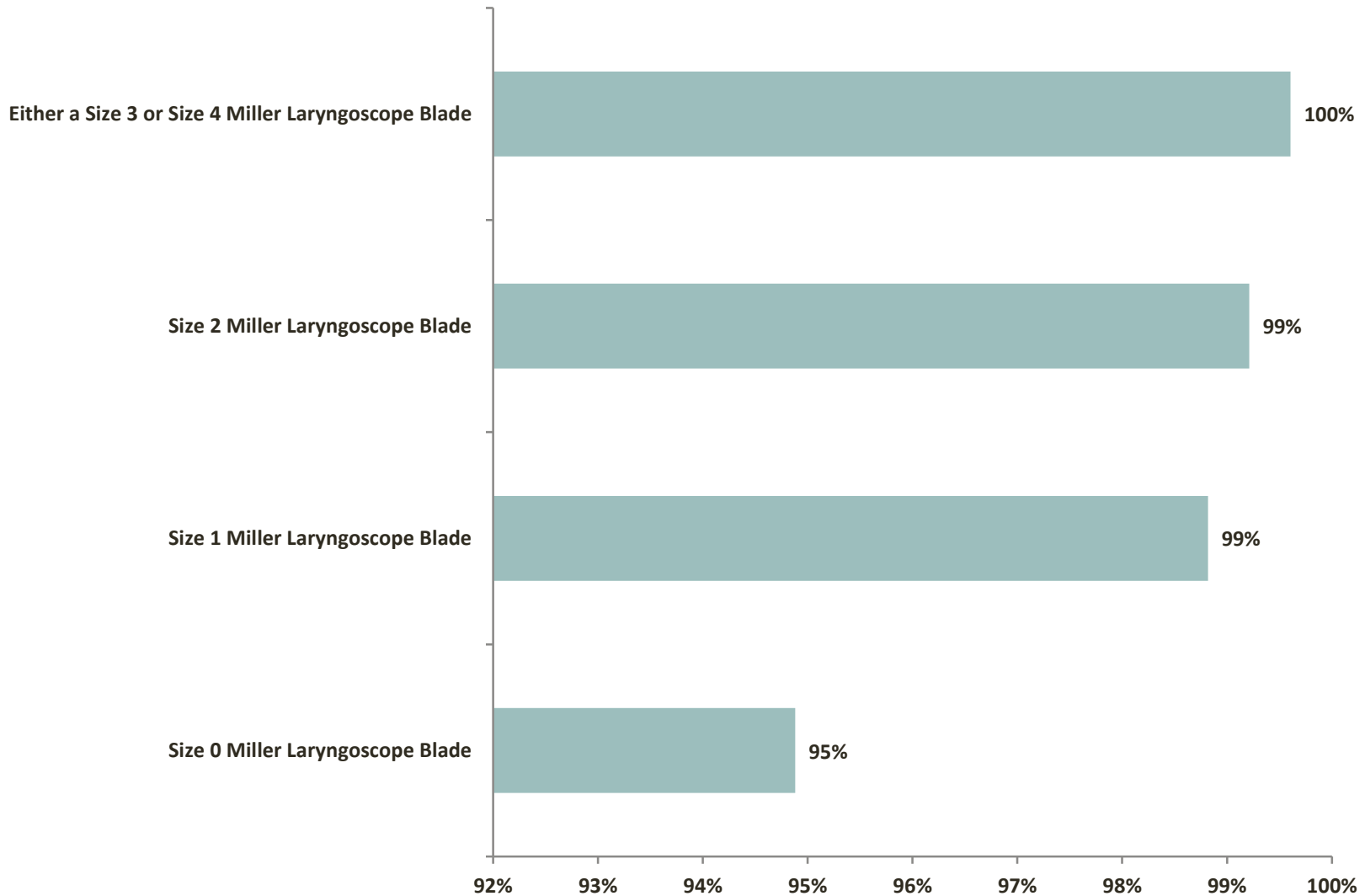
Sphygmomanometers: BLS (n=101) & ALS (n=508)



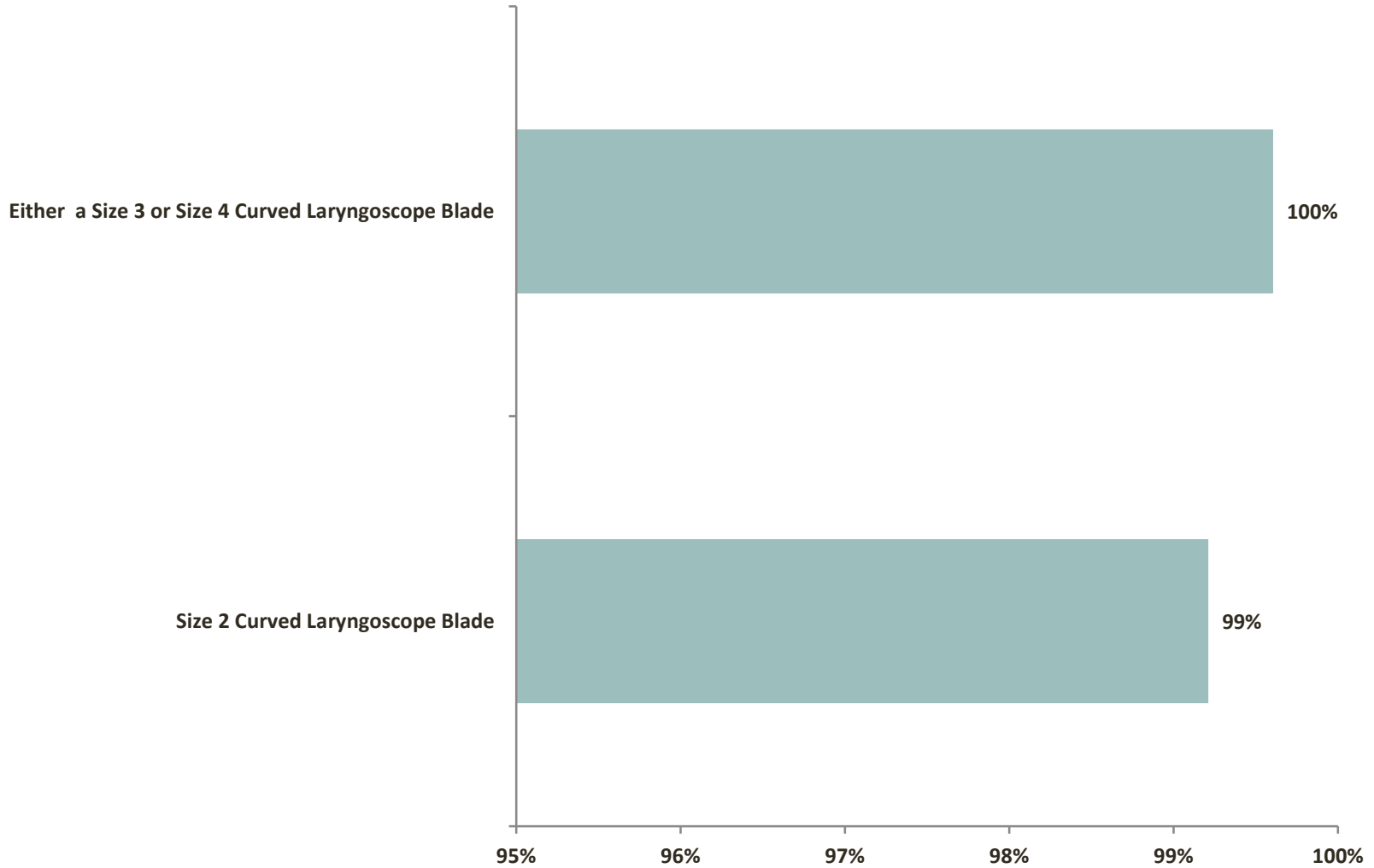
Other Equipment: BLS (n=101) & ALS (n=508)



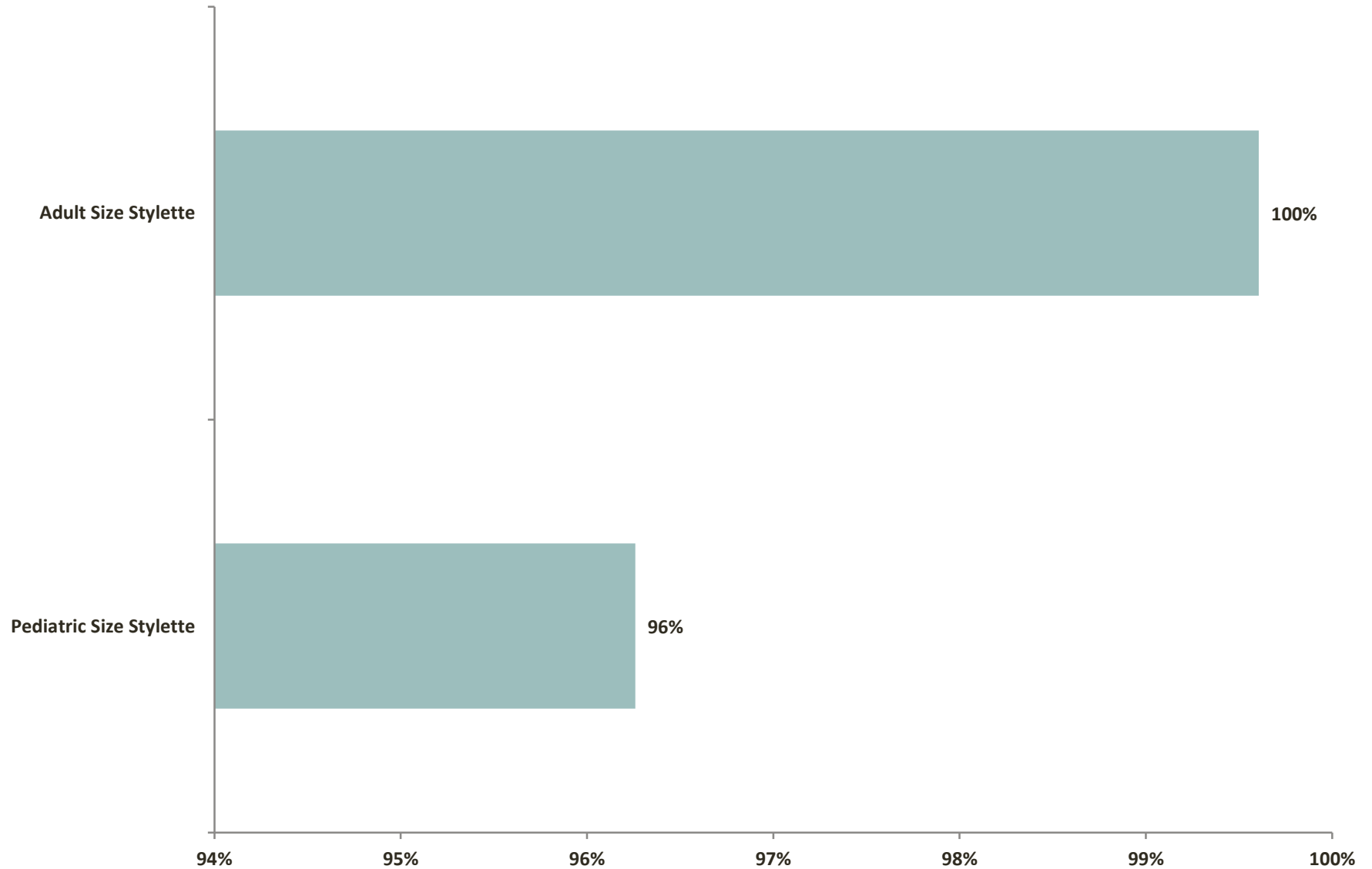
Miller Laryngoscope Blades: ALS Only (n=508)



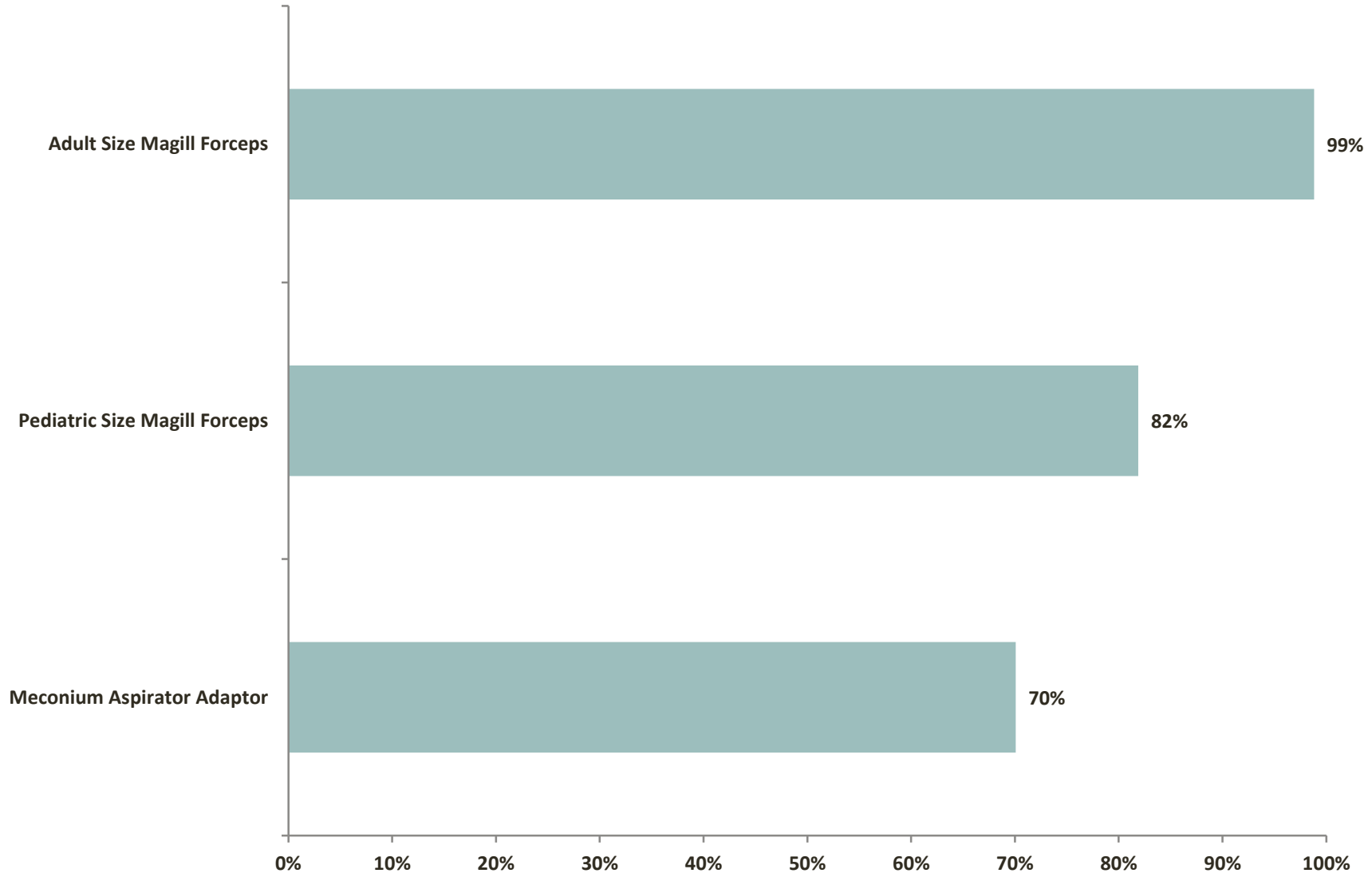
Curved Laryngoscope Blades: ALS Only (n=508)



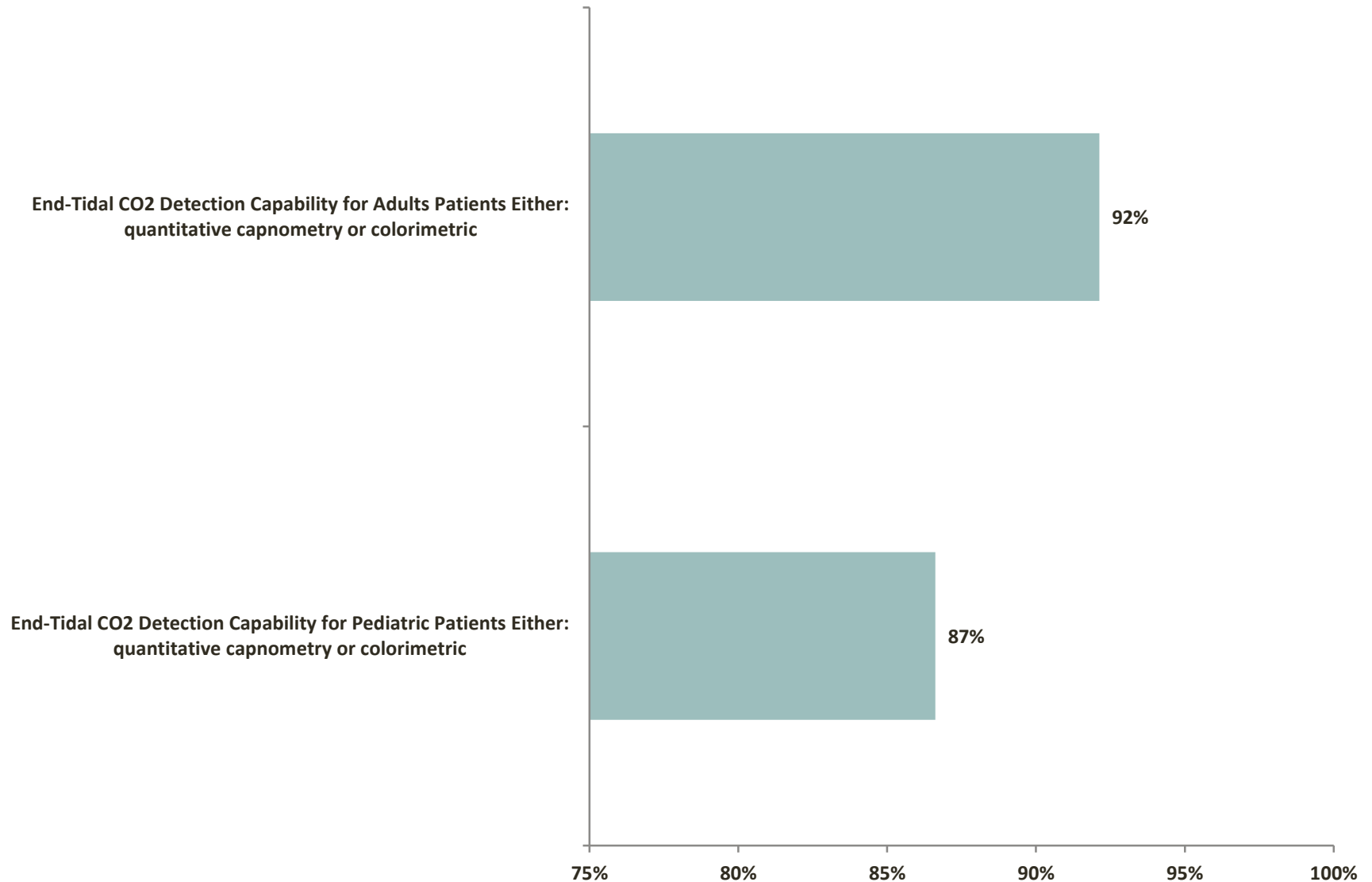
Stylettes: ALS Only (n=508)



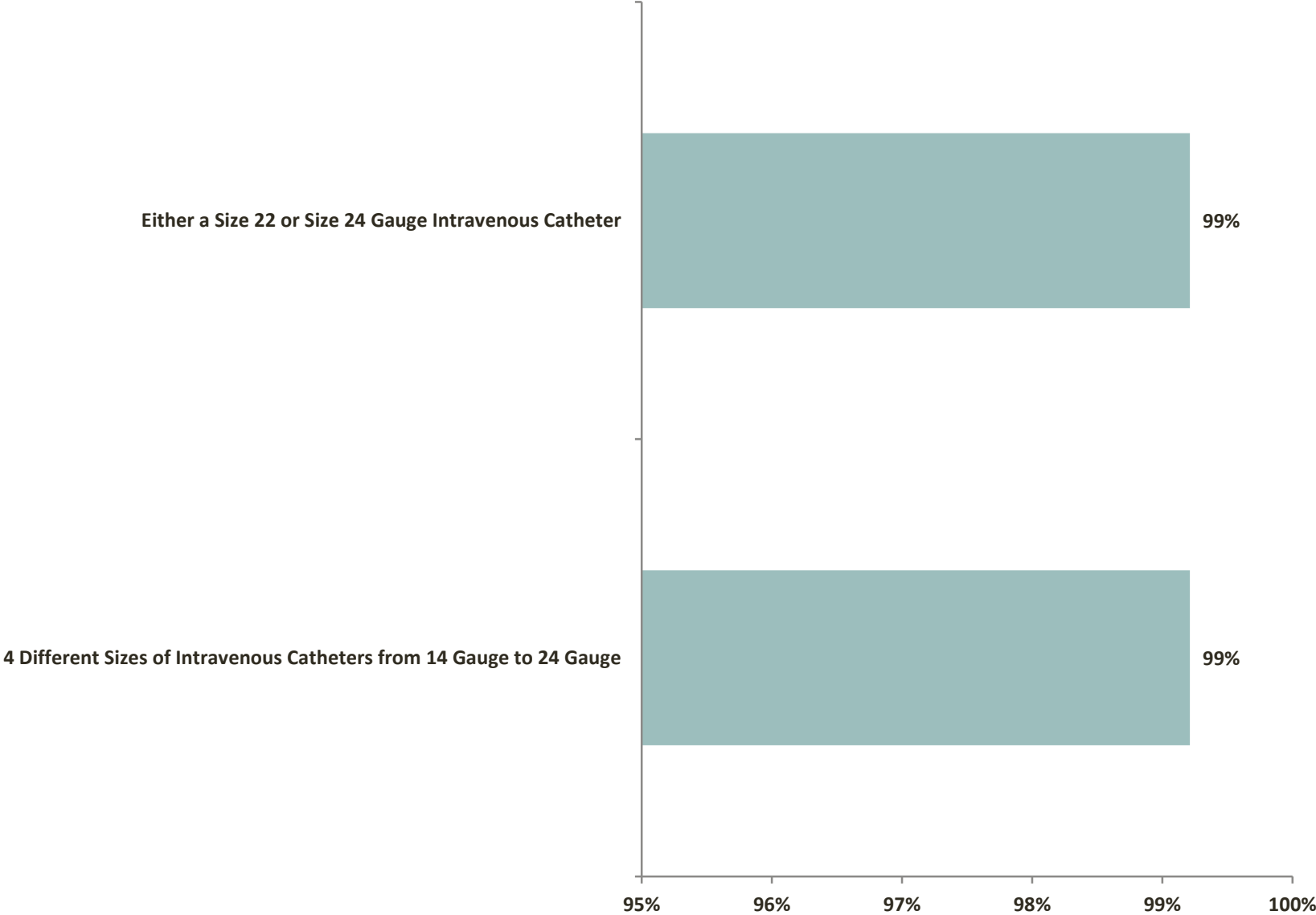
Forceps: ALS Only (n=508)



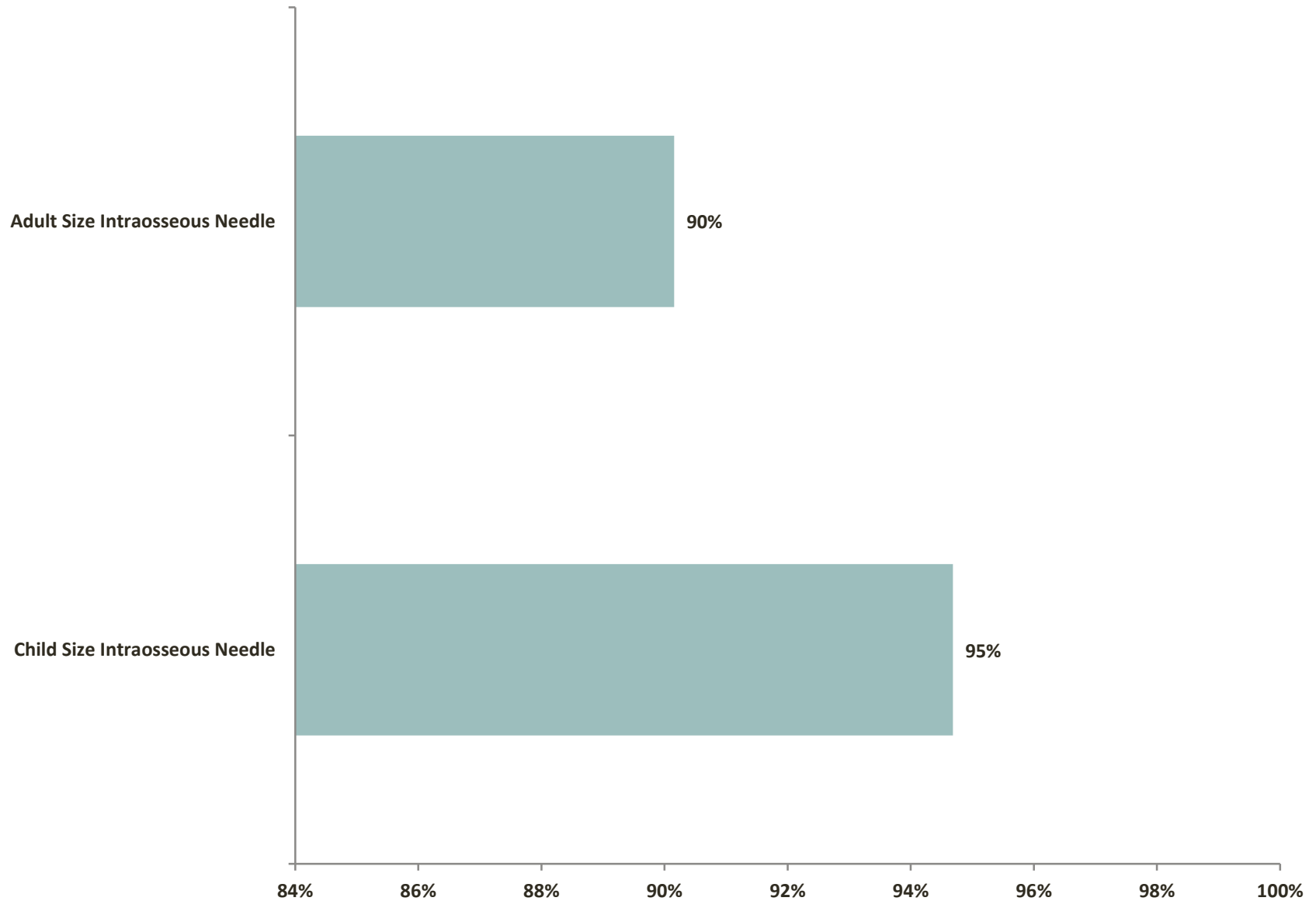
End-Tidal CO₂ Detection Capability: ALS Only (n=508)



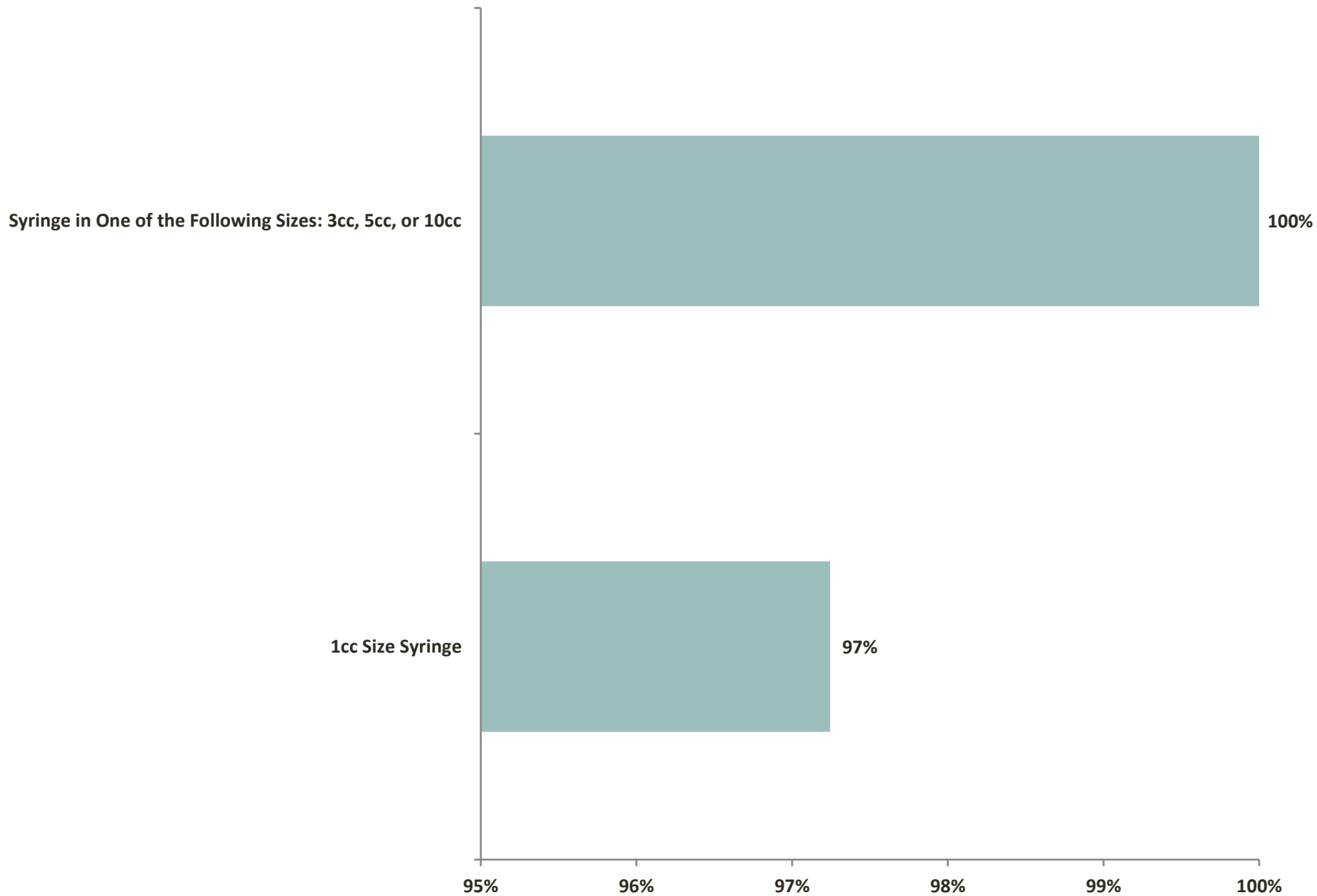
Intravenous Catheters: ALS Only (n=508)



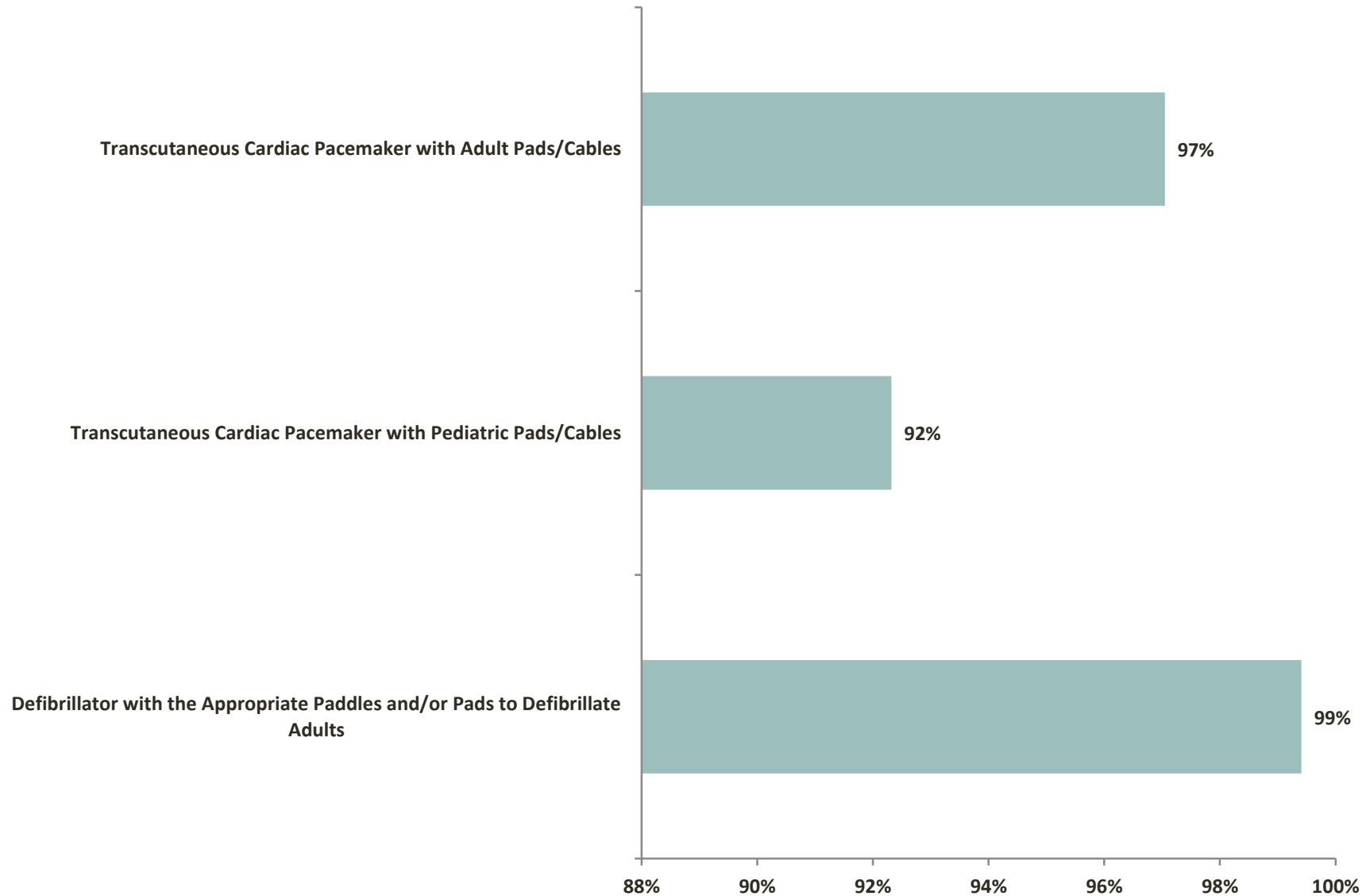
Intraosseous Needles: ALS Only (n=508)



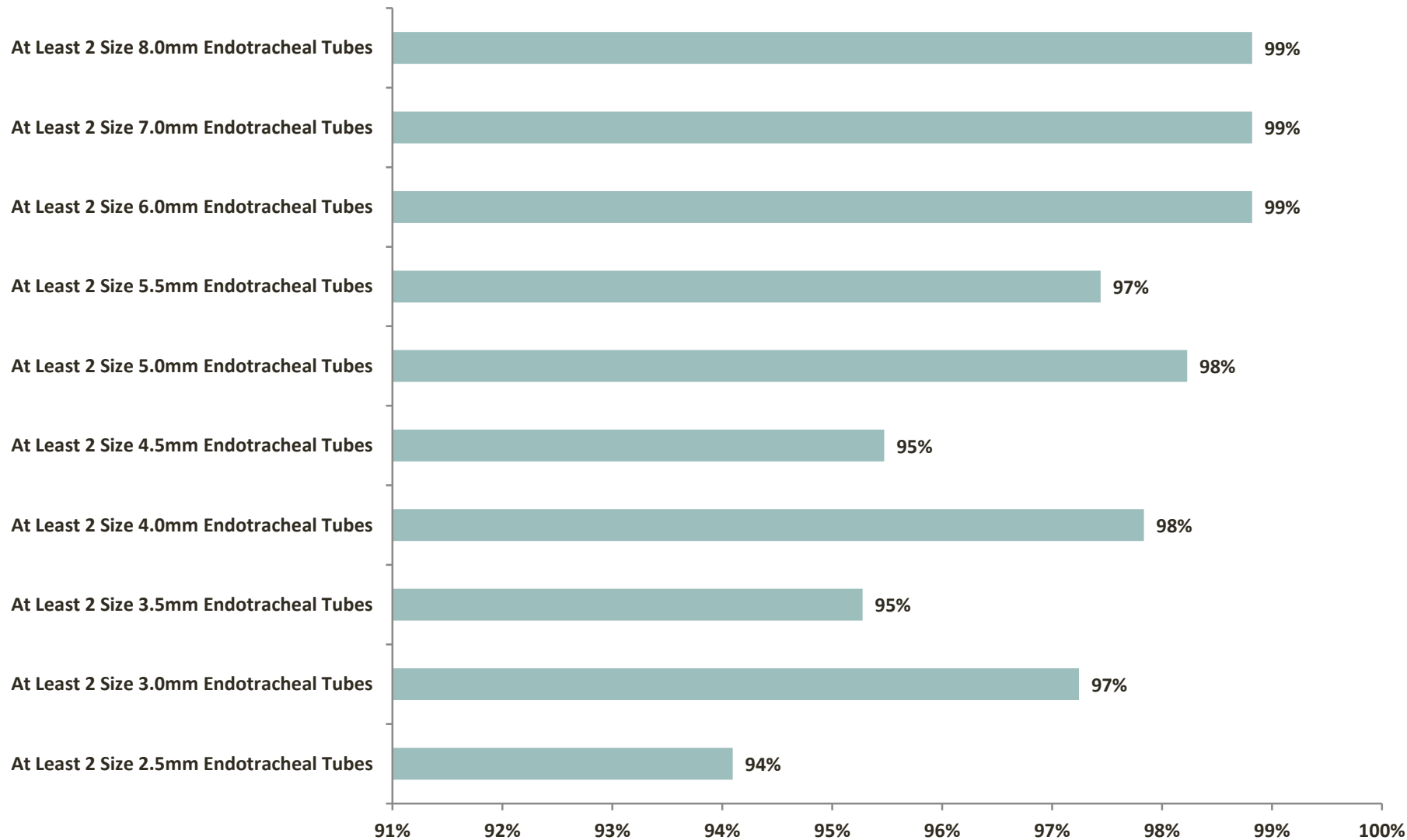
Syringes: ALS Only (n=508)



Transcutaneous Cardiac Pacemakers: ALS Only (n=508)



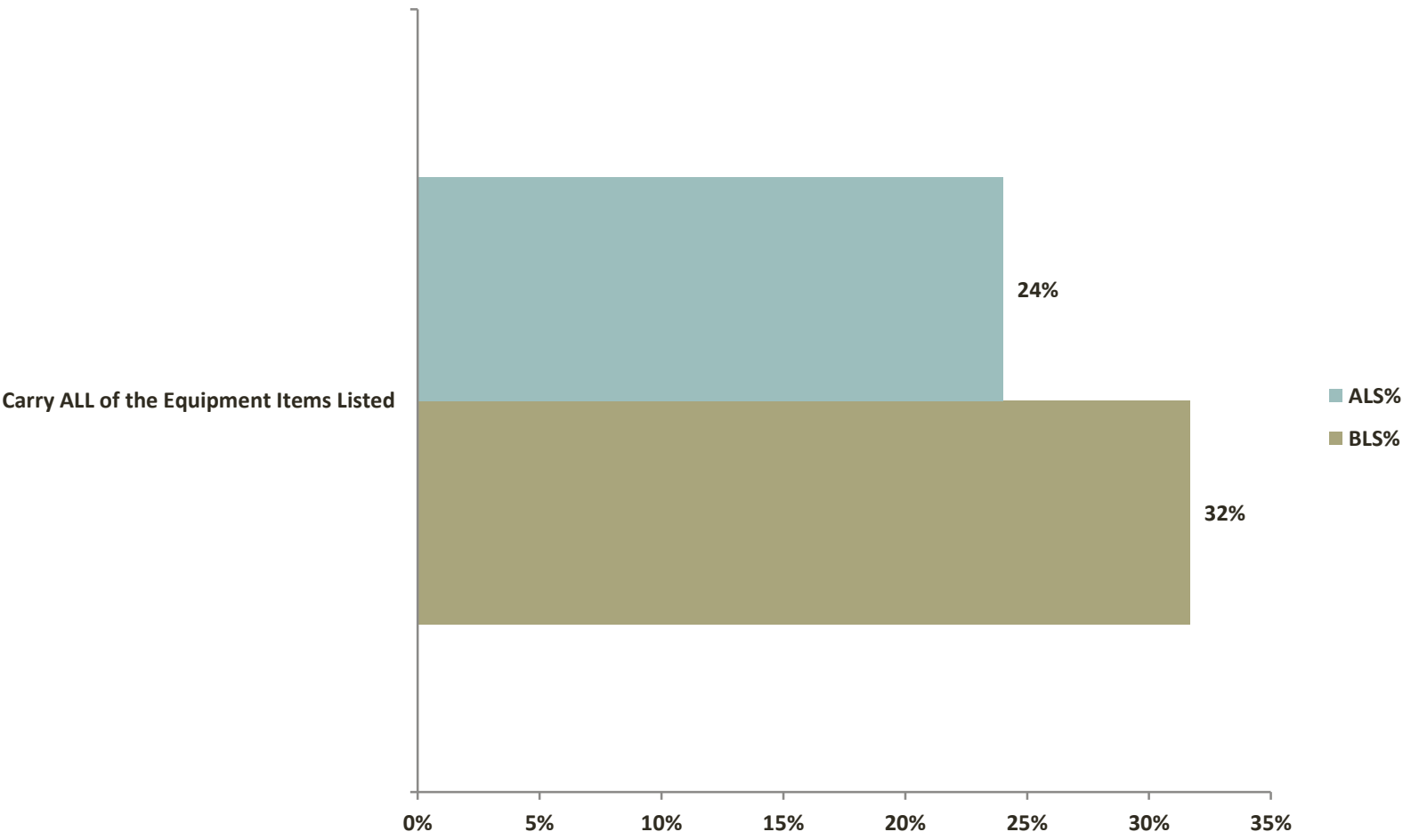
Endotracheal Tubes: ALS Only (n=508)



Performance Measure Results

- Items below 90% on both BLS and ALS responses:
 - Neonatal-sized mask for BVM
 - Pulse oximeter with pediatric probes
 - Child-sized lower extremity traction device
 - Small extremity immobilization device
- Items below 90%: BLS only
 - Length/weight-based tape
- Items below 90%: ALS only
 - Child-sized nasal cannula
 - Pediatric-sized Magill forceps
 - Meconium aspirator adaptor
 - End-tidal CO2 detection for pediatric patients

ALL Listed Equipment Items: BLS (n=101) & ALS (n=508)



Hospital Survey

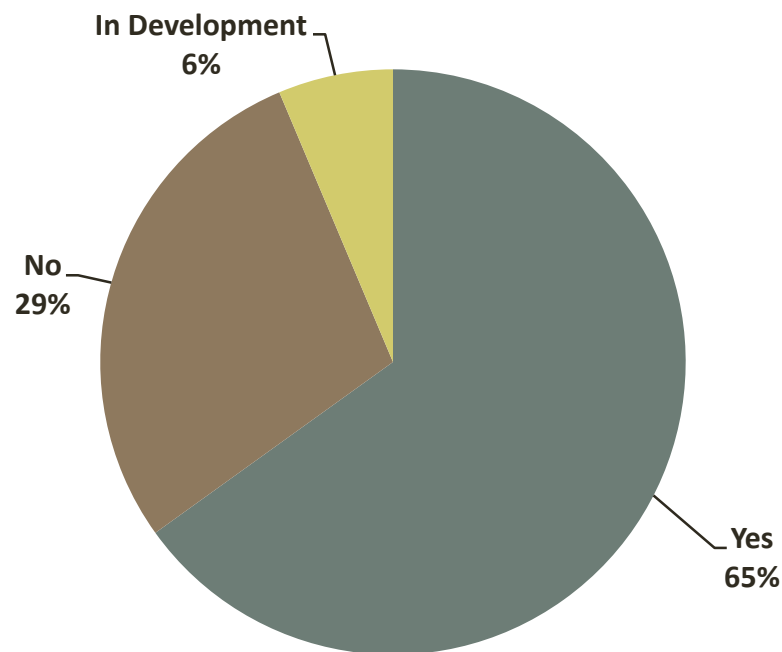
Hospital Survey

- 121 hospitals chosen randomly from Ohio hospitals with emergency departments
- Children's hospitals NOT excluded
- Survey sent via mail to ED Manager, follow-up done to ensure response
- Survey sent 12/1/10, available electronically on Division of EMS website
- 63 responses received by 2/28/11 (52%)

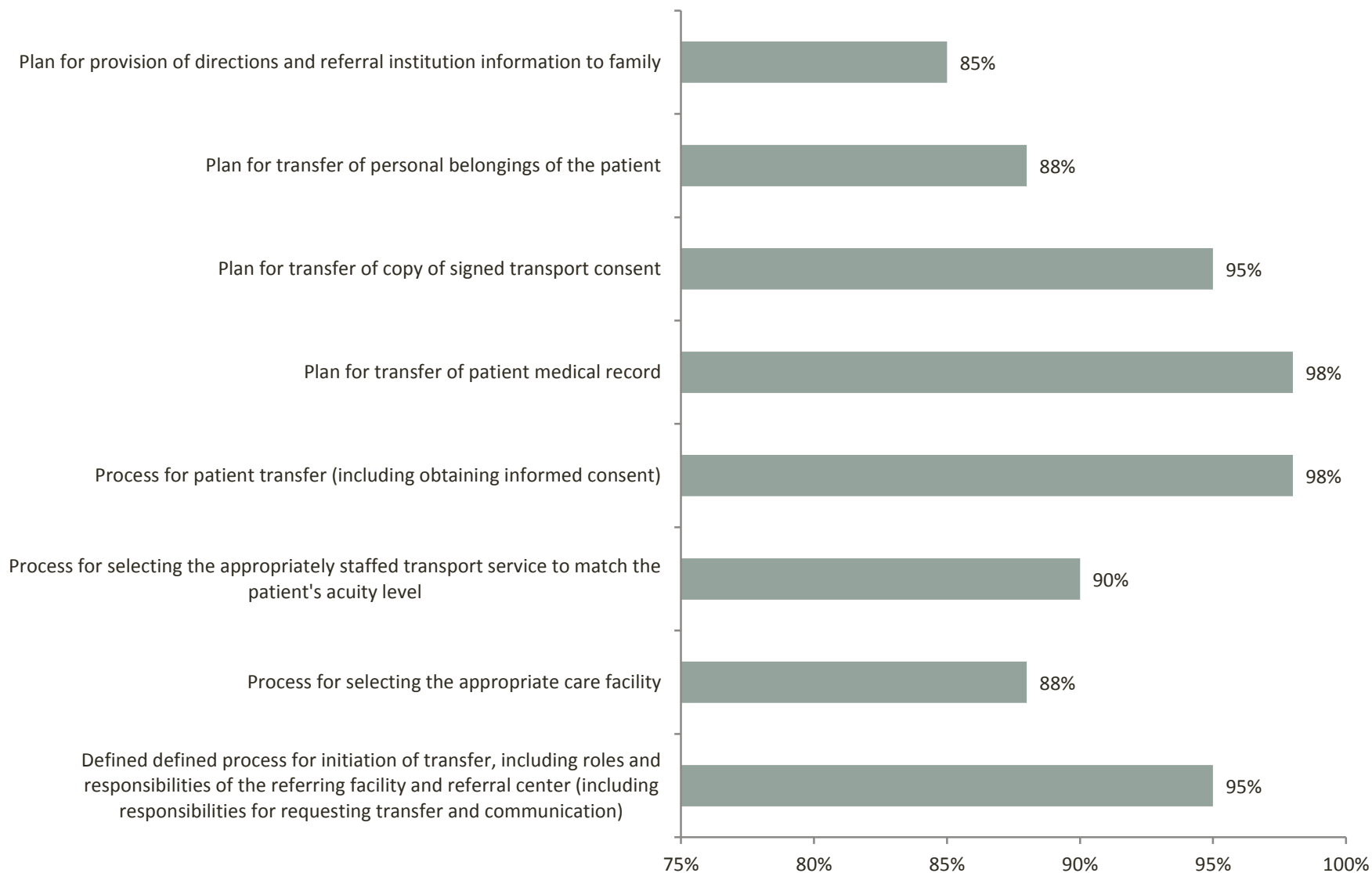
Performance Measure

- PM 76: The percentage of hospitals in the State/Territory that have written inter-facility transfer guidelines that cover pediatric patients and that include the following components of transfer:
 - Defined process for initiation of transfer, including the roles and responsibilities of the referring facility and referral center (including responsibilities for requesting transfer and communication).
 - Process for selecting the appropriate care facility.
 - Process for selecting the appropriately staffed transport service to match the patient's acuity level (level of care required by patient, equipment needed in transport, etc.).
 - Process for patient transfer (including obtaining informed consent).
 - Plan for transfer of patient medical record.
 - Plan for transfer of copy of signed transport consent.
 - Plan for transfer of personal belongings of the patient.
 - Plan for provision of directions and referral institution information to family.

Does your hospital or medical facility have written inter-facility guideline(s) that outline procedural and administrative policies with other hospitals for the transfer of patients of all ages, including children, in need of care not available at your hospital? (n=63)



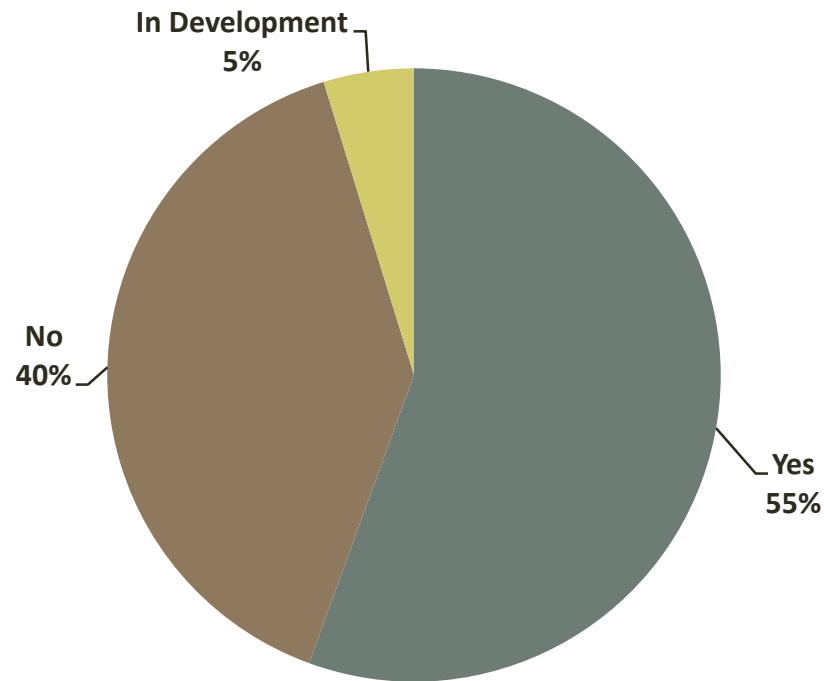
Do your guidelines include information specifically for the transfer of patients for each item below? (n=41)



Performance Measure

- PM 77: The percentage of hospitals in the State/Territory that have written inter-facility transfer agreements that cover pediatric patients.

Does your hospital or medical facility have written inter-facility agreement(s) with other hospitals for the transfer of patients of all ages, including children, in need of care not available at your hospital? (n=63)



Performance Measure Results

- 46% of hospitals have written inter-facility transfer guidelines that cover pediatric patients and that include the required components of transfer
- 55% of hospitals have written inter-facility transfer agreements that cover pediatric patients.



Scope of Practice

Approved by the State Board of EMS (EMS Board), within the Division of EMS of the Ohio Department of Public Safety

This document offers an “at-a-glance” view of the Scope of Practice for Emergency Medical Responders (EMR), Emergency Medical Technicians (EMT), Advanced Emergency Medical Technicians (AEMT), and Paramedics as approved by the EMS Board. The complete scope of practice can be found in Ohio Revised Code Sections 4765.35 (FR), 4765.37 (EMT-B), 4765.38 (EMT-I), and 4765.39 (EMT-P) and further defined in Ohio Administrative Code Rules 4765-12-04 (EMR), 4765-15-04 (EMT), 4765-16-04 (AEMT), and 4765-17-03 (Paramedic).

Performance of services outlined in this document and in the aforementioned code sections, shall only be performed if the Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician, and Paramedic have received training as part of an initial certification course or through subsequent training approved by the EMS Board. If specific training has not been specified by the EMS Board, the Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician, and Paramedic must have received training regarding such services approved by the local medical director before performing those services.

In accordance with Ohio Administrative Code Rule 4765-10-06, the individual Medical Director of each EMS agency may limit or ask that providers obtain medical control approval for certain treatments. Each community may need to tailor and revise the protocol to fit their region and individual practice, but must ensure that they remain within the approved scope of practice.

EMS Medical Directors are reminded that they are not permitted to expand the scope of practice for EMS providers, but may provide clarifications or limitations on services that are permitted. The EMS Board may allow Emergency Medical Responders, Emergency Medical Technicians, Advanced Emergency Medical Technicians, and Paramedics to perform services beyond their respective scopes of practices as part of a board-approved research study. The research study must be approved in advance in accordance with rule 4765-6-04 of the Ohio Administrative Code.

EMS medical directors and EMS providers are strongly encouraged to review the EMS Board's policy statement “Regarding EMS Provider Pre-Hospital transport of Patients with Pre-Existing Medical Devices or Drug Administrations” dated January 2004 (attached to this document, page 6). This statement clarifies how EMS providers, in the prehospital setting, should deal with medical devices and medicine administrations that are outside their scope of practice.

Updated 11/19/03; 5/17/05; 10/26/05; 10/17/07; 3/8/12, 3/5/2013



State EMS Board Division of EMS/Ohio Dept. of Public Safety

Updated March 5, 2013

	Airway Management	EMR	EMT	AEMT	PARAMEDIC
1	Open and maintain the airway	X	X	X	X
2	Oropharyngeal airway adjunct	X	X	X	X
3	Nasopharyngeal airway adjunct	X	X	X	X
4	Manual removal of obstructed airway	X	X	X	X
5	Laryngoscopy for removal of airway obstruction			X	X
6	Oral suctioning	X	X	X	X
7	Endotracheal (ET) tube suctioning via through a previously established airway or a stoma		X	X	X
8	Tracheostomy tube replacement			X	X
9	Pulse oximeter and capnography equipment application and reading	X	X	X	X
10	Oxygen administration				
	a. Nasal cannula	X	X	X	X
	b. Non-rebreather mask	X	X	X	X
	c. Mouth-to-barrier devices	X	X	X	X
	d. Partial rebreather mask		X	X	X
	e. Venturi mask		X	X	X
11	Ventilation management				
	a. Bag valve mask	X	X	X	X
	b. Ventilation with a flow-restricted oxygen-powered device	X	X	X	X
	c. Positive pressure ventilation devices (manually triggered or automatic ventilators)		X	X	X
12	Orotracheal intubation				X
	a. Apneic patients			X	X
	b. Pulseless <u>and</u> apneic patients*			X	X
13	Nasotracheal intubation				X
14	Cricothyrotomy, surgical				X
15	Cricothyrotomy, needle				X
16	Dual lumen airway				X
	a. Apneic patients			X	X
	b. Pulseless <u>and</u> apneic patients		X	X	X
17	Extraglottic airways				X
	a. Apneic patients			X	X
	b. Pulseless <u>and</u> apneic patients		X	X	X
18	Ventilator management - 16 years of age or older				X
19	BiPAP administration and management				X

20	CPAP administration and management		X	X	X
21	End tidal CO ₂ monitoring and detecting		X	X	X
	Oxygen humidifier equipment application and monitoring		X	X	X
22	Nasogastric (NG) tube placement				X
23	Orogastric (OG) tube placement				X
*Orotracheal intubation of pulseless and apneic patients was removed from the Ohio EMS scope of practice for Emergency Medical Technicians effective on January 1, 2013 .					

	Cardiac Management	EMR	EMT	AEMT	PARAMEDIC
1	Automated external defibrillator (use of an AED)	X	X	X	X
2	Cardiac monitor strip interpretation			X	X
3	Manual defibrillation			X	X
4	Cardiopulmonary resuscitation (CPR)	X	X	X	X
5	Transcutaneous cardiac pacing				X
6	Aspirin administration		X	X	X
7	Cardiac medication administration				X
8	Cardioversion				X
9	12-lead EKG performance & interpretation				X
10	12-lead EKG set up and application for electronic transmission*		X	X	X
11	Chest compression assist devices		X	X	X
12	Carotid massage				X
13	Administration of cardiac medication				X

*If a Paramedic is not present, the EMT and AEMT may only set up and apply a 12-lead electrocardiogram if all of the following conditions are met: 1) completed in accordance with written protocol; 2) only for the purpose of electronic transmission; 3) any delay in patient transport is minimized; 4) electrocardiogram is used in conjunction with destination protocols approved by the local medical director. The EMT and AEMT cannot interpret the EKG.

	Medical Management	EMR	EMT	AEMT	PARAMEDIC
1	Glucose monitoring system use (with Clinical Laboratory Improvement Amendments (CLIA) waiver in place)		X	X	X
2	Blood chemistry analysis				X
3	Peripheral IV blood specimens			X	X
4	Oral glucose administration		X	X	X
5	Auto-injector epinephrine (patient assisted*)	X	X	X	X
6	Epinephrine administration (SQ or IM)			X	X
7	Activated charcoal administration		X	X	X
8	Nitroglycerin administration (patient assisted*)		X	X	X
9	Nitroglycerin administration (non-patient assisted)			X	X
10	Aerosolized or nebulized medications administration (patient assisted*)		X	X	X
11	Administration of aerosolized or nebulized medications (non-patient assisted)			X	X
12	Administration of intranasal medications			X	X

***Patient Assisted Definition:**

- 1) May assist with patient's prescribed medication upon the patient's request and with written protocol.
- OR -
- 2) May assist with EMS-provided medication with verbal medical direction.

	Prehospital ALS Assistance	EMR	EMT	AEMT	PARAMEDIC
1	Set up of IV administration kit *		X		
2	Cardiac monitor *		X		
3	12-lead EKG application **		X	X	

* Set-up of equipment only. An AEMT or Paramedic must be present, or procedure(s) cannot be performed

** Set-up of equipment only. If a Paramedic is not present, procedure(s) shall not be performed except as previously noted in cardiac management section

	Trauma Management	EMR	EMT	AEMT	PARAMEDIC
1	PASG		X	X	X
2	Long spine board	X	X	X	X
3	Short spine board	X	X	X	X
4	Splinting devices	X	X	X	X
5	Traction splint		X	X	X
6	Cervical immobilization device (CID)	X	X	X	X
7	Helmet removal		X	X	X
8	Rapid extrication procedures		X	X	X
9	Needle decompression of the chest			X	X
10	Soft tissue management	X	X	X	X
11	Management of suspected fractures	X	X	X	X
12	Controlling of hemorrhage	X	X	X	X
	Preparatory / Basic Performances	EMR	EMT	AEMT	PARAMEDIC
1	Body substance isolation precaution/administration	X	X	X	X
2	Taking and recording of vital signs	X	X	X	X
3	Patient Care Report (PCR) documentation	X	X	X	X
4	Emergency childbirth management*	X	X	X	X
5	Trauma triage determination per OAC 4765-14-02	X	X	X	X
*An EMR may only assist with emergency childbirth management					
	Other	EMR	EMT	AEMT	PARAMEDIC
1	Medication administration (protocol-approved)			X	X
*** See page 5 for the complete listing of approved medications for the AEMT level					
2	IV maintenance and fluid administration			X	X
3	Maintenance of medicated IV fluids				X
4	IV infusion pump				X
5	Intraosseous insertion			X	X
6	Saline lock initiation			X	X
7	Maintenance of blood administration				X
8	Thrombolytic therapy initiation and monitoring				X
9	Chest tube monitoring and management				X
10	Central line monitoring				X
11	Eye irrigation	X	X	X	X
12	Eye irrigation with Morgan lens				X
Additional services					
<p>In the event of an emergency declared by the governor that affects the public's health, an EMR, EMT, AEMT, or Paramedic may perform immunizations and administer drugs or dangerous drugs, in relation to the emergency, provided the EMR, EMT, AEMT, or Paramedic is under physician medical direction and has received appropriate training regarding the administration of such immunizations and/or drugs.</p>					
Nerve Agent or Organophosphate Release					

	<p>An EMR, EMT, AEMT, or Paramedic may administer drugs or dangerous drugs contained within a nerve agent antidote auto-injector kit, including a MARK I[®] kit, in response to suspected or known exposure to a nerve or organophosphate agent provided the EMR, EMT, AEMT, or Paramedic is under physician medical direction and has received appropriate training regarding the administration of such drugs within the nerve agent antidote auto-injector kit.</p>
--	---

Approved Advanced Emergency Medical Technician (AEMT) Medications			
Aspirin			
Oral glucose			
Activated charcoal			
Sublingual nitroglycerin			
Epinephrine 1:1,000 (subcutaneous or intramuscular)			
Dextrose in water			
Diphenhydramine			
Benzodiazepines			
Bronchodilators			
Naloxone (including intranasal)			
Glucagon			
Nitrous oxide			
Nalbuphine			
Narcotics or other analgesics for pain relief			
Lidocaine for pain relief after intraosseous insertions			

As Approved by the EMS Board

The above medications are the ONLY medications that the AEMT has been approved to administer. If a medication does not appear on this listing, it has not been approved by the EMS Board, and SHALL NOT BE ADDED TO THE DEPARTMENT'S PROTOCOL.

The approved route of administration of any specific medication is stated in the respective EMT, AEMT, and Paramedic curriculum. The EMS provider shall administer medications only via the route addressed in each respective curriculum and consistent with their level of training.

Performance of services outlined in this document and in the aforementioned code sections, shall only be performed if the EMR, EMT, AEMT, and Paramedic have received training as part of an initial certification course or through subsequent training approved by the EMS Board. If specific training has not been specified by the EMS Board, the EMR, EMT, AEMT, and Paramedic must have received training regarding such services approved by the local medical director before performing those services.

The EMS Board may allow EMRs, EMTs, AEMTs, and Paramedics to perform services beyond their respective scopes of practice as part of a board-approved research study. The research study must be approved in advance in accordance with rule 4765-6-04 of the Ohio Administrative Code.

The Ohio Board of Emergency Medical Services (“EMS Board”) issues the following statement:

**Regarding EMS Provider Pre-Hospital Transport of Patients with
Pre-Existing Medical Devices or Drug Administrations
January 2004**

This statement is an attempt to provide general information about the above issue facing EMS providers. It should not be treated as legal advice or medical direction. For direct advice regarding a particular scenario, please consult with your medical director and legal counsel. Although the following statement represents the EMS Board’s general position on the above issue, this statement in no way precludes the EMS Board from taking disciplinary action in a particular case if necessary. Any potential complaints brought before the EMS Board will be decided on a case-by-case basis.

Introduction:

The Ohio Department of Public Safety, Division of Emergency Medical Services, has developed a defined scope of practice for EMS providers. It is maintained in matrix form and available on-line as a reference for public access. This scope of practice addresses all levels of EMS providers and has been approved by the EMS Board. Updates to the scope of practice are made as necessary and after approval by the EMS Board. From time to time, EMS providers are confronted on-scene with patients with pre-existing medical situations not included or addressed in their respective EMS Board-approved scope of practice. Specifically, patients with pre-existing medical devices and drug administrations requiring pre-hospital EMS service are becoming more commonplace. The intent of this position paper is to address the EMS provider’s approach to that pre-hospital patient with a pre-existing physician-ordered medical device or drug administration (“MDDA”) not covered in the provider’s scope of practice.

Discussion:

In general, the EMS provider should maintain the pre-existing MDDA and transport the patient to the appropriate facility. There is no expectation that the EMS provider will initiate, adjust, or discontinue the pre-existing MDDA. This implies that the EMS provider will maintain and continue care so that the patient can be transported. The EMS provider is expected to follow local protocols regarding the overall evaluation, treatment, and transportation of this type of pre-hospital patient requiring EMS service. It applies to EMS provider situations where alternative transportation and care is not available or practical (pre-hospital or “911 scene response”). It implies that the most appropriate and available level of EMS provider will respond to the request for pre-hospital EMS service. It also implies that the patient requires the pre-existing MDDA and it is not feasible or appropriate to transport the patient without the pre-existing MDDA.

The number and type of pre-existing MDDAs currently or potentially encountered by the EMS provider in the community setting is extensive and may change frequently. The intent of this position paper is not to provide an inclusive list of pre-existing MDDAs. However, as a guideline for the EMS provider, current pre-existing MDDAs may include ventilatory adjuncts (CPAP, BiPAP), continuous or intermittent IV medication infusions (analgesics, antibiotics, chemotherapeutic agents, vasopressors, cardiac drugs), and non-traditional out-of-hospital drug infusion routes (subcutaneous infusaports, central venous access lines, direct subcutaneous infusions, self-contained implanted pumps).

Conclusion:

In conclusion, the EMS provider confronted with a pre-hospital patient with a pre-existing physician-ordered medical device or drug administration not covered in the EMS provider’s respective scope of practice should provide usual care and transportation while maintaining the pre-existing MDDA, if applicable. Concerns or questions regarding real-time events associated with a pre-existing MDDA should be directed to the relevant Medical Control Physician. Concerns or questions regarding previous, recurrent, or future pre-hospital transportations with a pre-existing MDDA should be directed to the appropriate EMS Medical Director and legal counsel.

Reaffirmed by EMS Board 2/20/2008

OHIO DEPARTMENT OF PUBLIC SAFETY

Developing a Performance Improvement Program

Emergency Medical Services

Table of Contents

C H A P T E R 1	
The Purpose of PI	1
C H A P T E R 2	
Medical Direction	2
C H A P T E R 3	
Intent	3
C H A P T E R 4	
Implementation	4
C H A T P E R 5	
Suggested Samples	5
C H A T P E R 6	
Feedback Mechanism	23

The Purpose of Performance Improvement

Ohio Emergency Medical Service organizations must strive to maximize efficiency, effectiveness, promote excellence and personal accountability through peer review and continuous performance improvement.

Amended Substitute House Bill #138 requires EMS organizations to implement ongoing peer review and performance improvement programs to improve the availability and quality of EMS services.

In implementing these programs, EMS organization shall consider how to improve its ability to provide effective trauma care, particularly for pediatric and geriatric patients, and shall take into account the trauma care guidelines developed by the Ohio EMS Board.

Performance Improvement

Information generated solely for use in a peer review or performance improvement program is not a public record, is not subject to discovery and shall not be introduced into evidence in a civil action.

Definitions

Performance Improvement (PI):

The continuous study and improvement of process, system or organization.

Peer review:

A team process in which Emergency Medical Service providers continuously evaluate and improve their own patient care delivery system.

Medical Direction

Medical Direction participation is essential and important for the program's success.

The Medical Director is responsible for program content and spearheads leadership for the performance improvement program. He or she also sets the direction for performance improvement by creating a strong patient focus.

In addition, the EMS Medical Director helps establish clear statements that define the organization's mission, values, objectives, and expectations.

Intent

The intent of any performance improvement program is to:

- ? Provide data and information, in a non-punitive manner, on how well the system and process works.
- ? Implement continuing education, training programs, and equipment needs based on outcome data from the peer review / performance improvement process.

Each Emergency Medical Services Organization will establish:

- ? Medical Direction oversight. Regional Physician Advisory Board (RPAB) oversight if medical direction unavailable.
- ? An ongoing peer review and continuous performance improvement program.
- ? Establish a structure and / or membership to implement the PI process.
- ? Establish performance indicators relevant to their system.
- ? Develop a feedback mechanism to the patient care providers.

Implementation

Obtain EMS Medical Direction or RPAB oversight.

- ? Ensure your system has current prehospital protocols. RPAB Guidelines are available to download from the Ohio Department of Public Safety; Emergency Medical Services web site if a system needs assistance with this process. (www.ohiopublicsafety.com and select Emergency Medical Services)
- ? Protocols set the standard of care by which prehospital care providers are evaluated.
- ? Develop a review process, a method to review runs.

Suggestion for establishing a review process

Committee

- ? Develop a committee representative of the system. Example would be an ED physician as chairman, ED nursing representation, and a representative from each EMS service.
- ? The runs reviewed may depend on the system's run volume. In smaller systems, the committee may elect to review each run. Larger systems will need to select a specific topic, such as chest pain, and review only those runs or a percentage of those runs, depending upon volume.
- ? It is suggested that all systems review sentinel events. A sentinel event is defined as an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof.

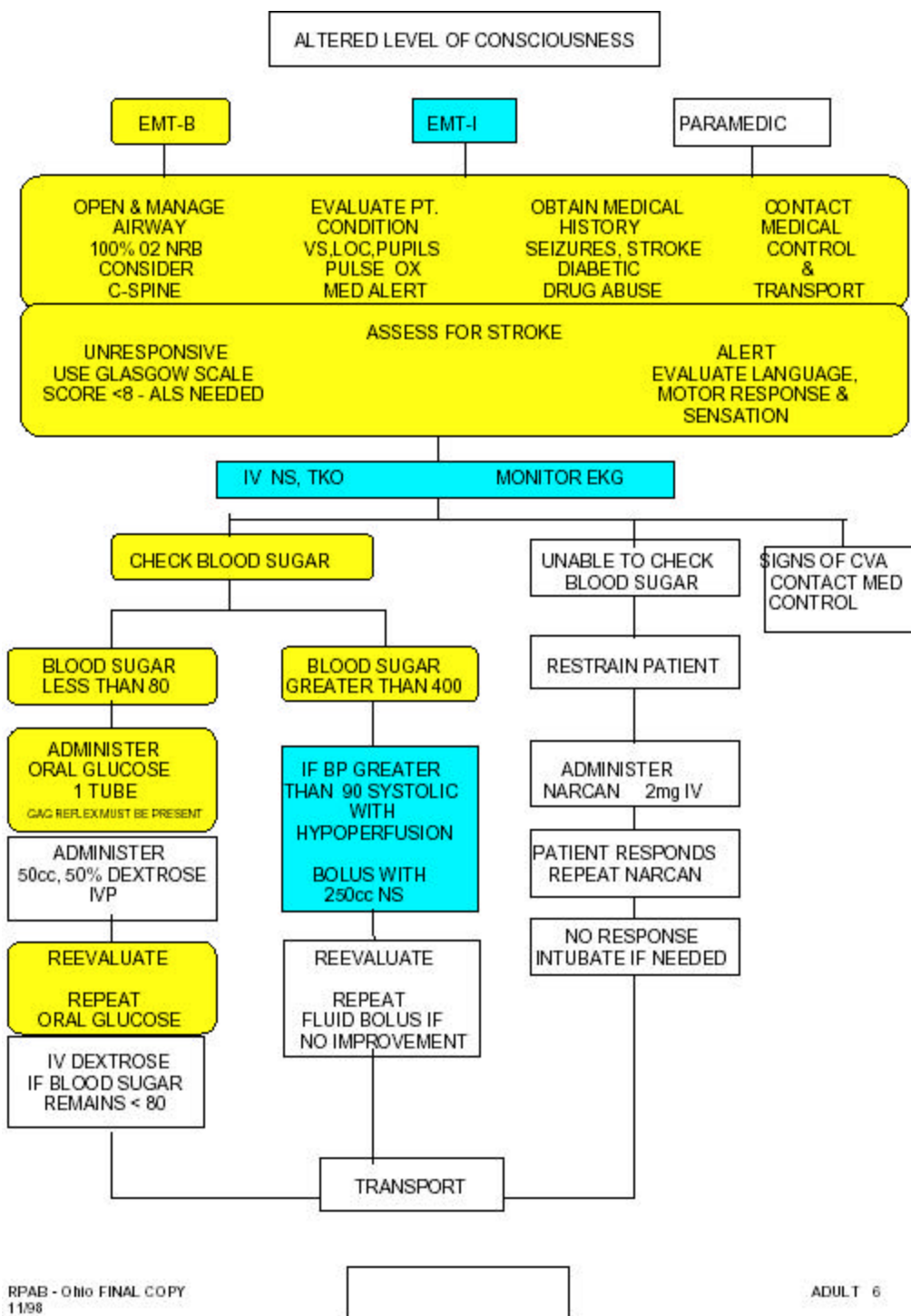
Performance Improvement Coordinator

- ? Some systems may elect to hire and/or appoint an individual to conduct performance improvement reviews and provide feedback to the providers.
- ? This individual may establish the same review system as a committee and review all runs, select runs, or percentages of runs.

Suggested Sample Review Forms

The following pages will show suggested forms for used in reviewing common patient complaints encountered by EMS providers.

- ? These forms will allow EMS organizations to begin the review process and evaluate their system's process and their providers' adherence to the established standard of care. (i.e., their protocols).
- ? It is suggested that one form be used to review each run. The reviewer will read the prehospital care report and determine if documentation reflects adherence to the items listed on the review form.
- ? Each review form reflects the protocols which are used to provide quality care to patients.



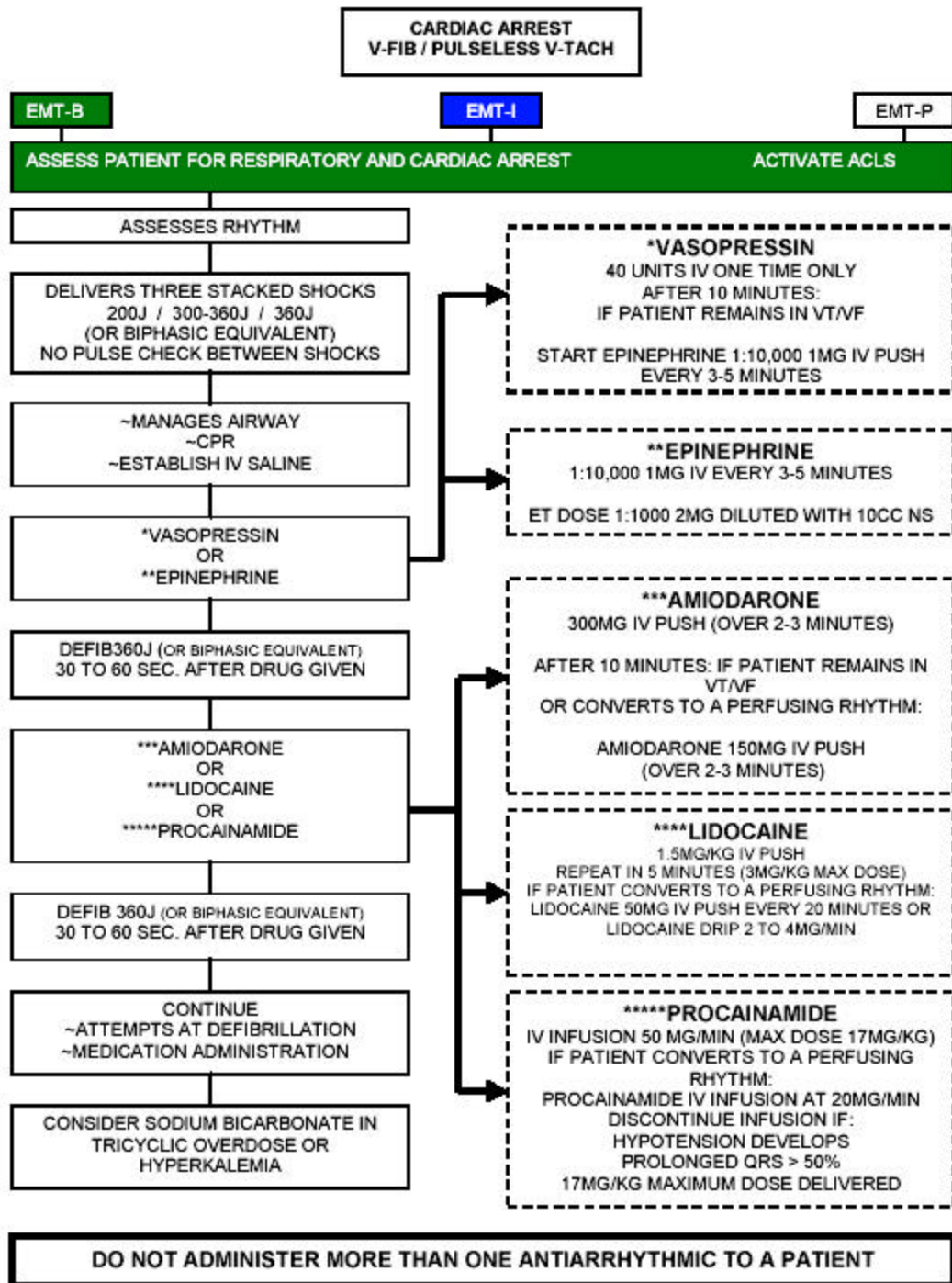
Run #: _____

Squad #: _____

Emergency Medical Services
Performance Improvement

ALTERED MENTAL STATUS

INDICATOR	YES	NO	NA
1. ABC assessment done?			
2. ABC management documented?			
3. Oxygen administration appropriately?			
4. Patient assessment documented? a. AVPU? b. breath sounds? c. vital signs? d. skin color/condition? e. Capillary refill time?			
5. History obtained/documented?			
6. Glasgow coma scale documented?			
7. Stroke assessment/Cincinnati Stroke Scale documented? a. facial droop? b. arm drift? c. speech?			
8. Blood glucose level checked?			
9. Blood glucose treated appropriately? a. >400 - administer 250cc fluid bolus? b. <80 - 50cc 50% dextrose or 1 mg glucagon?			
10. IV established?			
11. IV fluid administration documented?			
12. IV fluid administration appropriate?			
13. Cardiac monitor applied?			
14. Rhythm identified and documented?			
15. Narcan administered? a. administered appropriately?			
16. Medical direction contacted?			
17. Response to treatment(s) documented?			
18. Times documented?			
19. Other: _____ _____ _____			



Run #: _____

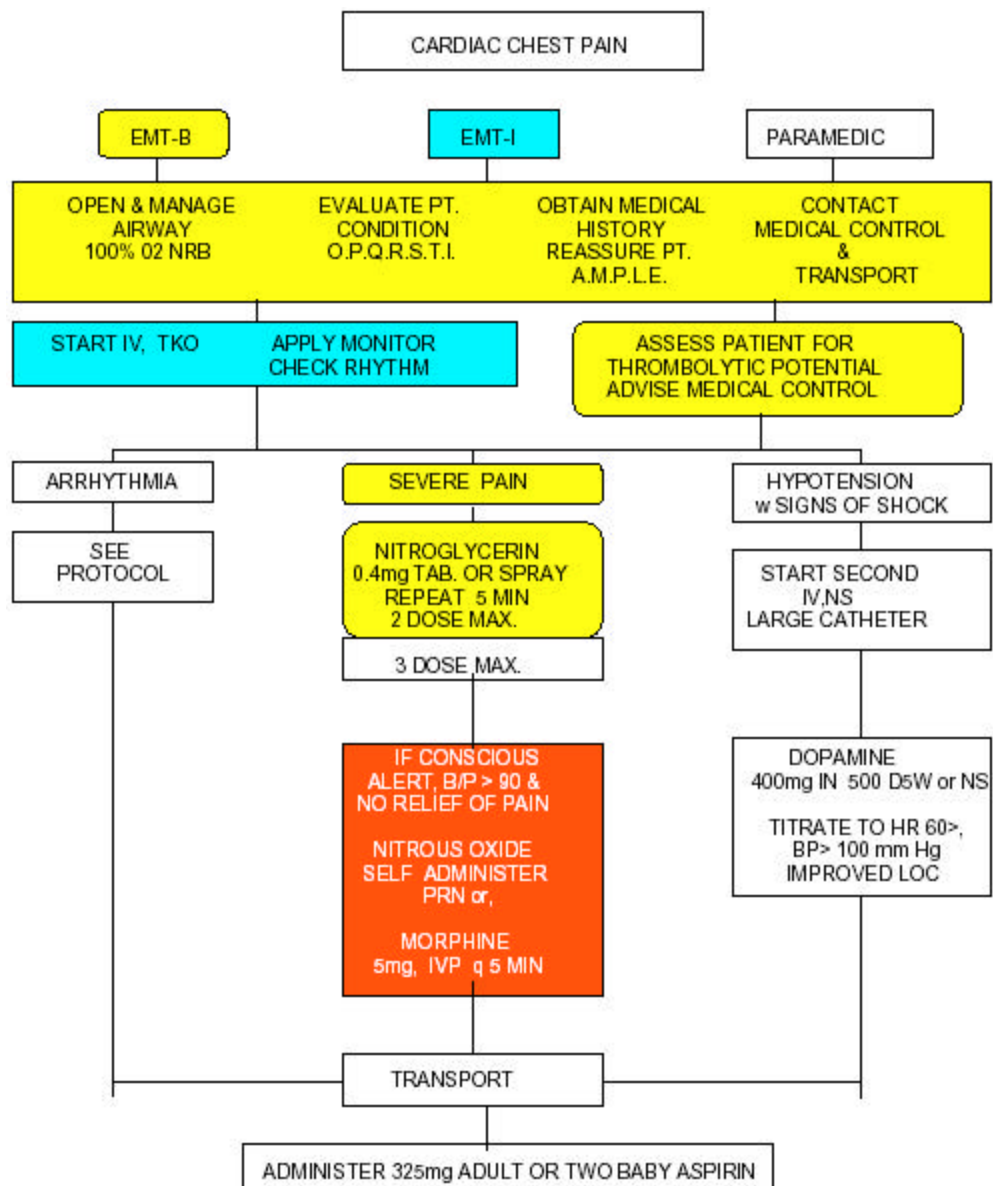
Squad #: _____

Emergency Medical Services
Performance Improvement

CARDIAC ARREST (Circle Appropriate one: ADULT / PEDIATRICS)

INDICATOR	YES	NO	NA
1. ABC assessment done?			
2. ABC management documented?			
3. CPR started?			
a. time started documented?			
4. Monitor/AED applied?			
a. delivers three stacked shocks, if indicated? (200J, 300J, 350J)			
b. continues CPR if shocks not indicated?			
5. Reassesses pulse?			
6. Manages airway?			
a. oral airway?			
b. EOA?			
c. ETT?			
d. Other: _____			
7. Oxygen administered appropriately?			
8. History obtained/documented (if able)?			
9. IV established?			
10. Rhythm(s) identified and documented?			
11. Rhythm(s) managed appropriately and medications administered appropriately?			
12. Other interventions performed appropriately and documented? (i.e., pacing)			

13. Medical direction contacted?			
14. Response to treatment(s) documented?			
15. Times documented?			
16. Other: _____			



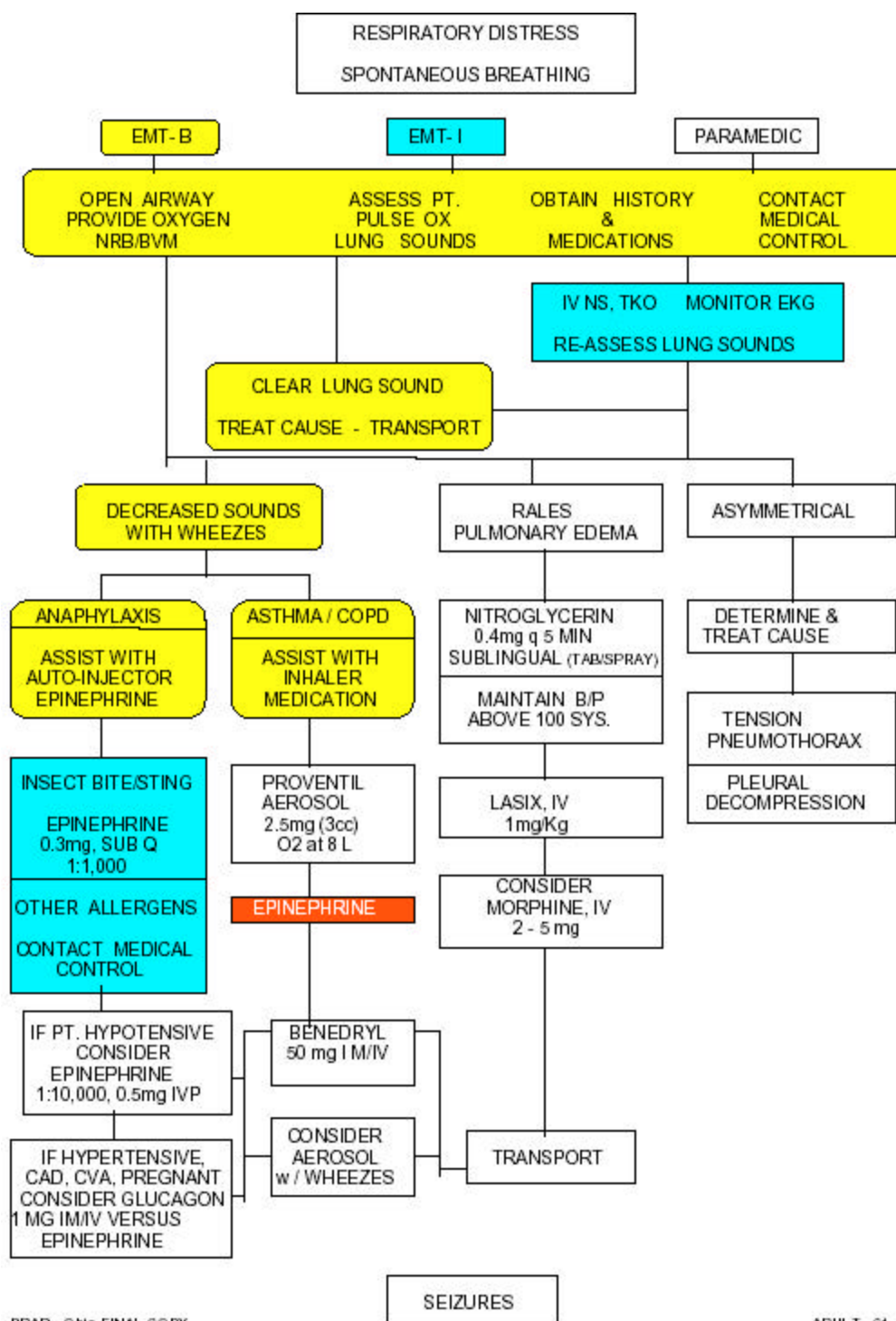
Run #: _____

Squad #: _____

Emergency Medical Services
Performance Improvement

CHEST PAIN

INDICATOR	YES	NO	NA
1. ABC assessment done?			
2. ABC management documented?			
3. Oxygen administration appropriately?			
4. Patient assessment documented? a. AVPU? b. breath sounds? c. vital signs? d. skin color/condition? e. Capillary refill time?			
5. History obtained/documented?			
6. Assessed for thrombolytic potential? a. previous MI? b. age over 30? c. systolic pressure < 180 and diastolic < 110? d. persistent pain for 15 minutes or longer? e. lack of stroke, bleeding or CNS problem history? f. lack of trauma or surgery in last 2 weeks? g. no pregnancy?			
7. IV established?			
8. IV fluid administration documented?			
9. IV fluid administration appropriate?			
10. Cardiac monitor applied?			
11. Rhythm identified and documented?			
12. Rhythm managed appropriately?			
13. NTG administered? if not, rationale documented?			
14. ASA allergy checked and documented?			
15. ASA administered? if not, rationale documented?			
16. Medical direction contacted?			
17. Response to treatment(s) documented?			
18. Times documented?			
19. Other: _____ _____ _____			



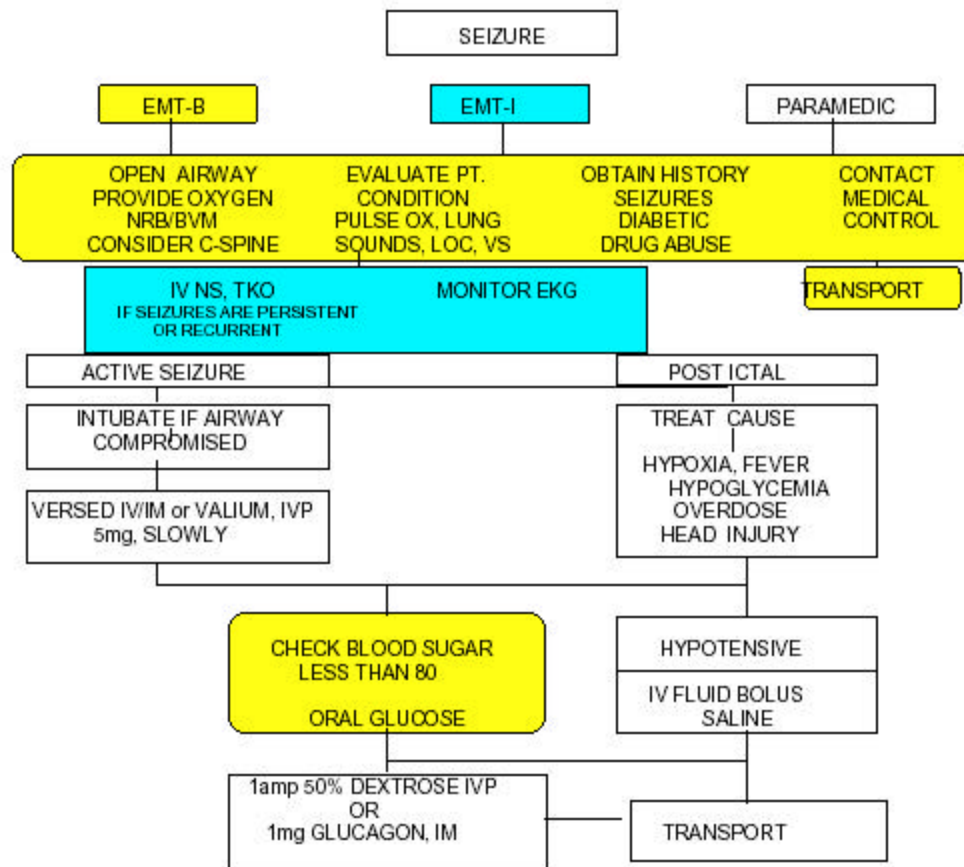
Run #: _____

Squad #: _____

Emergency Medical Services
Continuous Performance Improvement

RESPIRATORY DISTRESS

INDICATOR	YES	NO	NA
1. ABC assessment done?			
2. ABC management documented?			
3. Oxygen administered appropriately?			
4. Patient assessment documented? a. AVPU? b. breath sounds? c. vital signs? d. skin color/condition? e. Capillary refill time?			
5. Work of breathing described? a. mild? b. moderate? c. severe? d. speaks in sentences? e. speaks in 3-4 words? f. speaks single word?			
6. History obtained/documented?			
7. IV established?			
8. IV fluid administration documented?			
9. IV fluid administration appropriate?			
10. Suspected cause indicated? a. COPD/asthma? b. allergic reaction/anaphylaxis? c. obstructed airway? d. pulmonary edema? e. tension pneumothorax? f. other: _____?			
11. Pharmacological intervention(s) done? a. albuterol/Proventil? b. Lasix? c. epinephrine? d. NTG? e. Benadryl? f. morphine?			
12. Other interventions performed? _____			
13. Cardiac monitor applied?			
14. Rhythm identified and documented?			
15. Medical direction contacted?			
16. Response to treatment(s) documented?			
17. Times documented?			
18. Other: _____ _____			



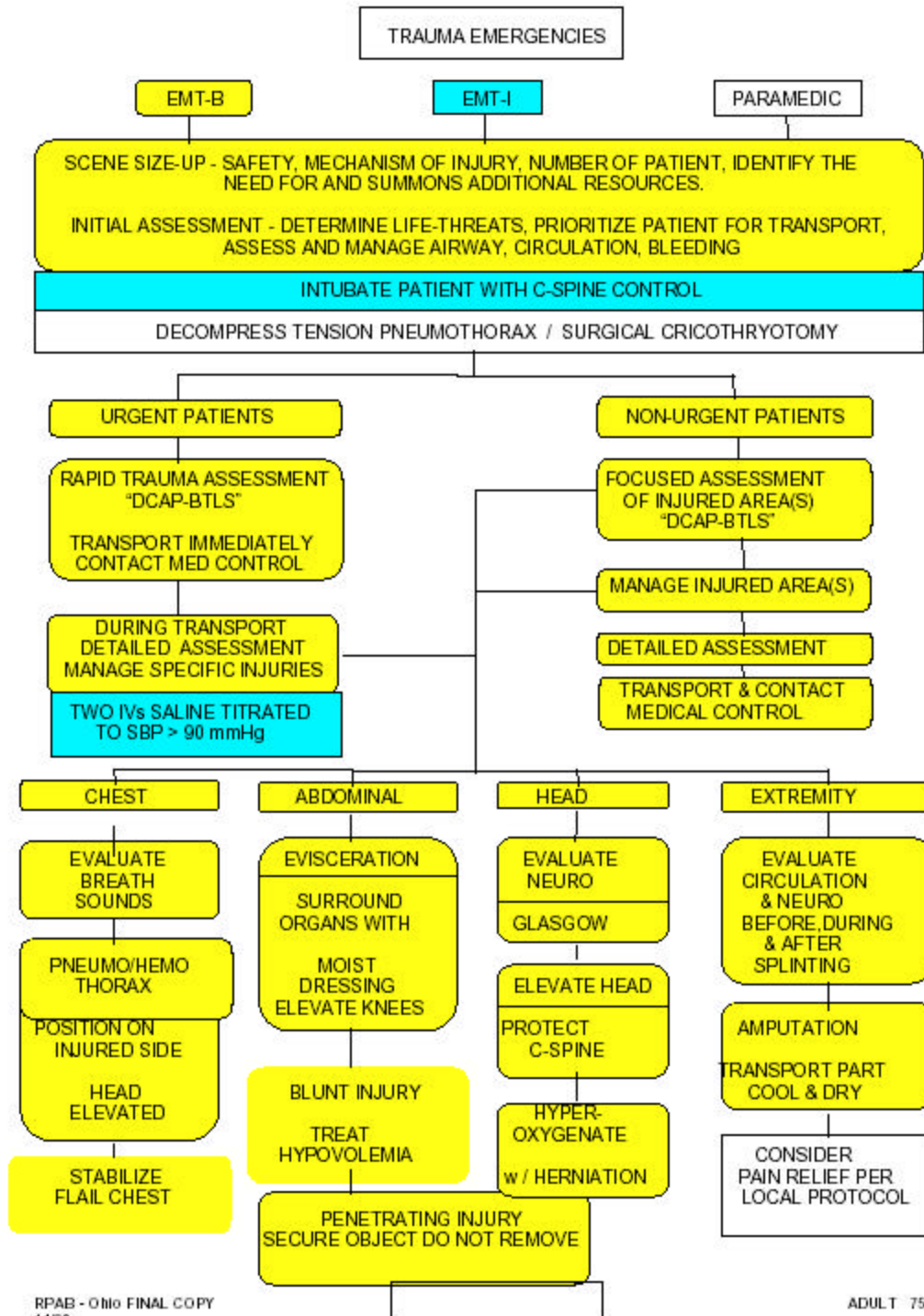
Run #: _____

Squad #: _____

Emergency Medical Services
Performance Improvement

SEIZURES

INDICATOR	YES	NO	NA
1. Airway managed and documented?			
2. Oxygen administered?			
3. Patient assessment documented? a. AVPU? b. breath sounds? c. vital signs? d. skin color/condition? e. Capillary refill time?			
4. Past medical history obtained/documented? (i.e., history of head trauma, diabetes, drugs, alcohol, stroke, heart disease?)			
5. Seizure history obtained and documented? a. Seizure history? b. Description of onset of seizure? c. Medications?			
6. IV established?			
7. IV fluid administration documented?			
8. Blood glucose level checked?			
9. Blood glucose treated appropriately? a. <80 - 50cc 50% dextrose or 1 mg glucagon?			
10. Cardiac monitor applied?			
11. Valium 5 mg. requested and/or administered if active seizures present?			
12. IV fluid bolus administered for hypotension?			
13. Medical direction contacted?			
14. Response to treatment(s) documented?			
15. Times documented?			
16. Other: _____ _____ _____			



Run #: _____

Squad #: _____

Emergency Medical Services
Performance Improvement

TRAUMA

Type of trauma: _____

INDICATOR	YES	NO	NA
1. Mechanism of injury documented?			
2. Chief complaint/injuries assessed/documented?			
3. ABC assessment done?			
4. ABC management documented?			
5. C-spine control documented?			
6. Location where injury occurred documented?			
7. Use or non-use of safety devices documented?			
8. Oxygen administered appropriately?			
9. Patient assessment documented? a. AVPU? b. breath sounds? c. vital signs? d. skin color/condition? e. Capillary refill time? f. motor, sensory, pulses?			
10. Injuries identified and documented?			
11. Injuries managed appropriately?			
12. IV(s) established?			
13. IV fluid administration documented?			
14. IV fluid administration appropriate?			
15. Glasgow Coma Scale documented?			
16. Reassessment documented?			
17. Response to treatment(s) documented?			
18. Medical Direction contacted?			
19. Times documented?			
20. Transport destination appropriate? _____			
21. Other: _____ _____ _____			

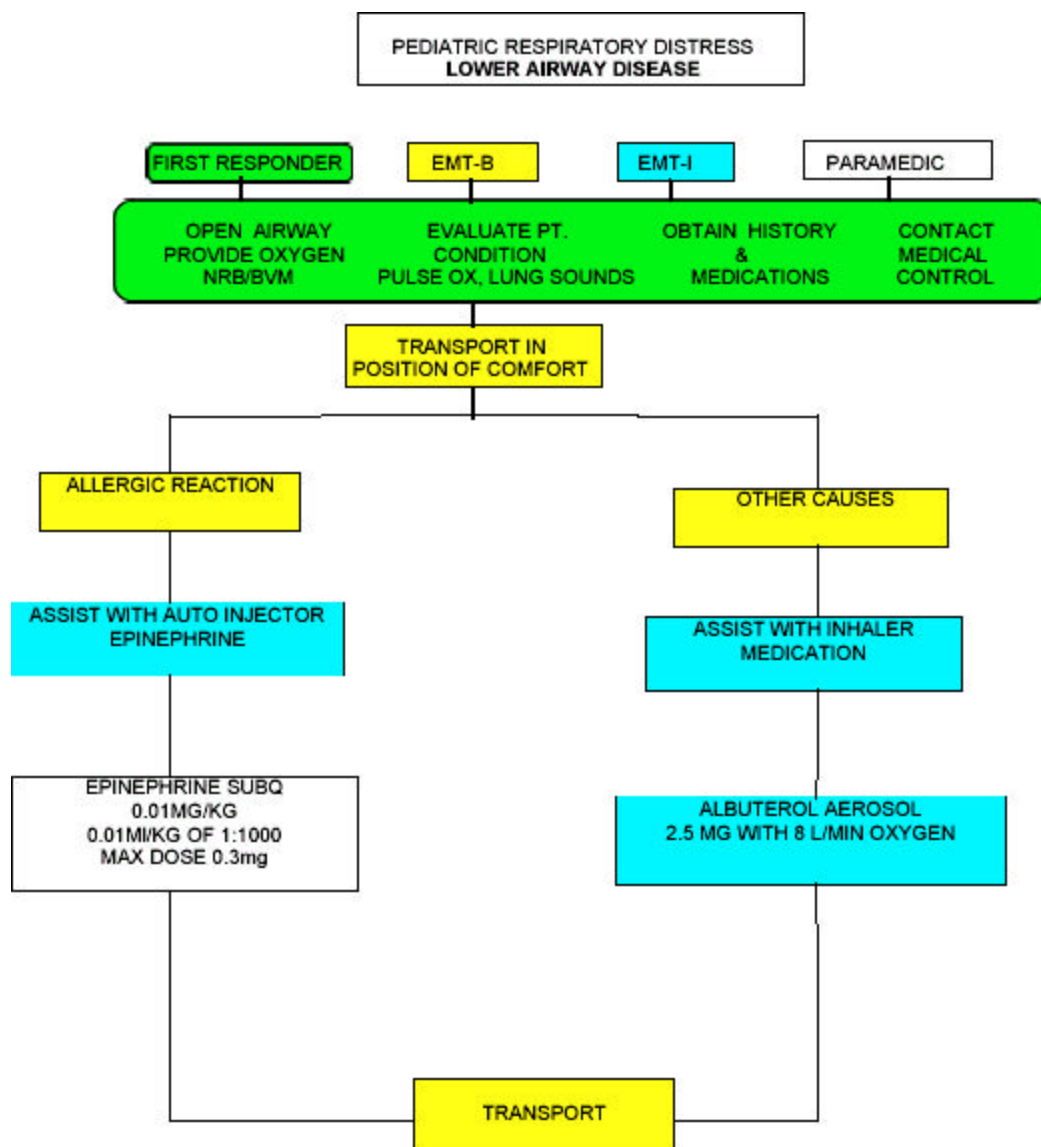
Department: _____

Performance Improvement

ON SCENE TIMES

COMPLAINT: CHEST PAIN

RUN NUMBER / DATE	< 15 MIN	> 15 MIN	JUSTIFIED? (Y) (N)



Run #: _____

Squad #: _____

Emergency Medical Services
Performance Improvement

PEDIATRIC RESPIRATORY DISTRESS

INDICATOR	YES	NO	NA
1. Airway managed/opened?			
2. Oxygen administered appropriately?			
3. Patient assessment documented? a. Vital signs (BP, P, R)? b. Breath sounds? c. Capillary refill time? d. AVPU? e. Skin color/condition?			
4. Distress/work of breathing described?			
5. Relevant history obtained/documented?			
6. Drug therapy indicated and provided appropriately? a. Benadryl (1.0 mg/kg IV/IM) b. Epinephrine (auto injector or 0.01 mg/kg sub-q) c. Albuterol aerosol (2.5 mg)			
7. Other interventions indicated and performed appropriately? (i.e., FB visualization with laryngoscope, needle cricothyrotomy)			
8. Medical Direction contacted?			
9. Reassessment documented?			
10. Response to treatment documented?			
11. Position during transport documented?			

Feedback Mechanism

Developing a feedback mechanism is an important process so that providers can see how the system and the process are working.

- ? The feedback mechanism selected must ensure that the confidentiality of both the provider and the patient are maintained.
- ? Various methods can be developed to provide this valuable information. One example would be the use of a newsletter providing pertinent PI information. A second example would be the use of run charts or graphs to depict the PI information. A sample of two of these methods follows.

Run #: _____

Squad #: _____

Emergency Medical Services
Performance Improvement

CHEST PAIN (20 runs reviewed)

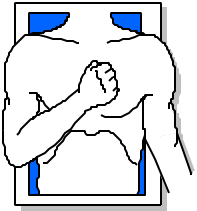
INDICATOR	%YES	%NO	%NA
1. ABC assessment done?	90	10	0
2. ABC management documented?	100	0	0
3. Oxygen administration appropriately?	100	0	0
4. Patient assessment documented? a. AVPU? b. breath sounds? c. vital signs? d. skin color/condition? e. Capillary refill time?	85	15	0
5. History obtained/documented?	80	20	0
6. Assessed for thrombolytic potential? a. previous MI? b. age over 30? c. systolic pressure < 180 and diastolic < 110? d. persistent pain for 15 minutes or longer? e. lack of stroke, bleeding or CNS problem history? f. lack of trauma or surgery in last 2 weeks? g. no pregnancy?	30	70	0
7. IV established?	75	25	0
8. IV fluid administration documented?	50	50	0
9. IV fluid administration appropriate?	100	0	0
10. Cardiac monitor applied?	100	0	0
11. Rhythm identified and documented?	90	10	0
12. Rhythm managed appropriately?	90	10	0
13. NTG administered? if not, rationale documented?	80 0	20 100	0 0
14. ASA allergy checked and documented?	90	10	0
15. ASA administered? if not, rationale documented?	70 0	30 100	0 0
16. Medical direction contacted?	100	0	0
17. Response to treatment(s) documented?	69	45	0
18. Times documented?	100	0	0
19. Other: _____ _____	NA	NA	NA

EMERGENCY MEDICAL SERVICES PERFORMANCE IMPROVEMENT



Emergency medical services providers in the State of Ohio strive everyday to deliver the highest standard of prehospital care to their residents.

December 2001



Assessing Chest Pain Cardiac vs. Non-Cardiac

- ? Not all chest pain is cardiac in origin and EMS personnel must use the following to assist them in the proper assessment and treatment of their patients.
- ? EMS personnel must gather, evaluate, and synthesize a great deal of information in very little time.
- ? Patient assessment means conducting a problem-oriented evaluation of your patient and establishing priorities of care based on existing and potential threats to life.
- ? EMS personnel can then develop a field diagnosis or impression - a prehospital evaluation of the patient's condition and its causes.
- ? Making critical decisions requires critical judgment - the use of knowledge and experience to form an impression of the patient's problem and plan their treatment.

ASSESSING CHEST PAIN

The **OPQRST** mnemonic may be used to recall pertinent questions to ask when obtaining a history from a patient experiencing chest pain.

1. **Onset:** "When did your symptoms begin?" "What were you doing when they began?" "Did your symptoms begin suddenly or gradually?"
2. **Provocation/Palliative:** "Did anything bring on the pain?" "Does anything make the pain better or worse?" (Associated with respiration, movement)

3. **Quality:** "How would you describe your discomfort?" (Pressure, pain, crushing, dull, burning, tearing, throbbing, squeezing, stabbing, vise-like)
4. **Region/Radiation/Referral:** "Where is your discomfort?" (Ask the patient to point to it) "Does it go anywhere else?" (Neck, shoulders, arm, back)
5. **Severity:** "On a scale of 0 to 10, with 0 being no pain and 10 being the worst, what number would you assign your pain or discomfort?"
6. **Timing:** "Does your discomfort come and go or is it constant?"

FEATURES THAT ARE ***NOT*** CHARACTERISTIC OF DISCOMFORT CAUSED BY MYOCARDIAL ISCHEMIA INCLUDE:

- ? Sharp of knife-like pain brought on by respiratory movements or cough.
- ? Primary or sole location of discomfort in the middle or lower abdominal region.
- ? Pain reproduced with movement or palpation of the chest wall or arms.
- ? Constant pain that lasts for many hours.
- ? Very brief episodes of pain that last a few seconds or less.
- ? Pain that radiates into lower extremities.

CLINICAL PRESENTATION

- ? Chest discomfort suggestive of ischemia is present in 75% to 80% of patients with acute MI.

- ? Symptoms include: chest, epigastric, arm, and wrist or jaw discomfort with exertion or at rest. May be accompanied by unexplained nausea and vomiting, persistent shortness of breath caused by left ventricular failure, and unexplained weakness, dizziness, sweating, anxiety, lightheadedness or syncope, or a combination of these symptoms
- ? Discomfort is usually ***NOT*** sharp, worsened by deep inspiration, affected by moving muscles in the area where the discomfort is localized, or positional in nature.



Full Arrests

- ? Twenty runs from January 2002 were reviewed. Most of the runs reviewed were well documented. The committee had a couple of suggestions to help further improve documentation of patient care delivered to cardiac arrested patient.
- ? Be sure to document airway management. Do not leave this open to incorrect interpretation. Be sure to include patient response.
- ? In cases of PEA, be sure to document the rhythm rate on the monitor. Atropine is only administered in those cases where the rate is slow (<60). It is important to document this as justification when atropine is either administered or withheld.

Cardiac Arrests (20)

Indicator	% Yes	% No
ABC assessment done?	92	8
ABC management documented	91	9
CPR started?	83	0 NA=17
Monitor/AED applied and; - delivers shocks if indicated? - continues CPR if no shocks?	100	0
Reassesses pulse?	67	33
Manages airway? - oral airway - EOA - ETT - Other	83	17
O2 administered appropriately?	92	8
History obtained/documented?	83	17
IV established?	92	8
Rhythms identified and documented?	100	0
Managed appropriately?	75	8 NA=17
Other interventions performed appropriately & documented? (i.e., external pacing)	34	8 NA=58
Medical direction contacted?	100	0
Response to treatment documented?	83	8.5 NA=8.5
Times documented?	92	8

NA=Not applicable

Meeting Information

The next meeting is February 23, 2002.

Please plan to attend as we will be selecting the quality indicators for review for 2002.

Continuing Education

- ? Education is an important component of the performance improvement process
- ? EMS continuing education is one method that can be utilized to correct areas of weakness identified by the peer review / performance improvement process.
- ? Continuing education helps to improve the EMS patient care delivery system.

Re-Evaluation

- ? The peer review / performance improvement system should re-evaluate the selected indicators at a later time to assess if there has been documented improvement.
- ? If there is no improvement, the process should be readjusted in an effort to find an effective method. For example, re-evaluate the educational process, communication system, protocols.
- ? Peer review / performance improvement is a continuous process.



- Administration
- Bureau of Motor Vehicles
- Emergency Management Agency
- **Emergency Medical Services**
- Office of Criminal Justice Services
- Ohio Homeland Security
- Ohio Investigative Unit
- Ohio State Highway Patrol



Procedures to Follow After Loss of Trauma Center Status

A hospital can lose its trauma center status in several ways:

- *Application for American College of Surgeons (ACS) verification or re-verification is denied, withdrawn, suspended or terminated.*
- *ACS verification is not obtained by the expiration of Ohio provisional designation.*
- *Voluntary surrender of ACS verification or Ohio provisional designation.*

Pursuant to Ohio Revised Code §3727.09 et seq, the procedures listed in this document are required to be followed when a hospital ceases to be a trauma center, regardless of the manner in which the loss of status occurred. Each of the 5 major steps of this procedure is prefaced with the relevant section of the ORC.

“Trauma victim” and “trauma patient” as used in this document is the same as defined in ORC §3727.09(A)(1) and §4765.01(N). In essence, it is a person who has suffered an injury which poses a risk of loss of life; loss of limb; significant, permanent disability; or significant, permanent disfigurement and is caused by blunt or penetrating trauma; exposure to electromagnetic, chemical or radioactive energy; drowning, suffocation or strangulation; or a deficit or excess of heat.

1. (3727.101(D)(2)(a)) Except as otherwise provided by federal law, at the earliest practicable date transfer to one or more appropriate trauma centers all trauma patients in the hospital to whom the hospital is not permitted to provide trauma care.
2. (3727.102) The hospital shall immediately notify, in writing, the following entities of the loss of trauma center status:
 - The Director of the Ohio Department of Health.
 - Ohio Department of Public Safety’s Division of Emergency Medical Services.
 - The Regional Physicians Advisory Board for their region.
3. (3727.10(C)) The hospital shall immediately make notification of the loss of trauma center status to all other hospitals with which it has a transfer agreement to accept trauma patients.
4. (3727.10) The following prohibitions apply to all hospitals that are not a trauma center and apply immediately when a hospital loses its trauma center status:
 - The hospital shall not represent itself as being able to care for trauma victims in a manner which is inconsistent with its non-trauma center status.
 - The hospital shall not provide trauma care to a trauma victim that is inconsistent with applicable federal laws, state laws, trauma care protocols and patient transfer agreements.
 - The hospital shall not transfer a trauma victim to a hospital that is not a trauma center with the appropriate level of categorization.

Mission Statement

“to save lives, reduce injuries and economic loss, to administer Ohio’s motor vehicle laws and to preserve the safety and well being of all citizens with the most cost-effective and service-oriented methods available.”

5. (3727.101(D)(2)(a) and 3727.09) Within 180 days of loss of trauma center status, the hospital shall have completed the following:
- A. Trauma care protocols shall be written, complying with applicable federal and state laws, and include policies and procedures with respect to all of the following:
 - a. Evaluation of trauma patients, including criteria for prompt identification of trauma patients who require a level of trauma care that exceeds the hospital's capabilities;
 - b. Emergency treatment and stabilization of trauma patients prior to transfer to an appropriate trauma center;
 - c. Timely transfer of trauma patients to appropriate trauma centers based on a patient's medical needs. Trauma patient transfer protocols shall specify all of the following:
 - i. Confirmation of the ability of the receiving trauma center to provide prompt trauma care appropriate to a patient's medical needs;
 - ii. Procedures for selecting an appropriate alternative trauma center to receive a patient when it is not feasible or safe to transport the patient to a particular trauma center;
 - iii. Advance notification and appropriate medical consultation with the trauma center to which a trauma patient is being, or will be, transferred;
 - iv. Procedures for selecting an appropriate method of transportation and the hospital responsible for arranging or providing the transportation;
 - v. Confirmation of the ability of the persons and vehicle that will transport a trauma patient to provide appropriate trauma care;
 - vi. Assured communication with, and appropriate medical direction of, the persons transporting a trauma patient to a trauma center;
 - vii. Identification and timely transfer of appropriate medical records of the trauma patient being transferred;
 - viii. The hospital responsible for care of a patient in transit;
 - ix. The responsibilities of the physician attending a patient and, if different, the physician who authorizes a transfer of the patient;
 - x. Procedures for determining, in consultation with an appropriate trauma center and the persons who will transport a trauma patient, when transportation of the patient to a trauma center may be delayed for either of the following reasons:
 - Immediate transfer of the patient is unsafe due to adverse weather or ground conditions.
 - No trauma center is able to provide appropriate trauma care to the patient without undue delay.
 - d. Peer review and quality assurance procedures for adult and pediatric trauma care provided in or by the hospital.
 - e. Enter into all of the following written agreements:
 - i. An agreement with one or more adult trauma centers in each level of categorization as a trauma center higher than the hospital that governs the transfer of adult trauma patients from the hospital to those trauma centers;
 - ii. An agreement with one or more pediatric trauma centers in each level of categorization as a trauma center higher than the hospital that governs the transfer of pediatric trauma patients from the hospital to those trauma centers.
 - f. The hospital must make trauma care protocols and trauma patient transfer agreements available for public inspection during normal working hours. The hospital must furnish a copy of such documents upon request and may charge a reasonable and necessary fee for doing so, provided that upon request it shall furnish a copy of such documents to the director of health free of charge.

Assessment of Factors Associated with the Delayed Transfer of Pediatric Trauma Patients: An EMS and Emergency Physician Survey

**Final Report for
OHIO EMS Injury Prevention Research Grant
EMS Funding Priority 4
2009 – 2010**

Principal Investigator: Richard A. Falcone, Jr., M.D., M.P.H.

Contributors

Marianne Beaudin, M.D., M.Sc., F.R.C.S.C.

Margot Daugherty, R.N., MSN, Med.

Gary Geis, M.D.

Suzanne Moody, M.P.A.

Rebecca L. Brown, M.D.

Victor F. Garcia, M.D.

Acknowledgments

We would like to acknowledge the participation of all of the hospitals and EMS providers that refer patients to our institution and their interest and willingness to help us continue to improve the care of injured children,

Table of Contents

Introduction.....	3
Background	3
Methods.....	4
Results.....	5
Discussion.....	7
Conclusion and Recommendations.....	10
Information/Qualifications.....	12
References.....	13
Figures and Tables.....	15
Budget.....	28
Appendix	
EMS Survey	
Physician Survey	

Introduction

Children represent a special challenge for emergency care providers. These challenges can result in delayed recognition of children in distress and therefore delay definitive treatment or appropriate transfer. Despite the fact that within the state of Ohio there are six pediatric trauma centers, the vast majority of ED visits made by children are to general hospitals which are less likely to have pediatric expertise, equipment, and policies in place. Given that injury remains the leading killer of children and that care provided at trauma centers has been shown to improve outcomes, it is essential that seriously injured children are quickly and appropriately evaluated and transferred to a designated trauma center for definitive diagnostic work up and care (Densmore, Lim, Oldham & Guice, 2006; MacKenzie et al., 2006).

Given the demonstrated delays in the transfer of injured children to pediatric trauma centers and the known limitations that exist for many pre-hospital and ED providers in caring for children, this study will help to clarify the existing trauma system, knowledge, and resource barriers impacting the rapid and appropriate transfer of injured children to designated trauma centers in the State of Ohio. Our innovative approach utilized surveys targeted to EMS providers and emergency medicine physicians to directly assess barriers currently impacting the care of injured children in our state. The surveys specifically addressed relevant EMS-C performance measures, knowledge of relevant trauma triage guidelines and recommendations for pre-transfer imaging, pediatric and trauma specific training and perceived barriers to patient transfer. Once the barriers are more clearly delineated within our state, directed training and system changes can be put into place. In addition, the findings from this study will further define a baseline of our current status to allow future tracking of improvements.

Background

Despite the importance of quick and appropriate transfer, we have previously identified that 82% of patients transferred to our Level I pediatric trauma center arrived well beyond the state two hour goal (average 420 minutes). Unfortunately these delays were not isolated among those children with minor injuries; 79% of those with overall severe injuries (Injury Severity Score (ISS) >15) and 47% of those with severe traumatic brain injuries (Glasgow Coma Score (GCS)<9) arrived beyond the two hour goal. When we investigated the etiology of these delays there were no observed differences related to individual hospitals, distance from our institution or mode of transport (air vs. ground). Delays were however more common among those with commercial insurance (75.8% vs. 64.8%; $p<0.05$) and those that had a CT scan prior to transfer (52.1% vs. 23.3%; $p<0.05$). In this prior ODPS funded study we were unable to demonstrate an association with imaging and any specific clinical findings and were therefore uncertain as to the reason providers felt the need to image prior to transfer (Chatoorgoon et al., 2010).

Other work has demonstrated that not only may excess imaging be associated with delays but that these children may require repeat imaging secondary to poor quality or unavailability of initial imaging exposing them to increased radiation risk and increased cost (Chwals et al., 2008). In addition, the reasons for obtaining imaging prior to transfer in a study of adult trauma patients revealed numerous misconceptions ranging from legal requirements, trauma center expectations, and fear of litigation as reasons to delay transfer to obtain imaging (Lee et al., 2008). Until we fully understand the reasons these providers are obtaining imaging prior to patient transfer we will be unable to properly educate and reduce this unnecessary practice.

According to the Institute of Medicine report, *Emergency Care for Children: Growing Pains* (Institute of Medicine [IOM], 2007) although children represent 27% of all ED visits, many hospitals are not adequately prepared to handle pediatric patients. The problems identified in this report include lack of transfer agreements and clear transfer guidelines for pediatric patients, limited and varied pediatric training and experience, lack of a designated pediatric emergency coordinator, failure to use evidence based approaches to provide care and reduce errors, and failure to explore and utilize new technologies to improve the care and rapid appropriate triage of pediatric patients. In addition to delays at outside hospitals, it has been noted that pre-hospital providers may not always bring pediatric trauma victims directly to an appropriate pediatric trauma center; the reasons for these “choices” are not clear. Given these demonstrated limitations, many dedicated well intentioned pre-hospital and ED providers often make do without the specialized pediatric training and resources that are present in pediatric trauma centers.

Methods

Survey development and distribution

Surveys were designed by a multi-disciplinary group including an Emergency Department (ED) physician, an Emergency Medical Services (EMS) provider, a pediatric trauma surgeon and an education specialist. Two surveys were developed, one designed for EMS providers and one for ED physicians. Both were created to help understand knowledge and system issues impacting the prompt identification and transfer of injured children to an appropriate pediatric trauma facility. Both surveys contained questions to obtain general demographic information as well as two case studies with questions, one scenario meeting the State of Ohio defined trauma criteria and another case study that did not definitely meet criteria but was subject to discussion. All surveys allowed participants to enter their answers in either an open-ended or multiple choice fashion (**Appendix 1**).

Utilizing a list of EMS providers provided by the State of Ohio Department of Public Safety and a list of ED physicians from Ohio, provided by the American College of Emergency Physicians (ACEP), individuals were randomly selected to receive the survey and a total of 958 EMS surveys and 936 physician surveys were mailed. The survey was open to all EMS and emergency physician providers who

treat injured children. Exclusion criteria included EMS providers who did not practice in the field and ED physicians currently working in pediatric trauma centers (PTC). The surveys were initially mailed in April of 2010 along with a cover letter introducing the study and requesting the participant to forward the provided SurveyMonkey website link (www.surveymonkey.com) to other peers to complete online. To further incentivize participation a five dollar gift card was included. A follow up letter was sent one month after the initial letters to further encourage participation. Surveys, both hard copy and electronic were accepted until June 30, 2010.

Results

EMS providers

In summary, a total of 825 EMS surveys were completed; 239 via mail and 586 online. There were 89 surveys excluded, 72 submitted with no responses and 17 not practicing in the field leaving a total of 736 surveys available for further analysis.

The majority of responders were paramedics (68%), worked full-time (66%), and were in a 911 service area (94%) (**Table 1**). In addition, 41% were from rural areas in the state and 47% were within 20 miles of the closest pediatric trauma center. Not surprisingly, pediatric experience among these providers was limited with 47% treating 10 or fewer pediatric patients a year, with the majority of providers having no pediatric intubation (65%) or intraosseous line placement (57%) experience in the past year (**Table 2**).

Despite the fact that scenario one was designed to clearly meet state trauma criteria and scenario two was not, 84% and 86% of providers answered that they would transport the patients to a pediatric trauma center. In scenario #1, a motor vehicle collision with a child that had abdominal bruising and pain, 93% of providers included mechanism of injury as the reason for transport to a PTC. Despite the fact that abdominal bruising and pain is a state trauma criterion, only 38% listed the pain and bruising and only 43% of respondents listed state trauma criterion as a reason for transfer to a trauma center (**Figure 1**). In scenario #2, a multi-vehicle collision with a death of the driver and an otherwise stable child, the main reason providers indicated they would transfer to a PTC was death of another passenger in the same vehicle (89.0%) (**Figure 2**). The mechanism of injury and amount of damage to the car, neither of which are State of Ohio trauma criteria were also listed as top reasons to indicate the need to transport directly to a trauma center. Fifty percent also incorrectly responded that this patient met state trauma criteria.

The location, rural, urban or suburban of the EMS provider did not impact the likelihood of transferring either patient (**Figure 3**). Among the providers that would transport the patient from scenario 1 or 2, 16% and 21% respectively, within 20 miles of a PTC would call for air transport (**Figure 4** and **Figure 5**). In addition, 62% would bypass an adult trauma center to transport to a PTC. It was observed that for those responding that they would bypass an adult center, transfer time to a PTC was 25 minutes compared to an average transport time of 34 minutes for those that would not bypass the adult center ($p<0.05$).

For scenario 1 and 2, 16% and 14% respectively, of respondents either were not sure or would not transport the patient directly to a PTC. The reasons provided for not transporting the patient to a PTC are shown in **Figure 6**. The primary reasons provided were that the PTC was too far away and that they would transfer to the closest community hospital. Accordingly, more than 90% of EMS providers who answered they would not transport because of distance were beyond 20 miles away from a PTC, with 49% for scenario #1 and 59% for scenario 2 being more than 40 miles away. Interestingly, only 32% and 23% considered traffic during rush hour as an important factor in scenario #1 and #2. Average transport time of those who would transport to a PTC was significantly different than for those who would not (28 minutes vs. 43 minutes, $p<0.05$). Just under half of those that would not initially transfer to a PTC would reconsider if there was tachycardia, hypotension, altered mental status, or an open fracture (**Figure 7**). Among those that would transfer either patient to a community hospital 83% either were unsure or knew there was not pediatric expertise at that institution. Furthermore, 21% of the EMS providers that would not transport to a PTC responded that there is never a reason to bypass the closest community hospital. Even among those that would not transport to a PTC, 73% correctly identified the patient in scenario 1 as meeting state trauma criteria, and 66% for scenario 2 incorrectly categorized the patient as meeting state trauma criteria.

ED physicians

A total of 486 ED physician surveys were returned: 384 via mail and 102 completed online. There were 107 surveys excluded because the participant was currently practicing in a PTC leaving a total of 377 surveys for further analysis.

Over 80% of respondents were residency trained in emergency medicine with less than 1% having fellowship training in pediatric emergency medicine (**Table 3**). Although 54% of respondents report treating over 200 pediatric patients a year, the majority had performed less than 5 intubations (93%), intraosseous line placement (99%), central line placement (99%), or chest tube placement (100%) (**Table 4**). Only 37% of respondents reported that their institution had an on call surgeon 24 hours a day.

For the first scenario, a child thrown from a dirt bike complaining of facial pain, 90% of the ED physicians correctly identified the patient as a trauma patient according to the State of Ohio definition and 74% would appropriately transfer to a PTC. Although the second scenario, a four year old that fell 5 feet with an upper extremity fracture, does not meet state trauma criteria, 46% of respondents classified this child as a trauma patient and 34% would transfer to a PTC.

ED physicians that would transfer either child, were asked if they would perform diagnostic studies and why prior the transfer. Less than 20% of respondents for the first scenario would do no diagnostic studies and 3% would do only a chest x-ray prior to transfer. For the first scenario, 56% would perform a head computed tomography (CT) prior to transfer (**Figure 8**). In scenario two, many fewer practitioners obtained imaging, other than an extremity film, but there were still nearly 33% that would

have obtained additional imaging. The primary reason provided for obtaining diagnostic studies prior to transfer were to avoid missed injuries, followed by legal concerns (**Figure 9**).

For those providers that would transfer either child the mode of transport is demonstrated in **Figure 10**. For the group that responded that they would transport via helicopter, 46% were greater than 20 miles from the PTC, among those greater than 50 miles from a PTC this percentage increased to 60%.

Among those that would not transfer either patient, 27% do not have 24 hour on-call surgeon coverage. In addition, the majority (69.6%) were from institutions less than 20 miles away from a PTC. Among those providers that would transfer the child in each scenario, 45% and 53% (scenario 1 and 2) work at an adult trauma center and 52% and 41% treat over 200 pediatric patients a year (**Table 5** and **Table 6**).

The ED physicians who would not transfer the patients were asked which additional findings would prompt them to transfer the child to a PTC (**Figure 11**). For the less severely injured child in scenario 2, ED physicians would transfer at a much higher rate if there were changes in the clinical status compared to those that would change their plan to not transfer the more severely injured child from scenario 1.

Discussion

Despite the existence of a trauma system in the State of Ohio it has previously been demonstrated both on a state and local level that greater than 80% of injured patients do not reach an appropriate trauma center within the state goal of 2 hours. Although the etiology of these delays is unclear it has previously been shown that they are associated with excess imaging prior to transfer. This study of over 700 EMS providers and nearly 500 EM physicians across the state adds to our understanding of such delays (**Figure 12**). First, we have demonstrated that both in the pre-hospital and initial hospital phase of care there is an under appreciation of the state trauma criteria and the value of a pediatric trauma center. In addition, in some cases the pre-hospital phase decision not to transfer to a pediatric trauma appears to be associated with the distance to the nearest pediatric trauma center. Meanwhile at the initial hospital many patients receive diagnostic testing prior to transfer for reasons that do not comply with Advanced Trauma Life Support (ATLS) protocols such as the need to avoid missing any injuries or for medico-legal concerns.

EMS providers face multiple challenges in the field when dealing with an injured pediatric patient, most importantly low levels of experience as demonstrated here. As a consequence, the ability to clearly apply the state trauma triage criteria to children appears to be somewhat limited and therefore may contribute to both over and under triage of children. For example, in scenario 1 a child who met trauma criteria because of abdominal bruising and pain was correctly taken to a trauma center by the majority of providers despite few actually identifying this patient as meeting state criteria or reporting that the clinical findings were important in their decision to transfer. Interestingly for both this scenario, as well as the

second scenario which included a clinically stable child involved in a MVC with a death at the scene, mechanism of injury and not the child's exam and vitals were utilized in determining the need for transfer directly to a pediatric trauma center. Mechanism of injury as an isolated triage criterion has not been found to be useful in indicating the need for a trauma resuscitation and rather clinical and physiologic parameters are much more indicative of the need for trauma care (Nuss, Dietrich & Smith, 2001; Kohn, Hammel, Bretz & Stangby, 2004; Cooper, Yarbrough, Zone-Smith, Byrne & Norcross, 1995). Therefore, although the correct decision to transfer was reached by most providers in the first scenario, ongoing education emphasizing the clinical and physiologic parameters outlined in the state's trauma triage criteria is necessary. For scenario two, although if readily accessible the transfer of this child to a pediatric trauma center is reasonable, it is important to recognize and appropriately utilize limited resources so as to ensure the children in most need are promptly transferred and evaluated.

Transferring patients long distances and overutilizing air transport services for scene transports has the potential to overburden the system as well as negatively impact patient safety. Analysis of the survey results interestingly demonstrate that rural providers are just as likely to transfer a child directly to a pediatric trauma center as are their urban and suburban counterparts. It was however noted that clearly, and often appropriately, distance from the pediatric trauma center was indeed a factor in making a decision to transport a child directly to a pediatric trauma center. Of those who would not transfer directly to a pediatric trauma center the majority were greater than 20 miles from the closest pediatric trauma center and on average transport time would be 45 minutes compared to just under 30 minutes for those that would transport directly. This time frame is appropriate given the current trauma triage guidelines which recommend transports not be longer than 30 minutes, although, given the previously noted extensive delays once arriving at a non-trauma center, the 15 minute additional transfer time may actually be in the child's best interest. For those EMS providers that are further from a pediatric trauma center it is important that as a state we continue to develop an inclusive trauma system to encourage the verification of additional level 3 centers that are committed to the prompt and appropriate treatment and transfer of injured children (Haller, 2002; Sampalis, et al., 1999; Hulka et al., 1997).

In addition, although there is continued debate regarding the distance beyond which air transport is of value, most would agree that a distance of less than 20 miles is generally a contraindication to air transport (Thomas, 2007.; Biewener, Aschenbrenner, Rammelt, Grass & Zwipp, 2004). Despite this, nearly 20% of responding EMS providers reported that they would request air transport even though they were less than 20 miles from the closest pediatric trauma center. Development of clear guidelines to support appropriate use of air transport will likely help ensure that the patients that will benefit most for this mode of transport receive it consistently.

Although the majority of the reasons given to not transfer either patient were related to distance from the pediatric trauma center there were some interesting and somewhat concerning observations. First, nearly 20% of respondents that said they would not transfer one or both of the patients reported that

there was “never” a reason to not go to the community hospital first. With the availability of air transport throughout the state and the number of pediatric trauma centers the frequency of this response is concerning and may imply a lack of knowledge regarding the benefits of children being cared for at a pediatric trauma center (Potoka, Schall & Gardner, 2000; Densmore et al., 2006; Hall, Reyes & Meller, 1996; Nakayama, Copes & Sacco, 1992). Second, it is interesting that although EMS providers reported that they would take a child to the nearest community hospital rather than directly to a pediatric trauma center, 80% were unaware of whether that hospital had any pediatric expertise or experience. This again indicates a lack of awareness of the value of children being cared for by those with expertise and experience in managing their unique physiology.

The level of experience of ED providers who are not part of a pediatric trauma center in managing severely injured children has been reported to be quite low (IOM, 2006; Gausche-Hill, Schmitz & Lewis, 2007). The results of this survey of Ohio ED providers confirms this deficiency with over 90% of respondents reporting having performed 5 or fewer critical procedures essential in the care of critically injured children. In addition the majority of these providers are functioning in hospitals that do not have 24 hour 7 day a week coverage by a general surgeon.

Although 90% of providers appropriately recognized the patient in scenario one, a child thrown from a dirt bike complaining of facial pain, as meeting trauma criteria, only 74% would transfer the patient to a pediatric trauma center. In addition, although the patient in the second scenario, a child with a fractured extremity following a low fall, did not meet state criteria, 46% felt it was a trauma and only 34% would transfer. These results suggest that although the majority of providers understand the appropriate criteria for identifying a pediatric trauma patient, not all providers recognize the benefit of transferring that child to a pediatric trauma center. Our data suggests that those working at an adult trauma center or who see more than 200 pediatric patients a year are less likely to transfer either patient. Although this may relate to an overall “comfort” level in dealing with trauma and/or children, available data continues to support that the pediatric trauma patient will have improved outcomes by having their care at a pediatric trauma center. This improved care is not only the result of the pediatric trauma team’s initial care but perhaps even more importantly on the developmentally appropriate care throughout recovery (Potoka, Schall & Ford, 2001).

Among those that did respond that they would transfer either pediatric trauma patient to the closest pediatric trauma center, only 20% would not do any imaging prior to transfer and only 3% would limit their diagnostic imaging to a CXR only. According to ATLS guidelines, initial management should be focused on stabilization, treatment of immediately life threatening injuries and transfer to a definitive care facility, namely an appropriate trauma center. Secondary, or adjunct imaging, should be performed only if it will not delay transfer or there is an appropriately trained provider that can manage the potential injuries identified. For the child in the first scenario, over 50% would perform a head CT prior to transfer to a pediatric trauma center. In addition, for the less severely injured child in scenario 2, over 30% would

perform additional imaging prior to transfer if they chose to transfer this child. As has been previously demonstrated this unnecessary imaging has been associated with delayed transfers and the need to repeat imaging because of poor quality or initial imaging is not available for review (Chatoorgoon et al., 2010; Chwals et al., 2008). In addition to the potential impact on cost, radiation exposure and delay of transfer, imaging without an available specialist (only 37% of respondents had a general surgeon available and likely even fewer had a neurosurgeon comfortable in managing pediatric trauma available) is in direct contradiction to the recommendations of ATLS guidelines.

Interestingly, when the reasons for obtaining such imaging were examined, the majority of respondents reported they were done to avoid missed injuries and for medico-legal reasons. Again although identifying immediately life threatening injuries that can be rapidly treated at the facility is part of ATLS, there is no need to identify all injuries prior to transfer. There is also no need to have definitively diagnosed all injuries prior to transfer from a medico-legal standpoint prior to transfer (Lee et al., 2008; Emergency Medical Treatment and Active Labor Act [EMTALA], 2000). Additionally, many of the other reasons given for performing additional diagnostic tests prior to transfer such as parent expectation, “routine”, and the perceived expectation of the trauma center should all be considered as not being in the best interest of the child.

Conclusions and Recommendations

This study, although limited in that it is a survey study and does not necessarily reflect actual practice, demonstrates several opportunities for improvement of the level of care provided to pediatric trauma patients in the State of Ohio. First, both EMS providers as well as ED physicians across the state may benefit from a more complete understanding of the current trauma triage criteria. As part of understanding the criteria and utilizing them to direct the appropriate patients to a pediatric trauma center it is incumbent upon pediatric trauma centers to continually educate providers and demonstrate with transparent risk adjusted outcomes the important benefits of having children cared for at designated trauma centers. In addition it is critical that triage criteria at all levels, pre-hospital and community hospital, as well as at the pediatric trauma centers themselves is strongly based in evidence that helps ensure the right patient gets to the right place at the right time and has access to the most appropriate resources.

Second this survey study further supports prior observations that providers have limited pediatric experience which has been associated with lower quality of care for children. In order to combat this limitation it is important that unique and readily available education and training opportunities exist. One such approach is the use of high fidelity simulation to train providers in the management of high risk but low frequency events. This method has been demonstrated to be useful in the training of trauma teams as well as numerous health care teams (Falcone et al., 2008; Patterson, Geis & Wears, 2006a). A limitation of simulation training is that it may be difficult for providers in communities at a distance from a simulation center to obtain such training. One potential innovative approach may be to offer simulation

training utilizing distance teleconferencing technology. Finally, the use of telemedicine to “virtually” assist in the management of severely injured children in the field or in the emergency departments of non-pediatric centers may enhance the immediate care of these patients (Marcin, Schepps, Page, Struve, Nagrampa & Dimand, 2004).

Third, given that distance from a pediatric trauma center was identified as an important issue for providers not transporting to a pediatric trauma center it will be important to develop the state’s trauma system to ensure that these children receive timely and high quality care at the first institution they are brought to. This can most likely be achieved not only through the type of education and telemedicine approaches described above but also by supporting and encouraging the development of more level 3 trauma centers as well as a more efficient and appropriate utilization of air transport.

Finally, the challenge of excessive imaging of pediatric patients prior to transfer to definitive care remains a vexing problem. Not only will directed education be important to combat this problem but also expansion of the evidence base describing the deleterious impact of such imaging including increased radiation exposure, increased costs, and delay in care which ultimately may impact outcome.

Information/Qualifications – Principal and all co-investigators

The principal investigator, **Richard A. Falcone, Jr., M.D., M.P.H.**, is currently the Director of the Trauma Services Program within the Division of Pediatric and Thoracic Surgery at Cincinnati Children’s Hospital Medical Center. He is also the Chair of the Trauma Performance Improvement Committee. He has an extensive background in trauma research including epidemiologic studies, quality of care studies and design and evaluation of injury prevention programs and has published over 50 peer reviewed articles. He has been funded by the ODPS for several previous projects as well as an ongoing multicenter project.

Marianne Beaudin, M.D., M.Sc., F.R.C.S.C. is currently the Pediatric Trauma Fellow at Cincinnati Children’s. Dr. Beaudin has a background in both basic science and clinical research including design and evaluation of head injury guidelines and trauma epidemiologic studies. Her clinical research has resulted in several peer reviewed articles, oral and poster presentations.

Margot Daugherty, R.N., M.S.N., M.Ed., is currently the trauma nurse educator at Cincinnati Children’s. Ms. Daugherty has extensive experience in both adult and pediatric trauma program management and pre-hospital care. She is actively involved in teaching health care providers at all levels how to care for injured patients with an emphasis on pediatric patients. She is an ATLS course coordinator as well as TNCC instructor.

Gary Geis, M.D. is a fellowship trained pediatric emergency medicine physician and emergency medicine liaison to the Trauma Services Program at Cincinnati Children's. He is also the assistant medical director of the Cincinnati Children's Center for Simulation and Research and is intimately involved in resident and fellowship education. Dr. Geis has been funded by AHRQ as a co-investigator for his work in simulation and has numerous peer reviewed publications.

Suzanne Moody, M.P.A., is the Clinical Research Coordinator in the Trauma Services Program at Cincinnati Children's and has extensive experience in trauma data management, project organization and data analysis.

References

1. Densmore J.C., Lim H.M., Oldham K.T., Guice K.S. (2006). Outcomes and delivery of care in pediatric injury. *J Ped Surg.* 41:92-98.
2. MacKenzie E.J., Rivera F.P., Jurkovich G.J., Nathans A.B., Frey K.P., Egleston B.L., Salkever D.S., Scharfstein D.O. (2006). A national evaluation of the effect of trauma-center care in mortality. *NEJM.* 354:366-78.
3. Chatoorgoon K., Huezo K, Rangel E., Francois N., Schweer L., Daugherty M., Koehn M., Ricketts C., Brown R.L., Garcia V.F., Falcone R.A. (2010). Unnecessary imaging, not distance or transportation mode impacts delays in the transfer of the injured children. *Pediatr Emer Care.* 26:481-86.
4. Chwals W.J., Robinson A.V., Sivitt C.J., Alaedeen D., Fitzenrider E., Cizmar L. (2008). Computed tomography before transfer to a level 1 pediatric trauma center risks duplication with associated increased radiation exposure. *J Ped Surg.* 43: 2268-72.
5. Lee C.Y., Bernard A.C., Fryman L., Coughenour J., Costitch J., Boulanger B., Chang P., & Kearney P.A.. (2008) Imaging may delay transfer of rural trauma victims:a survey of referring physicians. *J Trauma.* 65:1359-63.
6. Institute of Medicine [IOM], Emergency Care for Children: Growing Pains, (2006). <http://www.iom.edu/Reports/2006/Emergency-Care-for-Children-Growing-Pains.aspx>
7. Nuss K.E., Dietrich A.M., Smith G.A. (2001) Effectiveness of a pediatric trauma team protocol. *Pediatr Emerg Care.* 17:96-100.
8. Kohn M.A., Hammel J.M., Bretz S.W., Stangby A. (2004). Trauma team activation criteria as predictors of patient disposition from the emergency department. *Acad Emerg Med.* 11:1-9.
9. Cooper M.E., Yarbrough D.R., Zone-Smith L., Byrne T.K., Norcross E.D. (1995). Application of field triage guidelines by pre-hospital personnel: is mechanism of injury a valid guideline for patient triage? *Am Surg.* 61:363-7.
10. Haller J.A. (2002). The evolution and current status of emergency medical services for children. *Surg Clin N Am.* 82:263-71.
11. Sampalis et al. (1999). Trauma care regionalization a process-outcome evaluation. *J Trauma.* 46;565-79.
12. Hulka F., et al. (1997). Influence of a statewide trauma system on pediatric hospitalization and outcome. *J Trauma.* 42:514-19.
13. Thomas S.H. (2007). Helicopter EMS transport outcomes literature: annotated review of articles published 2004-2006. *Prehosp Emerg Care.* 11:477-88.
14. Biewener A., Aschenbrenner U., Rammelt S., Grass R., Zwipp H. (2004). Impact of helicopter transport and hospital level on mortality of polytrauma patient. *J Trauma.* 56:94-8.
15. Potoka D.A., Schall L.C., Gardner M.J. (2000). Impact of pediatric trauma centers on mortality in a statewide system. *J Trauma.* 49, 237-45.
16. Hall J.R., Reyes H.M., Meller J.L. (1996). The outcome for children with blunt trauma is best at a pediatric trauma center. *J Pediatr Surg.* 3:72-76.

17. Nakayama D.K., Copes W.S., Sacco W. (1992). Differences in trauma care among pediatric and nonpediatric trauma centers. *J Pediatr Surg.* 27:427-31.
18. Guasche-Hill, M., Schmitz, C., Lewis, R.J. (2007). Pediatric preparedness of US emergency departments: a 2003 survey. *Pediatrics*, 120(6), 1229-1237.
19. Potoka D.A., Schall L.C., Ford H.R. (2001). Improved functional outcome for severely injured children treated at pediatric trauma centers. *J Trauma.* 51:824-34.
20. Emergency Medical Treatment and Active Labor Act. (2000) 42 USC §1395dd.
21. Falcone R.A., Daugherty M., Schweer L., Patterson M., Brown R.L., Garcia V.F. (2008). Multidisciplinary pediatric trauma team training using high-fidelity trauma simulation. *J Pediatr Surg.* 43:1065-71.
22. Patterson M.D., Geis G., Wears R.L. (2006a). Implementation of a simulation based patient safety curriculum in a pediatric emergency department, from <http://www.abstracts2view.com/pas/E-PAS2006:59:2320.3>
23. Marcin J.P., Schepps D.E., Page K.A., et al. (2004). The use of telemedicine to provide pediatric critical care consultations to pediatric trauma patients admitted to a remote trauma intensive care unit: a preliminary report. *Pediatr Crit Care Med.* 5:251-6.

Table 1: EMS Survey Demographics

Certification Level (n=713)	n	%
EMT-Paramedic	485	68.0%
EMT-Intermediate	65	9.1%
EMT-Basic	163	22.9%
Practice Status (n=734)	n	%
Full-time EMS Only	92	12.5%
Part-time EMS Only	27	3.7%
Volunteer EMS Only	61	8.3%
Full-time Firefighter/EMS	289	39.4%
Part-time Firefighter/EMS	73	9.9%
Volunteer Firefighter/EMS	73	9.9%
Full-time EMS		
Officer/Supervisor	104	14.2%
Part-time EMS		
Officer/Supervisor	15	2.0%
Employer a 911-Responder Service (n=734)	n	%
Yes	692	94.3
No	42	5.7
Primary Employer Service (n=732)	n	%
Rural	303	41.4%
Urban	132	18.0%
Suburban	297	40.6%
Distance to closest pediatric trauma center (n=736)	n	%
1 -10 miles	140	19.0%
11-20 miles	206	28.0%
21-30 miles	135	18.3%
31- 40 miles	81	11.0%
41-50 miles	76	10.3%
Over 51 miles	98	13.3%
Distance to closest adult trauma center (n=736)	n	%
1 -10 miles	230	31.3%
11-20 miles	213	28.9%
21-30 miles	108	14.7%
31- 40 miles	75	10.2%
41-50 miles	66	9.0%
Over 51 miles	44	6.0%
Distance to closest community hospital (n=733)	n	%
1 -10 miles	527	71.9%
11-20 miles	184	25.1%
21-30 miles	16	2.2%
31- 40 miles	4	0.5%
41-50 miles	2	0.3%
Over 51 miles	0	0.0%

Table 2: EMS Survey - Pediatric Experience

	EMT-Paramedic		EMT-Intermediate		EMT-Basic			
Annual # of CEU's	11.35		8.45		9.36			
# of Pediatric Patients Treated Annually	EMT-Paramedic	%	EMT-Intermediate	%	EMT-Basic	%	Total	%
None	5	0.7%	0	0.0%	4	0.5%	9	1.2%
1-5	70	9.5%	14	1.9%	75	10.2%	159	21.6%
6-10	119	16.2%	29	3.9%	33	4.5%	181	24.6%
11-25	162	22.0%	15	2.0%	52	7.1%	229	31.2%
26-50	82	11.2%	3	0.4%	17	2.3%	102	13.9%
Over 50	45	6.1%	4	0.5%	6	0.8%	55	7.5%
# of Pediatric Intubations Conducted Annually	EMT-Paramedic	%	EMT-Intermediate	%	EMT-Basic	%	Total	%
None	278	37.9%	55	7.5%	163	22.2%	496	67.7%
1-5	199	27.1%	10	1.4%	22	3.0%	231	31.5%
6-10	2	0.3%	0	0.0%	2	0.3%	4	0.5%
11-15	1	0.1%	0	0.0%	0	0.0%	1	0.1%
Over 15	1	0.1%	0	0.0%	0	0.0%	1	0.1%
# of Pediatric intraosseous lines placed annually	EMT-Paramedic	%	EMT-Intermediate	%	EMT-Basic	%	Total	%
None	198	26.9%	53	7.2%	166	22.6%	417	56.7%
1-5	227	30.9%	12	1.6%	16	2.2%	255	34.7%
6-10	28	3.8%	0	0.0%	4	0.5%	32	4.4%
11-15	9	1.2%	0	0.0%	0	0.0%	9	1.2%
Over 15	21	2.9%	0	0.0%	1	0.1%	22	3.0%
# of Children Taken to Pediatric Trauma Center Annually	EMT-Paramedic	%	EMT-Intermediate	%	EMT-Basic	%	Total	%
Less than 5	206	34.7%	30	5.1%	91	15.3%	327	55.1%
5-15	105	17.7%	16	2.7%	44	7.4%	165	27.8%
16-30	53	8.9%	3	0.5%	8	1.3%	64	10.8%
Greater than 30	32	5.4%	2	0.3%	3	0.5%	37	6.2%

**Table 3: Physician Survey -
Demographics**

Residency Trained in Emergency Medicine (n=375)	n	%
Yes	305	81.33%
No	70	18.67%
Fellowship Trained in Pediatric Emergency Medicine (n=377)	n	%
Yes	3	0.80%
No	374	99.20%
	Range	Average
Years in Practice	0-50	13
Years in Practice in an Emergency Department	0-38	12.4
Employed Full-time in Emergency Department	n	%
Yes	310	82.23%
No	64	16.98%
Distance to closest pediatric trauma center (n=374)	n	%
1-10 miles	179	47.9%
11-20 miles	75	20.1%
21-30 miles	39	10.4%
31-40 miles	15	4.0%
41-50 miles	15	4.0%
over 51 miles	43	11.5%
Works at a pediatric trauma center	3	0.8%
Work in an adult trauma center (n=376)	n	%
Yes	183	48.67%
No	190	50.53%
Don't Know	3	0.80%

Table 4: Physician Survey - Pediatric Training & Experience

Pediatric CME's obtained annually	Range 0-100	Average 11.3
Pediatric Patients Treated Annually (n=370)	n	%
None	17	4.6%
1-25	24	6.5%
26-50	24	6.5%
51-100	49	13.2%
101-200	56	15.1%
Over 201	200	54.1%
Pediatric intubation performed in last 12 months (n=370)	n	%
None	170	45.9%
1-5	176	47.6%
6-10	15	4.1%
11-15	6	1.6%
Over 15	3	0.8%
Intraosseous Lines placed on children under 10 in last 12 months (n=369)	n	%
None	220	59.6%
1-5	147	39.8%
6-10	3	0.8%
11-15	0	0.0%
Over 15	1	0.3%
Central lines placed in children less than 17 in last 12 months (n=370)	n	%
None	309	83.5%
1-5	56	15.1%
6-10	6	1.6%
11-15	1	0.3%
Over 15	0	0.0%
Chest tubes placed in children less than 17 in last 12 months (n=370)	n	%
None	336	90.8%
1-5	36	9.7%
6-10	0	0.0%
11-15	0	0.0%
Over 15	0	0.0%

Table 5: Physician Scenario 1.

	Physicians who would transfer patient to a pediatric trauma center (n=271)		Physicians who would NOT transfer patient to a pediatric trauma center (n=95)	
Still in Training	53	19.6%	16	16.8%
Residency Trained in EM	221	81.5%	75	78.9%
Fellowship Trained in Ped EM	3	1.1%	0	0.0%
Years in Practice (average)	13.2	Range = 0-50	12.6	Range = 0-39
Years Practice in ED (average)	12.7	Range = 0-37	12.3	Range = 0-38
Work Full-time in ED	226	83.4%	78	82.1%
Work in verified adult trauma center	123	45.4%	53	55.8%
Pediatric CME's obtained annually (average)	11.6	Range = 0-100	10.6	Range = 0-100
Pediatric patients treat annually				
None	7	2.6%	7	7.4%
1-25	16	5.9%	8	8.4%
26-50	20	7.4%	5	5.3%
51-100	38	14.0%	10	10.5%
101-200	50	18.5%	5	5.3%
Over 201	140	51.7%	58	61.1%
According to State of Ohio definition of trauma, would consider and treat this patient as a trauma patient	254	93.73%	75	78.95%

Table 6: Physician Scenario 2

	Physicians who would transfer patient to a pediatric trauma center (n=121)		Physicians who would NOT transfer patient to a pediatric trauma center (n=238)	
Still in Training	23	19.0%	42	17.6%
Residency Trained in EM	97	80.2%	197	82.8%
Fellowship Trained in Ped EM	2	1.7%	1	0.4%
Years in Practice (average)	13.6	Range = 0-46	12.8	Range = 0-50
Years Practice in ED (average)	12.9	Range = 0-37	12.6	Range = 0-38
Work Full-time in ED	97	80.2%	204	85.7%
Work in verified adult trauma center	64	52.9%	108	45.4%
Pediatric CME's obtained annually (average)	12.1	Range = 0-100	11.1	Range = 0-100
Pediatric patients treated annually				
None	4	3.3%	8	3.4%
1-25	13	10.7%	9	3.8%
26-50	14	11.6%	11	4.6%
51-100	16	13.2%	32	13.4%
101-200	24	19.8%	31	13.0%
Over 201	50	41.3%	145	60.9%
According to State of Ohio definition of trauma, would consider and treat this patient as a trauma patient	68	56.2%	98	41.2%

Figure 1.

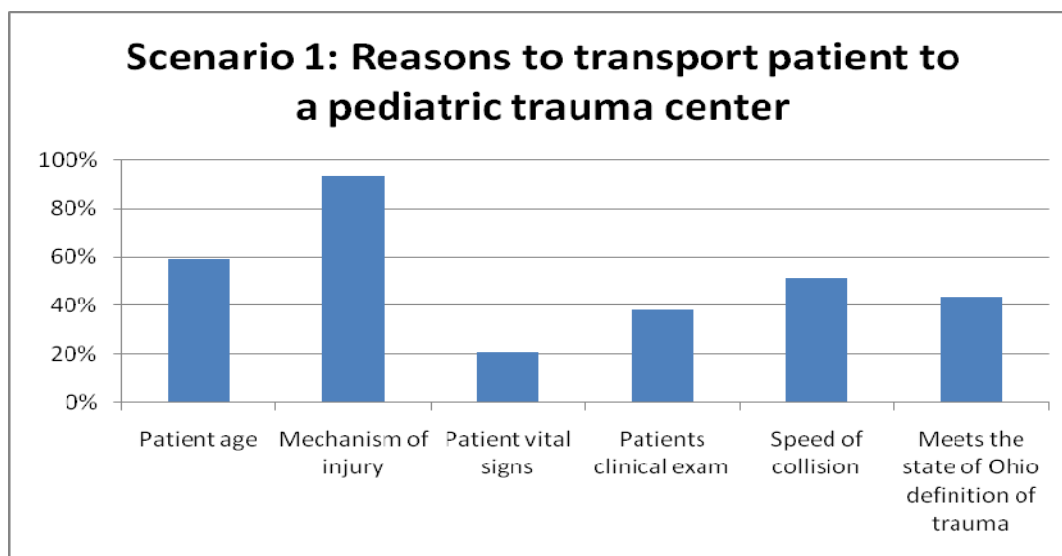


Figure 2.

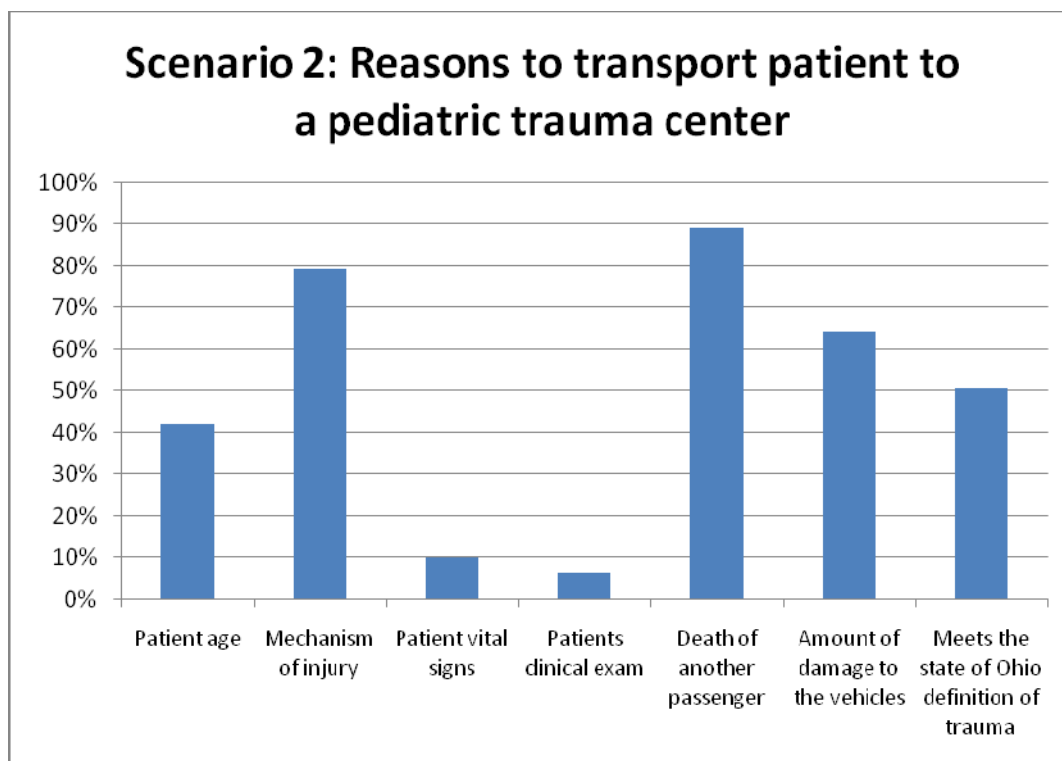


Figure 3.

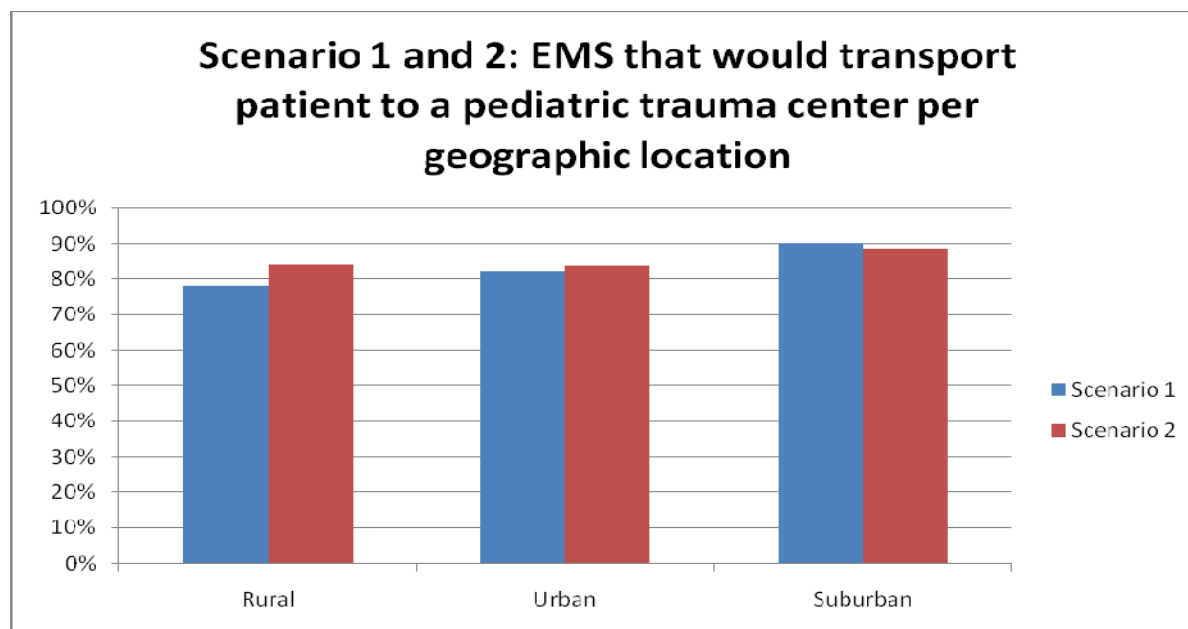


Figure 4.

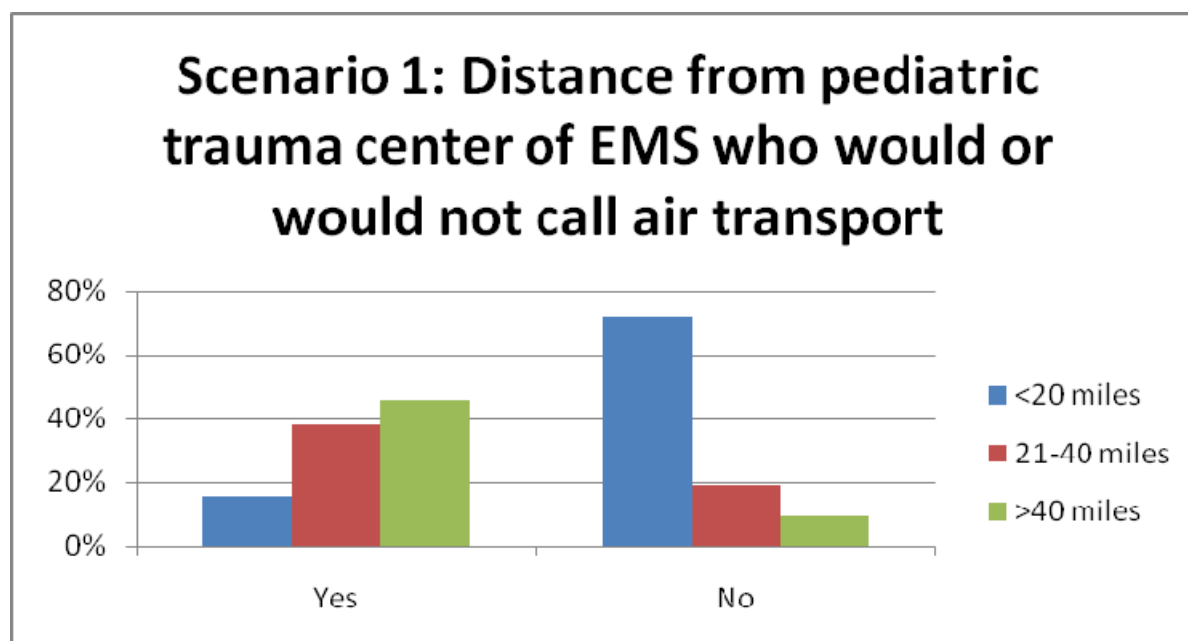


Figure 5.

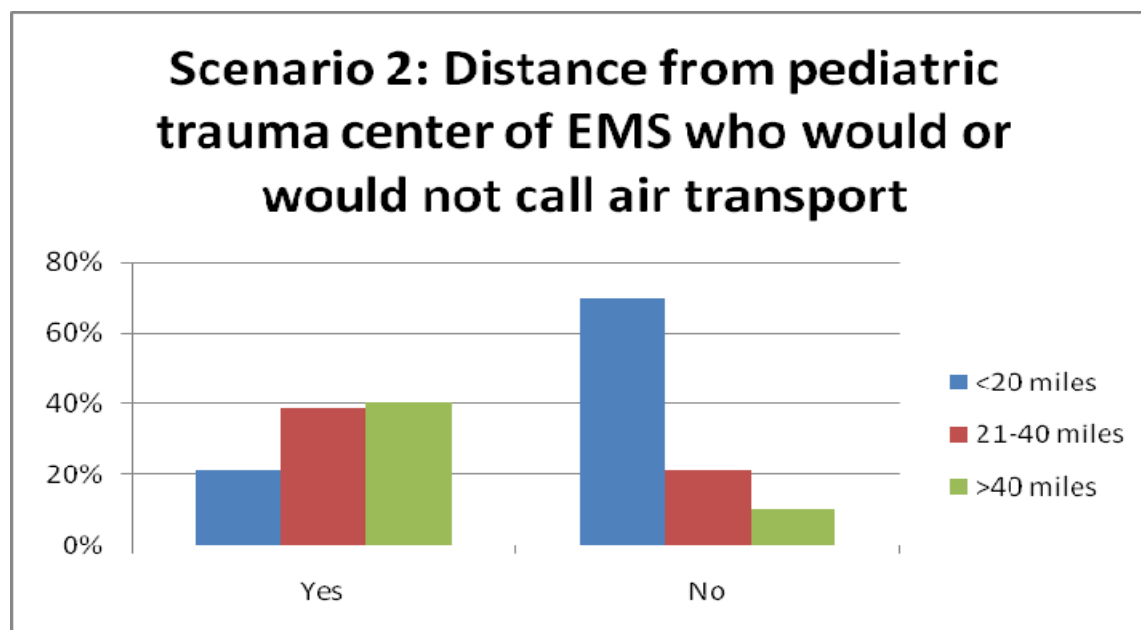


Figure 6.

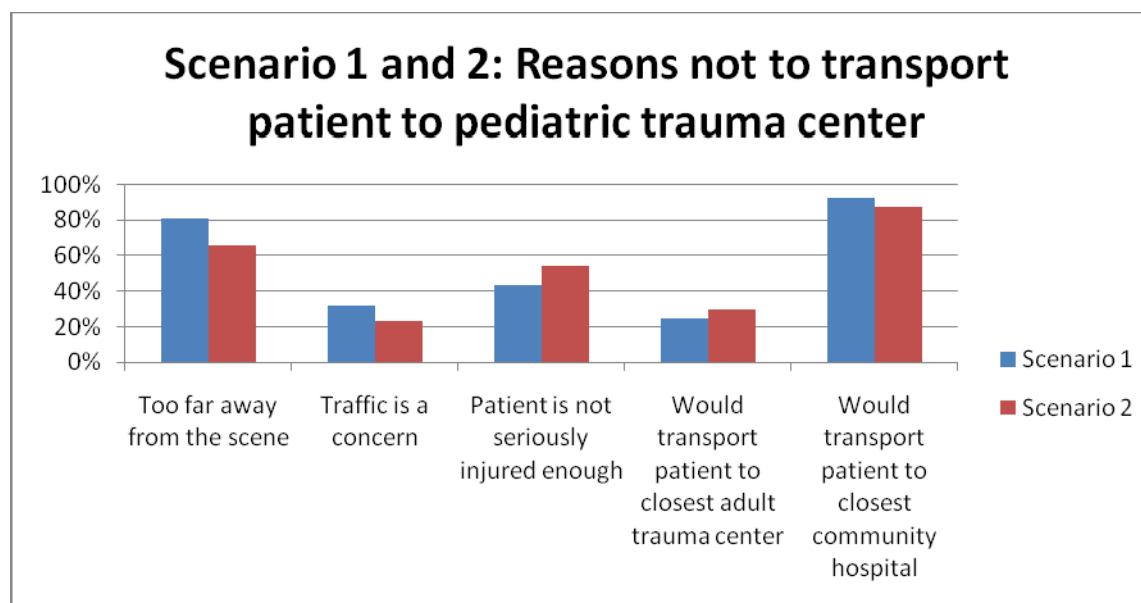


Figure 7.

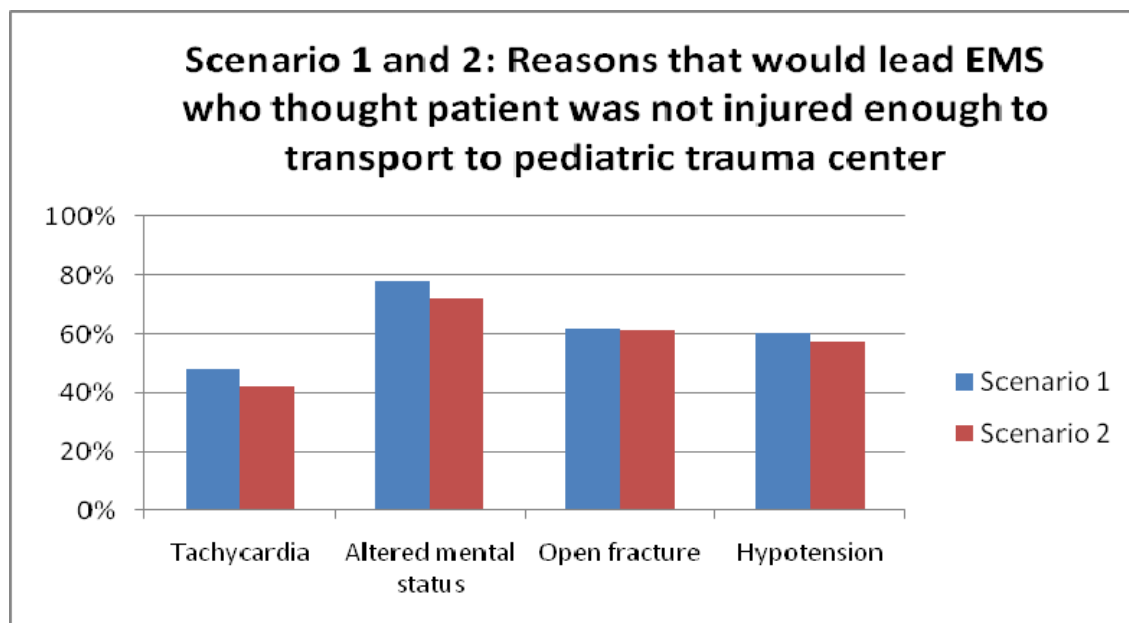


Figure 8.

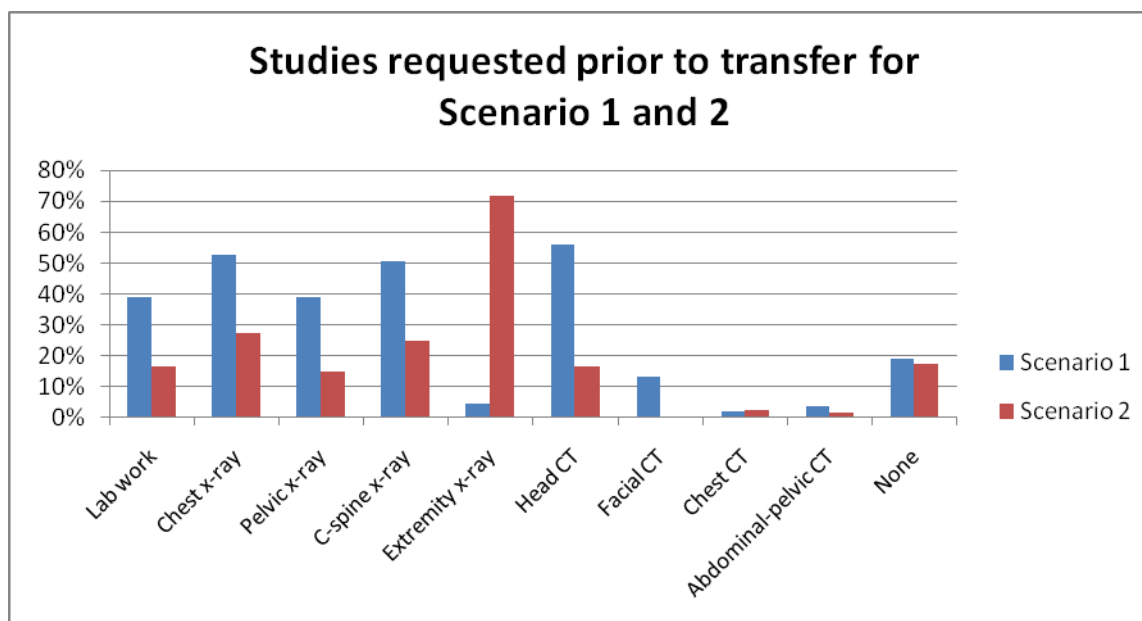


Figure 9.

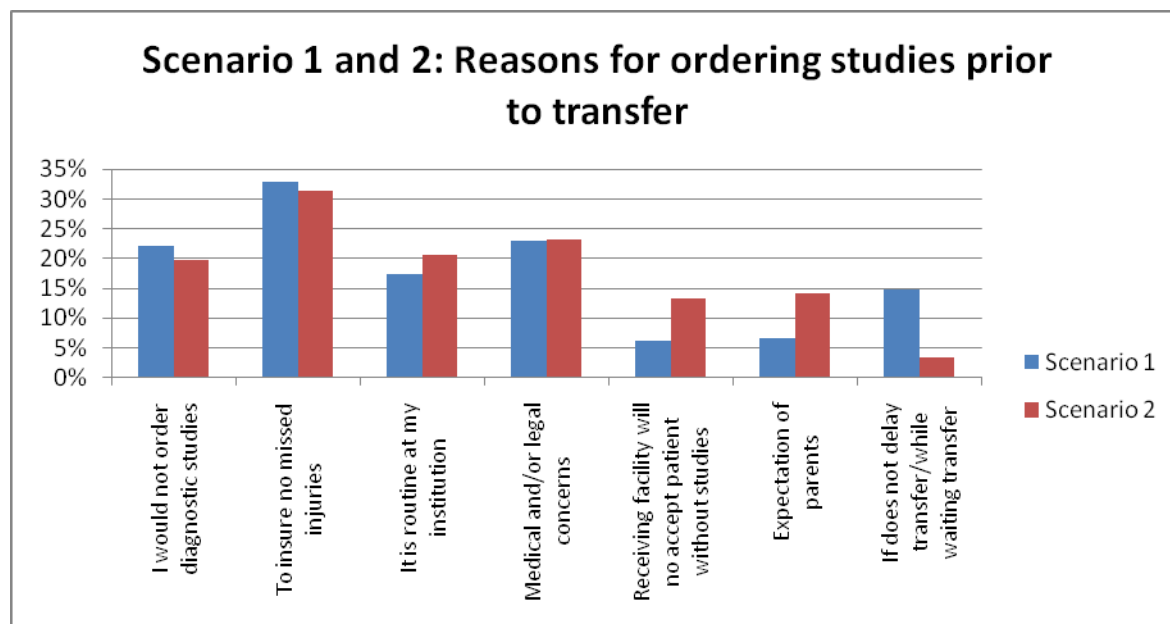


Figure 10.

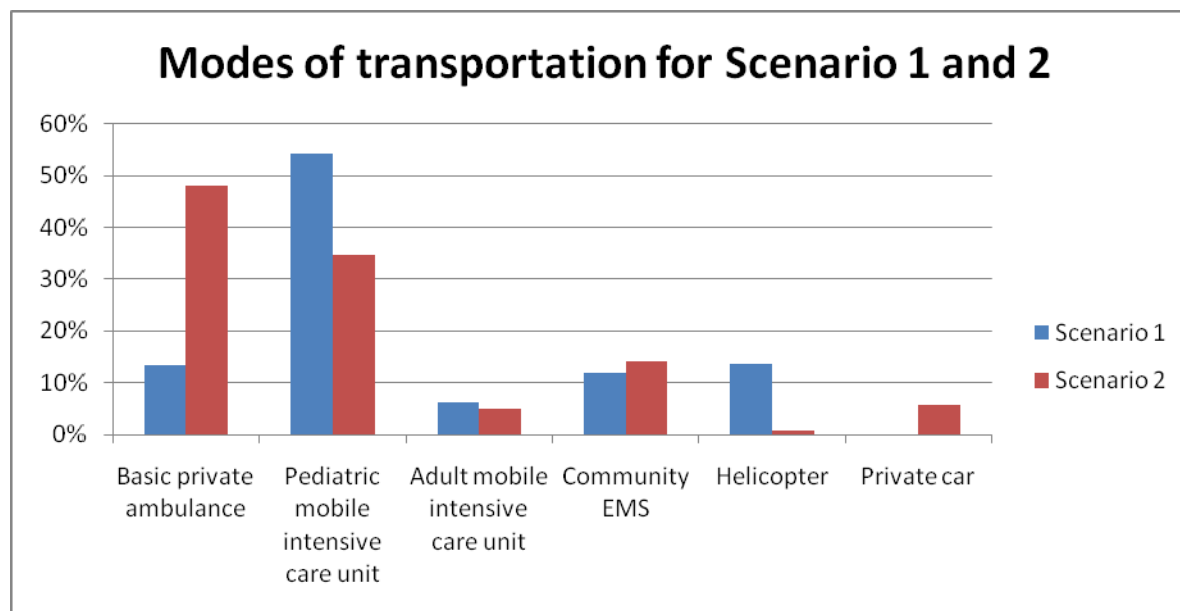


Figure 11.

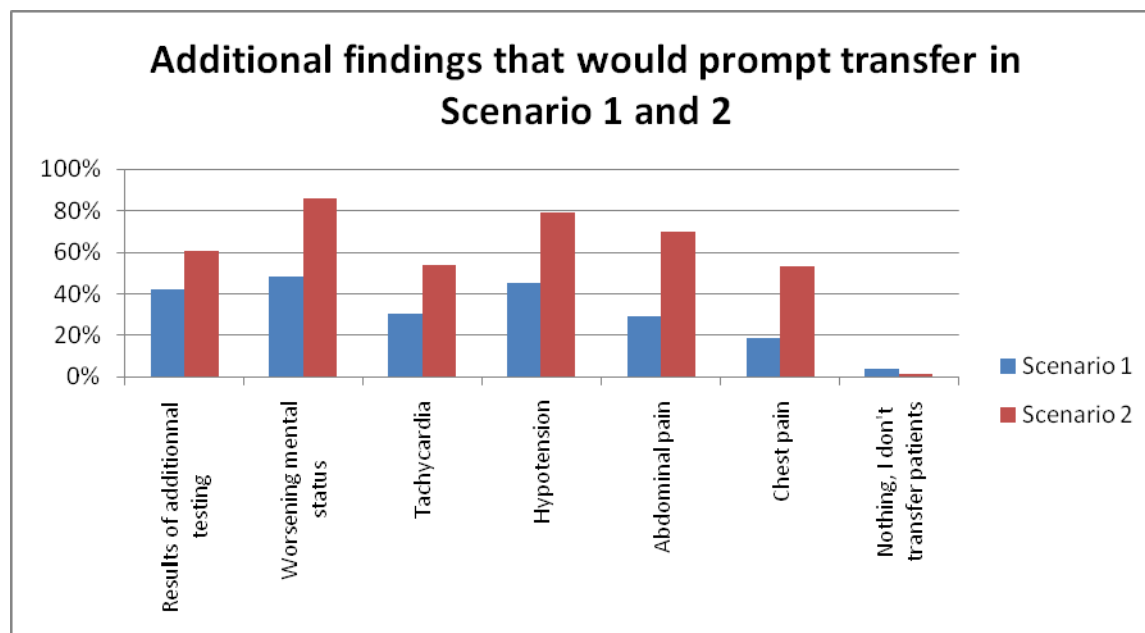
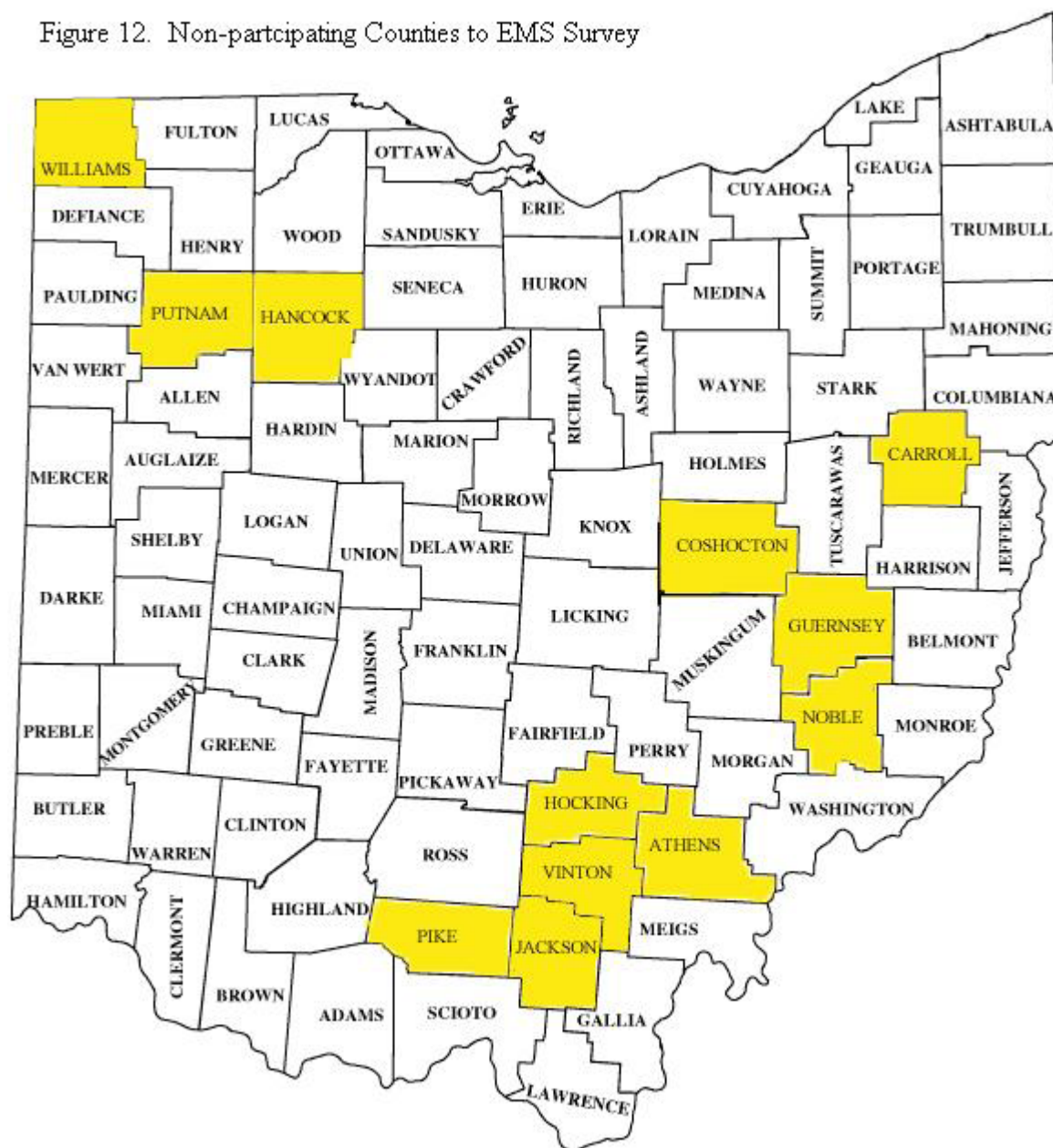


Figure 12. Non-participating Counties to EMS Survey



Total Project Expenditures

Budget Description	Total Project Expenditures
Personnel Costs	
Trauma Staff	\$10,228.49
Materials & Supplies	
Printing expenses, postage, letterhead and mailing list from ACEP (American College of Emergency Physicians)	\$2,160.72
Equipment Purchases	
None	\$0
Contractual Services	
None	\$0
Meetings/Events	
None	\$0
Other	
Incentive gift cards	\$10,030.00
Total Project Expenditures	\$22,419.21

Appendix 1: EMS Survey

Demographic questions:

- 1) Years certified as an EMT-P _____ EMT-I _____ EMT-B _____
- 2) Practice status:
Full-time EMS Only _____ Part-time EMS Only _____
Volunteer EMS Only _____
Full-time Firefighter/EMS _____ Part-time Firefighter/EMS _____
Volunteer Firefighter/EMS _____
Full-time EMS Officer/Supervisor _____ Part-time EMS Officer/Supervisor _____
Not practicing in the field at this time _____

If you are not practicing in the field at this time please skip to the end

- 3) Is your primary employer a 911-responder service? Yes _____ No _____
- 4) What are the county, state, and zip code where you practice (primary employer)?
County _____ State _____ Zip code _____
- 5) Is your primary employer service: rural _____ urban _____ suburban _____
- 6) How many pediatric CEU's do you obtain annually? (Numeric only) _____
- 7) How many departments do you work for? _____
- 8) How many pediatric patients would you estimate you treat annually?
- _____ None
_____ 1-5
_____ 6-10
_____ 11-25
_____ 26-50
_____ over 50
- 9) How many pediatric intubations do you perform annually?
- _____ 0
_____ 1-5
_____ 6-10
_____ 11-15
_____ over 15

10) Throughout your career, how many intraosseous lines have you placed on children under 10 years old?

- ☐ 0
- ☐ 1-5
- ☐ 6-10
- ☐ 11-15
- ☐ over 15

11) The closest pediatric trauma center is how many miles from your primary department?

- ☐ 1-10 miles
- ☐ 11-20 miles
- ☐ 21-30 miles
- ☐ 31-40 miles
- ☐ 41-50 miles
- ☐ over 51 miles

12) What is your average transport time to the pediatric trauma center? (In minutes) _____

13) The closest adult trauma center is how miles from your primary department?

- ☐ 1-10 miles
- ☐ 11-20 miles
- ☐ 21-30 miles
- ☐ 31-40 miles
- ☐ 41-50 miles
- ☐ over 51 miles

14) What is your average transport time to the adult trauma center? (In minutes) _____

15) The closest community hospital is how miles from your primary department?

- ☐ 1-10 miles
- ☐ 11-20 miles
- ☐ 21-30 miles
- ☐ 31-40 miles
- ☐ 41-50 miles
- ☐ over 51 miles

16) What is your average transport time to the community hospital? (In minutes) _____

Please respond to the following scenario based questions. If you have more than one EMS employer, base your responses from what you consider your primary place of employment. In addition, please answer these questions based on your current practice, not what you believe the “correct” answer may be.

Scenario 1

You arrive at the scene of an accident of an 8 year-old struck by a car traveling approximately 25 miles per hour. The 8 year old is awake and there was no witnessed loss of consciousness. The child presents with an abrasion to the abdomen and complains of mild pain on palpation. Vital signs: blood pressure 92/60; pulse 110; respirations 20. There are no other obvious injuries and the remainder of your exam is normal. The time is 1630.

17) In your practice, and under ideal circumstances, would you transport this child to a trauma center?

____ Yes

____ No

____ Not sure

If you answered yes to question #17 proceed with question #18

If you answered no to question #17 skip to question #22

If you answered not sure to question #17 skip to question #22

18) If your answer to question 17 is **yes**:

Why would you transfer this patient to a pediatric trauma center? (Select all that apply)

____ Patient age

____ Mechanism of injury

____ Patients vital signs

____ Patients clinical exam

____ Speed of collision

____ Meets the State of Ohio definition of trauma

19) If your answer to question 17 is **yes**:

Would you call for air transport for this child?

____ Yes

____ No

____ Not sure

20) If your answer to question 17 is **yes**:

Would you bypass any adult trauma centers to get to the pediatric trauma center?

- ☐ Yes
☐ No
☐ Not sure

21) If your answer to question 17 is **yes**:

How many children a year do you bring to a pediatric trauma center?

- ☐ Less than 5
☐ 5-15
☐ 15-30
☐ Over 30

Skip to Scenario 2

22) If your answer to question 17 is **no** or **not sure**

Why would you **not** transfer to a pediatric trauma center?

Pediatric trauma center is too far away from the scene of the accident.

- ☐ True
☐ False

23) If your answer to question 17 is **no** or **not sure**

Why would you **not** transfer to a pediatric trauma center?

It is rush hour, traffic might be a concern.

- ☐ True
☐ False

If you answered true to question #23 proceed to question #24

If you answered false to question #23 skip to question #25

24) If your answer to question 23 is **true**

How much longer would you estimate the rush hour traffic will add to your commute to a pediatric trauma center (in minutes)?

minutes

25) If your answer to question 17 is **no** or **not sure**
Why would you **not** transfer to a pediatric trauma center?

This child is not seriously injured enough to require transfer to a pediatric trauma center.

☐ True

☐ False

If you answered true to question #25 proceed to question #26

If you answered false to question #25 skip to question #27

26) If your answer to question #25 is **true**

Which of the following findings would make you believe this child should be transported to a pediatric trauma center? (Select all that apply)

☐ Tachycardia

☐ Altered mental status

☐ Open fracture

☐ Hypotension

☐ Other _____

27) If your answer to question 17 is **no** or **not sure**

Why would you **not** transfer to a pediatric trauma center?

I would take the child to the nearest adult trauma center

☐ True

☐ False

If you answered true to question #27 proceed to question #28

If you answered false to question #27 skip to question #30

28) If your answer to question 27 is **true**

Does this hospital have pediatric expertise (i.e. Pediatric trained physicians, additional training in pediatric trauma care, and have a dedicated pediatric area in the emergency department)?

☐ Yes

☐ No

☐ Not sure

29) Do you believe an adult trauma center would provide better care than your closest hospital for this child?

- ☐ Yes
☐ No
☐ Not Sure

30) In this case, I would transport this child to the nearest facility

- ☐ True
☐ False

If you answered true to question #30 proceed to question #31

If you answered false to question #30 skip to question #32

31) If your answer to question 30 is **true**

Does this hospital have pediatric expertise (i.e. Pediatric trained physicians, additional training in pediatric trauma care, and have a dedicated pediatric area in the emergency department)?

- ☐ Yes
☐ No
☐ Not sure

32) Do you believe there is ever a reason to bypass the closest hospital to bring a child to a pediatric trauma center?

- ☐ Yes
☐ No
☐ Not sure

33) Do you believe there is ever a reason to bypass the closest hospital to bring an adult to an adult trauma center?

- ☐ Yes
☐ No
☐ Not sure

34) Would you ever bypass the closest hospital to bring an adult patient to an adult trauma center?

- ☐ Yes
☐ No
☐ Not sure

35) I do not consider this a trauma as defined by the State of Ohio definition of trauma

☐ True

☐ False

Scenario 2

You are responding to a multi-car crash on a busy rural road. Upon arrival you find three cars; two with heavy front-end damage and one car with heavy damage to the front-end and rear quarter panel on the driver's side. Police direct you to the vehicle with front and rear damage. The vehicle's driver is dead. In the back seat is a three-year-old boy restrained in a 5 point convertible car seat. He is awake and crying, with no increased work of breathing and has strong peripheral and central pulses. Vital signs are: blood pressure 96/60; pulse 116; respirations 24. You note a 2 cm laceration above his left eye and the rest of your exam is normal.

36) In your practice, and under ideal circumstances, would you transport this child to a trauma center?

☐ Yes

☐ No

☐ Not sure

If you answered yes to question #36 proceed with question #37

If you answered no to question #36 skip to question #41

If you answered not sure to question #36 skip to question #41

37) If your answer to question 36 is **yes**:

Why would you transfer this patient to a pediatric trauma center? (Select all that apply)

☐ Patient age

☐ Mechanism of injury

☐ Patient's vital signs

☐ Patient's clinical exam

☐ Death of another passenger

☐ Amount of damage to the vehicles

☐ Meets the State of Ohio definition of trauma

38) If your answer to question 36 is **yes**:
Would you call for air transport for this child?

☐ Yes
☐ No
☐ Not sure

39) If your answer to question 36 is **yes**:
Would you bypass any adult trauma centers to get to the pediatric trauma center?

☐ Yes
☐ No
☐ Not sure

40) If your answer to question 36 is **yes**:
How many children a year do you bring to a pediatric trauma center?

☐ Less than 5
☐ 5-15
☐ 15-30
☐ over 30

Skip to end

41) If your answer to question 36 is **no** or **not sure**
Why would you **not** transfer to a pediatric trauma center?

Pediatric trauma center is too far away from the scene of the accident.

☐ True
☐ False

42) If your answer to question 36 is **no** or **not sure**
Why would you **not** transfer to a pediatric trauma center?

It is rush hour, traffic might be a concern.

☐ True
☐ False

If you answered true to question #42 proceed to question #43
If you answered false to question #42 skip to question #44

43) If your answer to question 42 is **true**

How much longer would you estimate the rush hour traffic will add to your commute to a pediatric trauma center (in minutes)?

____ minutes

44) If your answer to question 36 is **no** or **not sure**

Why would you **not** transfer to a pediatric trauma center?

This child is not seriously injured enough to require transfer to a pediatric trauma center.

____ True

____ False

If you answered true to question #44 proceed to question #45

If you answered false to question #44 skip to question #46

45) If your answer to question #44 is **true**

Which of the following findings would make you believe this child should be transported to a pediatric trauma center? (Select all that apply)

____ Tachycardia

____ Altered mental status

____ Open fracture

____ Hypotension

____ Other _____

46) If your answer to question 36 is **no** or **not sure**

Why would you **not** transfer to a pediatric trauma center?

I would take the child to the nearest adult trauma center

____ True

____ False

If you answered true to question #46 proceed to question #47

If you answered false to question #46 skip to question #49

47) If your answer to question 46 is **true**

Does this hospital have pediatric expertise (i.e. Pediatric trained physicians, additional training in pediatric trauma care, and have a dedicated pediatric area in the emergency department)?

☐ Yes
☐ No
☐ Not sure

48) If your answer to question 36 is **no** or **not sure**

Do you believe an adult trauma center would provide better care than your closest hospital for this child?

☐ Yes
☐ No
☐ Not Sure

49) If your answer to question 36 is **no** or **not sure**

In this case, I would transport this child to the nearest facility

☐ True
☐ False

If you answered true to question #49 proceed to question #50

If you answered false to question #49 skip to question #51

50) If your answer to question 49 is **true**

Does this hospital have pediatric expertise (i.e. Pediatric trained physicians, additional training in pediatric trauma care, and have a dedicated pediatric area in the emergency department)?

☐ Yes
☐ No
☐ Not sure

51) Do you believe there is ever a reason to bypass the closest hospital to bring a child to a pediatric trauma center?

☐ Yes
☐ No
☐ Not sure

52) Do you believe there is ever a reason to bypass the closest hospital to bring an adult to an adult trauma center?

☐ Yes
☐ No
☐ Not sure

53) Would you ever bypass the closest hospital to bring an adult patient to an adult trauma center?

☐ Yes
☐ No
☐ Not sure

54) I do not consider this a trauma as defined by the State of Ohio definition of trauma

☐ True
☐ False

Thank you for completing the survey. Please return in the enclosed self-addressed stamped envelope.

*****Please encourage the EMS providers in your department to complete the survey at the following link:**

<http://www.surveymonkey.com/s/MSTW73W>

Appendix 1 (Continued)
Physician Survey
Demographic questions

1. Are you still in training?

☐ Yes

☐ No

2. Are you residency trained in Emergency Medicine?

☐ Yes

☐ No

3. Are you fellowship trained in Pediatric Emergency Medicine?

☐ Yes

☐ No

4. Do you have any area of particular interest or specialization?

☐ Yes (please specify) _____

☐ No

5. How many years have you been in practice?

_____ years

6. How many years of practice do you have in an Emergency Department?

_____ years

7. Do you work full-time in an Emergency Department?

☐ Yes

☐ No

8. Do you work in a verified adult trauma center?

☐ Yes

☐ No

☐ Don't know

9. Do you work in a verified pediatric trauma center?

- ☐ Yes
☐ No
☐ Don't know

If you answered yes to question #9 please skip to the end

10. How many pediatric CME's do you obtain on an average annually?

11. Approximately how many pediatric patients would you estimate you treat annually?

- ☐ None
☐ 1 – 25
☐ 26 – 50
☐ 51 – 100
☐ 101 – 200
☐ over 201

12. Approximately how many pediatric intubations did you perform during the last 12 months?

- ☐ None
☐ 1 – 5
☐ 6 – 10
☐ 11 – 15
☐ over 15

13. Approximately how many intraosseous lines have you placed on children under 10 years of age in the last 12 months?

- ☐ None
☐ 1 – 5
☐ 6 – 10
☐ 11 – 15
☐ over 15

14. Approximately how many central lines have you placed in children less than 17 years of age in the last 12 months?

- ☐ None
- ☐ 1 – 5
- ☐ 6 – 10
- ☐ 11 – 15
- ☐ over 15

15. Approximately how many chest tubes have you placed in children less than 17 years of age in the last 12 months?

- ☐ None
- ☐ 1 – 5
- ☐ 6 – 10
- ☐ 11 – 15
- ☐ over 15

16. The closest pediatric trauma center from your primary work place is how many miles away?

- ☐ I work at a pediatric trauma center
- ☐ 1 – 10 miles
- ☐ 11 – 20 miles
- ☐ 21 – 30 miles
- ☐ 31 – 40 miles
- ☐ 41 – 50 miles
- ☐ over 51 miles

Please answer the questions related to the following scenarios as if you were working at your primary place of service. For example: if you work in more than one emergency department, please answer scenario questions based on your practice at the location you most frequently work. In addition, please answer these questions based on what you would actually do, not what you believe the “correct” answer may be.

Scenario 1

A 12 year-old presents to your emergency department with facial pain 30 minutes after crashing a dirt bike. The patient states that the “rear of the bike slid out” from under her causing her to be thrown from the bike; her brother reports that she had a “brief” loss of consciousness. She is complaining of facial, right arm, and right leg pain. She is also holding a retainer in her hand. You note her to be awake and alert with a GCS of 15. Vital signs: blood pressure 108/72; pulse 96; respiratory rate 24; temperature 36.4 (97.6) axillary; oxygen saturation on room air 98%. Your physical exam finds abrasions to her forehead, nose, right arm, and right lower leg. She is also complaining of facial pain on palpation and has bilateral periorbital contusions as well as a dental mal-occlusion. Remainder of the scalp and neck exam is normal to inspection and palpation. Thorax, abdominal and pelvic exam is unremarkable.

17. In your practice, according to the State of Ohio definition of trauma, would you consider and treat this patient as a trauma patient?

- ☐ Yes
- ☐ No
- ☐ Not sure

18. Is there an on-call surgeon available 24/7 at your facility to help manage this patient?

- ☐ Yes, a pediatric general surgeon
- ☐ Yes, an adult general or trauma surgeon
- ☐ Yes, both a pediatric general surgeon and an adult general or trauma surgeon
- ☐ No
- ☐ Not sure

19. Would you transfer this patient to a pediatric trauma center?

- ☐ Yes
- ☐ No
- ☐ Not sure

If you answered yes to question #19 proceed to question #20

If you answered no to question #19 skip to question #23

If you answered not sure or other to question #19 skip question #23

20. If you answered **yes** to question #19

Prior to transfer would you perform the following: (select all that apply)

- ☐ Lab work
- ☐ Chest x-ray
- ☐ Pelvic x-ray
- ☐ C-spine x-ray
- ☐ Head CT
- ☐ Chest CT
- ☐ Abdominal/pelvic CT
- ☐ None
- ☐ Other (please specify) _____

21. If you answered **yes** to question #19

If you ordered diagnostics prior to transfer please select all that apply.

- ☐ I would not order diagnostics
- ☐ To assure no missed injuries
- ☐ Routine at my institution
- ☐ Medical and/or legal concern
- ☐ Receiving facility will not accept patient without studies
- ☐ Expectation of parents
- ☐ Other (please specify) _____

22. If you answered **yes** to question #19

Which mode of transportation would you use to transport this patient to a pediatric trauma center?

- ☐ Basic private ambulance service
- ☐ Pediatric mobile intensive care unit (including transport teams from a pediatric trauma center)
- ☐ Adult mobile intensive care unit
- ☐ Community EMS
- ☐ Helicopter
- ☐ Private car

Skip to Scenario 2

23. If you answered **no** to question #19

Would you transfer the patient to an adult trauma center?

☐ Yes

☐ No

☐ No, I currently work in an adult trauma center

☐ Not sure

24. If you answered **no** to question #19

What additional findings might prompt you to transfer to a pediatric trauma center? (select all that apply)

☐ Results of additional testing

☐ Worsening mental status

☐ Tachycardia

☐ Hypotension

☐ Abdominal pain

☐ Chest pain

☐ Nothing. I don't transfer patients

Scenario 2

You are asked by the nurse to examine a 4 year-old patient who has fallen approximately 5 feet from a tree. He was brought in by the parents by private vehicle. The patient is crying, being held in mom's arms with an obvious deformity of the right forearm. Your exam finds the patient to be awake and alert, consoled somewhat by the mother. Vitals show blood pressure: 98/68; pulse 125; respirations 26; temperature 37.2 (99) orally, oxygen saturation on room air 99%. You note an obvious deformity of the right forearm moderate edema and obvious tenderness. Distal exam of that arm shows intact finger movements with a strong radial pulse present. Sensory exam is limited by patient age and anxiety but seems intact. There are also abrasions noted on the patient's right cheek and hand. You do not palpate tenderness or instability to the face. Remainder of the scalp and neck exam is normal to inspection and palpation. Thorax, abdominal and pelvic exam is unremarkable.

25. In your practice, according to the State of Ohio definition of trauma, would you consider and treat this patient as a trauma patient?

☐ Yes

☐ No

☐ Not sure

26. Is there an on-call surgeon available 24/7 at your facility to help manage this patient?

- ☐ Yes, a pediatric general surgeon
- ☐ Yes, an adult general or trauma surgeon
- ☐ Yes, both a pediatric general surgeon and an adult general or trauma surgeon
- ☐ No
- ☐ Not sure

27. Would you transfer this patient to a pediatric trauma center?

- ☐ Yes
- ☐ No
- ☐ Not sure

If you answered yes to question #27 proceed to question #28

If you answered no to question #27 skip to question #31

If you answered not sure or other to question #27 skip to question #31

28. If you answered **yes** to question #27

Prior to transfer would you perform the following (select all that apply)

- ☐ Lab work
- ☐ Chest x-ray
- ☐ Pelvic x-ray
- ☐ C-spine x-ray
- ☐ Head CT
- ☐ Chest CT
- ☐ Abdominal/pelvic CT
- ☐ None
- ☐ Other (please specify) _____

29. If you answered **yes** to question #27

If you ordered diagnostics prior to transfer please select all that apply.

- ☐ I would not order diagnostics
- ☐ To assure no missed injuries
- ☐ Routine at my institution
- ☐ Medical and/or legal concern
- ☐ Receiving facility will not accept patient without studies
- ☐ Expectation of parents
- ☐ Other (please specify) _____

30. If you answered **yes** to question #27

Which mode of transportation would you use to transport this patient to a pediatric trauma center?

- ☐ Basic private ambulance service
- ☐ Pediatric mobile intensive care unit (including transport teams from a pediatric trauma center)
- ☐ Adult mobile intensive care unit
- ☐ Community EMS
- ☐ Helicopter
- ☐ Private car

Skip to the end

31. If you answered **no** to question #27

Would you transfer the patient to an adult trauma center?

- ☐ Yes
- ☐ No
- ☐ No, I currently work in an adult trauma center
- ☐ Not sure

32. If you answered **no** to question #27

What additional findings might prompt you to transfer to a pediatric trauma center? (select all that apply)

- ☐ Results of additional testing
- ☐ Worsening mental status
- ☐ Tachycardia
- ☐ Hypotension
- ☐ Abdominal pain
- ☐ Chest pain
- ☐ Nothing. I don't transfer patients

Thank you for completing the survey. Please return in the enclosed self-addressed stamped envelope.

****Please encourage the Emergency Physician's in your department to complete the survey at the following link:**

<http://www.surveymonkey.com/s/KHTRFHC>

August 29, 2012

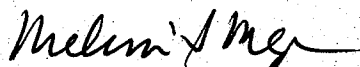
Alan Boster, Grants Administrator
EMS/Trauma Research Grant Program
Ohio Department of Public Safety
Division of EMS
1970 West Broad Street, 5th Floor
Columbus, OH 43223

Dear Mr. Bolster,

The Physical Medicine and Rehabilitation Department at MetroHealth Medical Center is pleased to submit this Final Report for the 2011 to 2012 Ohio Division of EMS Trauma Research Grant: "Defining Trauma Outcomes through an Investigation of Associations between Trauma and Rehabilitation Registry Data." This grant addresses the enhanced value of merging a Trauma Registry and Rehabilitation Registry that will identify variables impacting outcomes.

The attached Final Report has two components: the narrative progress report and the fiscal report. A check in the amount of \$5,961.39, representing the amount of the grant unspent, will be mailed to you from our Accounting/AP Department separately. Please do not hesitate to contact our offices if you have any questions.

Sincerely,



Melvin S. Mejia, MD
Assistant Professor, PM&R
Case Western Reserve University
MetroHealth Rehabilitation Institute of Ohio
Office: 216-778-2929
Fax: 216-778-5560
Email: mmejia@metrohealth.org



Linda Carnivale, signing for:
Kathleen M. Kreidler
Director of Research
The MetroHealth System
Office: 216-778-8791
Fax: 215-778-8720
Email: kkreidler@metrohealth.org

MSM/dlr

Attachment

Introduction

The Centers for Disease Control and Prevention describes traumatic injuries as the leading cause of death for children and young adults. Globally, trauma accounts for more than 5.8 million deaths per year¹. Trauma is a leading cause of lost years of life to an individual who has sustained multiple life-threatening injuries².

The inception of systematic trauma care in 1922 by the American College of Surgery did not come to fruition until 1966, with the release of the National Academy of Sciences report, that the need for a system of trauma care was needed³. This report paved the way for the development of the Emergency Medical Services (EMS) system (under the auspices of the Department of Transportation) in 1973. The EMS Systems Act identified trauma systems as one of 15 essential components of an EMS system and from thereon, concerted efforts were undertaken to ascertain that the delivery of trauma care is at its optimum.

In Ohio, the roots of the EMS system can be traced back to 1969, with the leadership of Dr. James Warren through the creation of the Heartmobile Program (mobile coronary care unit), heralding the provision of advanced pre-hospital care across the nation. It was not until 1992, when the Division of EMS was established within the Ohio Department of Public Safety (ODPS). In the same year, Senate Bill 98 was passed creating the State Board of EMS to development and implement prehospital systems of care in the state. In 1999 the Ohio Trauma Registry (OTR) was set up within the Division of EMS requiring hospitals to submit data on trauma victims to the state. The OTR was designed to address data collection issues and quality of trauma care delivery as well as monitoring trauma outcomes. House Bill 138 was passed in July of 2000 to establish a statewide trauma system, to create the Ohio Trauma Committee (OTC), to define the trauma patient, and to establish standards for trauma centers. The OTC was established to assist the State Board of EMS in its objectives to develop a quality trauma system of care for injured patients.

The existence of integrated Trauma Systems and trauma registries have proven to be essential in improving survival rates and diminishing the likelihood of sustaining life-long disabilities^{4,5}. This can be attributed to improved and effective triage systems at the field and the evolution of care in highly specialized regional trauma centers that can provide necessary service in a timely and expeditious manner. A recent meta-analysis revealed a 15% reduction in mortality with the establishment of trauma systems, further justifying their importance⁶.

Recognizing the need to identify and document long term outcomes from traumatic injuries, the Trauma Rehabilitation Registry was established in 2005 within the Division of EMS. This is considered a vital step at incorporating a reliable measure of patient disability via the Functional Independence Measure (FIM) into the Trauma Registry instead of the previously used outcome measure of mortality (2009 Ohio Trauma Registry Annual Report). The data gathered in the Rehabilitation Registry from inpatient rehabilitation facilities however, has not been available in trauma system evaluation reports, creating a shortcoming in the system. Currently, there is an absence of standardization of data reporting and data linkage between the Trauma and Rehabilitation Registries. Little is thus known about the functional outcomes of those who survive catastrophic injuries.

Trauma and Rehabilitation Registry Merge

The objective of the study is to enhance the ability of the MetroHealth Trauma Registry to assess quality of trauma care with the addition of functional outcome measures from the inpatient rehabilitation database.

Study aims:

1. To link the Trauma and Rehabilitation Registry Data
2. To identify variables from the Trauma Registry that are associated with long term functional outcomes for persons who sustained traumatic brain injury (TBI), spinal cord injury (SCI) and polytrauma (multiple injuries).

The proposed study moves toward the direction of the State's goals in having a comprehensive Trauma system. Outlined in the State EMS Trauma Committee proceedings last October 2010 is the creation of a well-integrated trauma program that incorporates rehabilitation services early in the course of the patients' hospitalization, as well as inclusion of rehabilitation data (i.e. functional outcome data) into the trauma system evaluation reports. Vital to this process too is the involvement of rehabilitation personnel into the performance improvement process.

TABLE OF CONTENTS

Narrative Progress Report

Executive Summary	4
Biosketch, Principal Investigator, M Mejia	6
Biosketch Co-Investigator, GA Nemunaitis	8
Biosketch, Co-Investigator, J Claridge	14
Methods.....	23
Ohio Trauma Registry and Rehabilitation Registry Data Fields Description	25
Analysis	36
Results	37
Conclusions and Recommendations.....	51
Appendix.....	58
Chart 1. Study Population Frequency of Trauma Type N = 879	58
Chart 2. Number of Patients Discharged from Rehabilitation to Home	58
Chart 3. Percent of Patient Discharged Home from Rehabilitation by ISS Category	59
Chart 4. Percent of Patients Discharged Home from Rehabilitation by GCS Category ..	59
Chart 5. Mean REHAB LOS by Age Category.....	60
Chart 7. Mean REHAB LOS by ISS Category	60
Chart 8. Mean REHAB LOS by GCS Category	61
Chart 9. Mean FIM Total Gain by ISS Category	61
Chart 10. Mean FIM Total Gain by GCS Category	62

Fiscal Report

Financial Issues and Consideration	63
Award Summary Report	64
Detailed Expenditure Report (salary/fringe for personnel)	65

Executive Summary

Purpose: The main purpose of this project was to identify variables from the Trauma Registry that impact long-term outcomes for persons with traumatic injuries.

Methods: Retrospective data analyses using Administrative Data Sets

Participants / Methods: 879 patients with traumatic spinal cord injury, traumatic brain injury and polytrauma from 2005 to 2010, who were transported to a Level I Trauma system and subsequently admitted and discharged from the system's inpatient rehabilitation center. Trauma Registry patients were matched (by medical record number and birth date) to their data in the Rehabilitation Registry. Standard descriptive statistics were calculated to describe participants and outcome measures. Demographic measures included age, sex, race, marital status, trauma type, and health insurance. Trauma data points included ISS, Glasgow Coma Score (GCS), intubation at any time prior to acute rehabilitation, positive and negative drug test, number of comorbidities/complications, total time spent at the scene of the accident. Outcome measures were obtained through the Rehabilitation Registry. These outcomes included: total length of hospital stay (REHAB LOS), rehabilitation discharge disposition, total Functional Independence Measure (FIM) gain, motor FIM gain, and cognitive FIM gain. Chi-square tests for categorical demographic variables and Student's t test for continuous variables were performed to determine any statistically significant differences between the three trauma type groups (i.e. polytrauma, traumatic spinal cord injury (SCI) and traumatic brain injury (TBI)).

Bivariate associations were analyzed utilizing Pearson Correlations with a significance level of less than or equal to .05.

Binary Logistic regression was used to analyze the outcome measure of rehabilitation discharge disposition (home or not to home) and two stage linear regression was used to analyze the functional outcomes as measured with the FIM.

Results: The mean age of the total sample was 42.75 (\pm 18.04), 71.9% were discharged to home, 42.1% were intubated at some time prior to rehabilitation admission, 27.2% had public health insurance, mean ISS was 25.53 (\pm 9.55), mean Glasgow Coma Score was 15.39 (\pm 7.58), average total FIM Motor Gain was 24.68 (\pm 13.64), and mean number of comorbidities/complications was 7.57 (\pm 3.59).

Separating the sample by trauma type we did not find any statically significant differences in the demographics of the three groups. Statistical differences between the trauma types were found for GCS, ISS, REHAB LOS and cognitive FIM gain. The GCS for SCI (mean = 13.333) and TBI (mean = 12.769) groups were higher than the polytrauma group (mean = 10.748). The TBI group had the highest mean ISS (mean = 30.29) compared to the Polytrauma group (mean = 26.15) and SCI group (mean = 13.86). The Polytrauma group had the longest average REHAB LOS (mean = 43.451) compared to the SCI (mean = 39.526) and TBI (mean = 21.611) groups. The SCI group (mean = 2.48) had the lowest cognitive FIM gain than the Polytrauma group (mean = 5.53) and the TBI group (mean = 3.25).

The bivariate analysis between trauma data and rehabilitation outcomes revealed that higher ISS scores were associated with longer length of stays, not going home after rehabilitation, less total FIM gain, and less total FIM motor gain. Higher GCS was associated

with longer length of stay, lower total FIM gain, lower FIM motor gain and lower total FIM cognitive gain. Total scene time was only found to have an association with total FIM cognitive gain, with longer total time at the scene associated with higher levels of total FIM cognitive gain. Interestingly, those who were not tested for drugs had lower total FIM gain and lower total FIM cognitive gain.

Length of hospital stay

Having government sponsored health insurance increased REHAB LOS by 22.086 days and being intubated at any time prior to rehabilitation increased hospital stay by 22.890 days. For every one point increase in ISS increased REHAB LOS by almost one day (.788 days).

Rehabilitation Discharge Disposition

Persons who are older, have more comorbidities/complications, were intubated pre-rehabilitation, and have higher ISS are less likely to be discharged to home after acute rehabilitation. Those persons who are married and have commercial health insurance compared to those without any health insurance are more likely to be discharged to home after acute rehabilitation.

Total FIM Gain

Older persons, persons with more comorbidities/complications, those with high ISS and high GCS decreased the amount of total FIM gain during acute rehabilitation. The strongest predictors in the regression model were GCS and number of comorbidities/complications with a significant level of $\leq .001$.

Total FIM Motor Gain

For total FIM motor gain, the regression analysis indicated that the older a person, the more comorbidities/complications, higher ISS, higher GCS, and longer scene time decreased the level of motor gain as measured by the FIM score. Testing negative for drugs compared to not being tested for drugs increased total FIM motor gain.

Total FIM Cognitive Gain

Having more comorbidities/complications, testing positive for drugs and higher GCS decreases the gain in cognitive function as measured by the FIM. Having been intubated at some time prior to rehabilitation increased a person's gain in cognitive function.

Conclusion, Recommendations and Future Course: Trauma data, especially ISS and GCS, should be included in research and quality projects when trying to determine and understand long-term outcomes of persons with traumatic injuries. Further standardization and utilization of the trauma and rehabilitation registries (i.e. criteria for inclusion and scoring methods) across institutions can define long term outcomes for those who survive SCI. Further improvements in medical informatics will allow for the creation of a repository of data within an institution and across collaborating Trauma systems.

Our continued research with this combined database will be to look at the three trauma groups (Poly, SCI and TBI) separately to determine if different trauma variables affect outcomes of the three groups. In addition, we plan to look at the GCS components (verbal, eye and motor) and their independent effects on outcomes. Further finetuning of the databases will hopefully yield a larger merged study population from which trends and outcomes can be sufficiently derived.

Biosketch, Principal Investigator, M Mejia

Melvin Samson Mejia, M.D.

Department of Physical Medicine and Rehabilitation

2500 MetroHealth Drive, Cleveland, OH 44109

Office: 216-778-2929

Fax: 216-778-5560

email: mmejia@metrohealth.org

EDUCATION

2003-2004		Spinal Cord Injury Medicine Fellowship	University of Texas Southwestern Medical Center at Dallas, TX
2000-2003		PM&R Residency	Case Western Reserve University MetroHealth Rehabilitation Inst of Ohio, Cleveland, OH
1999-2000		Medical Internship	Case Western Reserve University MetroHealth Rehabilitation Inst of Ohio, Cleveland, OH
1995		Post-Graduate Internship	Veterans Memorial Med Center, Philippines
1990-1994	M.D.	Doctor of Medicine	University of the East Memorial Med Center, Philippines
1986-1990	B.S.	Biology	Ateneo de Manila University, Philippines

STAFF APPOINTMENTS

2006-Present	Assistant Professor, Department of Physical Medicine and Rehabilitation / Spinal Cord Injury Service	Case Western Reserve University MetroHealth Rehabilitation Inst of Ohio, Cleveland, OH
2004-2006	Assistant Professor, Department of Physical Medicine and Rehabilitation / Spinal Cord Injury Service	University of Texas Southwestern Medical Center at Dallas, Dallas, TX Veterans Affairs North Texas Health Care System, Dallas, TX

LICENSURE AND CERTIFICATIONS

Medical Licensure

- State Medical Board of Ohio, 2003

Board Certification

- American Board of Physical Medicine and Rehabilitation, 2004
- American Board of Physical Medicine and Rehabilitation, Subspecialty Certification in
Spinal Cord Injury Medicine, 2004
- Educational Commission for Foreign Medical Graduates 1997

SELECTED PRESENTATIONS

"Merging of Trauma and Rehabilitation Registries to Further Define Long Term Outcomes in Traumatic Spinal Cord Injuries", Mejia M, Roach MJ, Nemunaitis G, Nowak M, Claridge J. To be presented at the Academy of Spinal Cord Injury Professionals, Las Vegas, NV. September 2012.

"Impact of Roho Cushion Inflation on Pushrim Kinetics During Advanced Wheelchair Skills in Persons with Spinal Cord Injury", Mejia M, Nagy J, Nemunaitis G, Roach MJ. 2012 ASIA Conference, Denver, CO. May 2012.

"Impact of Pneumatic vs Airless Wheelchair Tires on Pushrim Kinetics During Advanced Wheelchair Skills in Persons with Spinal Cord Injury", Mejia M, Nagy J, Nemunaitis G, Roach MJ. 2012 ASIA Conference, Denver, CO. May 2012.

"Association of Body Weight and Height on Pushrim Forces During Advanced Wheelchair Skills in Persons with Spinal Cord Injury", Mejia M, Nagy J, Nemunaitis G, Roach MJ. 2012 ASIA Conference, Denver, CO. May 2012.

"Impact of Time Since Injury on Pushrim Kinetics During Advanced Wheelchair Skills in Manual Wheelchair Users with Spinal Cord Injury", Henzel M, Nagy J, Roach MJ, Nemunaitis G, Mejia M. 2012 ASIA Conference, Denver, CO. May 2012.

BOOK CHAPTERS

- Airway & Respiratory Interventions: Ventilator Management. Common Problems in Rehabilitation Medicine: Spinal Cord Injury. Mejia M. Edited by T Bryce. Demos; NY, NY, 2009

Biosketch Co-Investigator, GA Nemunaitis

NAME Nemunaitis, Gregory A. eRA COMMONS USER NAME	POSITION TITLE Associate Professor of Physical Medicine and Rehabilitation Director of the Spinal Cord Injury Medicine		
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i>)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s))	FIELD OF STUDY
Case Western Reserve University, Cleveland, OH	BA, BA	1980	Anthropology/Medical Science
Case Western Reserve University School of Medicine, Cleveland, OH	MD	1985	Medical Doctor
Mt Sinai Medical Center, Cleveland, OH	Internship	1986	Internal Medicine
Thomas Jefferson University Hospital, Philadelphia Pennsylvania	Residency	1989	Physical Medicine and Rehabilitation
Medical College of Ohio, Toledo, Ohio	Certification #1623	1992	American Board of Electrodiagnostic Medicine
Medical College of Ohio, Toledo, Ohio	Certification #147	1999	Subspecialty certification in Spinal Cord Injury Medicine
Rehabilitation Institute of Chicago, Chicago, Ill	Regional Classifier	2000	United Cerebral Palsy Athletic Association
MetroHealth Medical Center, Cleveland, Ohio	Recertification # 147	2009	Subspecialty certification in Spinal Cord Injury Medicine
Emergency Management Institute, FEMA Independent Study Course	IS-00197.EM	2009	Special Needs Planning Considerations for Emergency Management

A. Positions and Honors.

Positions and Employment

1989 – 1996

Assistant Professor, Department of Physical Medicine and Rehabilitation,
Medical College of Ohio, Toledo, OH

1992 – 2000

Residency Program Director, Department of Physical Medicine and Rehabilitation, Medical College of Ohio, Toledo Ohio

Trauma and Rehabilitation Registry Merge

1996 – 2002	Associate Professor, Department of Physical Medicine & Rehabilitation, Medical College of Ohio, Toledo, Ohio
2006 - 2012	WOC Physician at the Louis Stokes Cleveland Department of VAMC
2002 – present	Associate Professor, Department of Physical Medicine & Rehabilitation, MetroHealth Rehabilitation Institute of Ohio, Cleveland, Ohio
2002 - present	Director of Spinal Cord Injury Rehabilitation, MetroHealth Rehabilitation Institute of Ohio, Cleveland, Ohio
2004 - present	Program Director of the Spinal Cord Injury Medicine Fellowship, MetroHealth Rehabilitation Institute of Ohio, Cleveland, Ohio
2006 - present	Associate Professor at CWRU School of Medicine, Case Western Reserve University, Cleveland, Ohio
2006 – present	Consultant for Gradalis Corp. Muscle Assessment in HIBM2 following GNE Gene Therapy. Mary Crowley Research Center, Dallas, Texas
2011 – present	Professor, Department of Physical Medicine and Rehabilitation CWRU School of Medicine, Case Western Reserve University, Cleveland, Ohio

Other Experience and Professional Memberships

1986 -present	The American Academy of Physical Medicine and Rehabilitation
1990 –present	Member, American Spinal Injury Association
1992 –present	Association of Academic Physiatrists
1995 –1997	Education Committee, American Academy of Physical Medicine and Rehabilitation
2006 -2012	PI: Spinal Cord Injury Model System Grant. National Institute of Disability and Rehabilitation Research
2006 -2012	Dissemination and Knowledge Translation Committee. Spinal Cord Injury Model System. National Institute of Disability and Rehabilitation Research, US Department of Education
2006 -2012	Technology Module/SIG. Spinal Cord Injury Model Systems. National Institute of Disability and Rehabilitation Research, US Department of Education
2005 -present	Membership Committee Member, American Spinal Cord Injury Association
2001 -present	State of Ohio Emergency Medical Services Board, Trauma Committee Member
2002 -present	Member, American Trauma Society
2006 -present	Grant reviewer for the State of Ohio EMS/Trauma Research Grant Program Ohio Department of Public Safety, Division of EMS
2006-present	Peer Reviewer: Neurorehabilitation and Neural Repair

B. Selected peer-reviewed publications

Abstracts

1. Henzel K, Nagy J, Roach MJ, Nemunaitis G, Mejia M. Impact of Time since Injury on Pushrim Kinetics During Advanced Wheelchair Skills in Manual Wheelchair Users with Spinal Cord Injury (SCI). *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):243-244.
2. Mejia M, Nagy J, Nemunaitis G, Roach MJ. Impact of Roho Cushion Inflation on Pushrim Kinetics During Advanced Wheelchair Skills in Manual Wheelchair Users with SCI. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):243-244.
3. Mejia M, Nagy J, Roach MJ, Winslow A, Wilczewski C, Adams L, Nemunaitis G. Association of Body Weight and Height on Pushrim Forces during Advanced Wheelchair Skills in Persons with SCI. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):247.
4. Mejia M, Nagy J, Roach MJ, Winslow A, Wilczewski C, Adams L, Nemunaitis G. Impact of Pneumatic vs. Airless Wheelchair Tires on Pushrim Forces During Advanced Wheelchair Skills in Manual Wheelchair Users with SCI. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):248.
5. Nagy J, Winslow A, Wilczewski C, Adams, Kaplan D, Distler M, Roach MJ, Mejia M, Nemunaitis G. Observations of Community Manual Wheelchair Users with Spinal Cord Injury. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):245.
6. Nagy J, Winslow A, Wilczewski C, Adams, Kaplan D, Distler M, Roach MJ, Mejia M, Nemunaitis G. Impact of Axle Position on Pushrim Kinetics During Advanced Wheelchair Skills in Manual Wheelchair Users with Spinal Cord Injury. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):248.
7. Nagy J, Winslow A, Wilczewski C, Adams, Kaplan D, Distler M, Roach MJ, Mejia M, Nemunaitis G. Impact of Axle Position on Pushrim Kinetics During Advanced Wheelchair Skills in Able Bodied Subjects. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):249.
8. Mowery D, Nagy J, Winslow A, Wilczewski C, Adams L, Roach MJ, Mejia M, Nemunaitis G. Observations between Neurological Level of Injury and Manual Wheelchair Pushrim Force. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):247.
9. Distler M, Nagy J, Wilczewski C, Adams L, Nemunaitis G, Roach MJ, Impact of Caster Diameter on Pushrim Kinetics during Advanced Wheelchair Skills in Manual Wheelchair Users with SCI. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):246.
10. Winslow A, Nagy J, Mejia M, Nemunaitis G, Roach MJ. Variation in Pushrim Forces due to Alteration of Wheelchair Camber. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):244.
11. Winslow A, Nagy J, Mejia M, Nemunaitis G, Roach MJ. Pushrim Forces in a Rigid versus Folding Frame Wheelchair. *Topics in Spinal Cord Injury Rehabilitation* 2012;18(1):212.
12. Atluri K, Nagy J, Newcomb H, Roach MJ, Mejia M, Nemunaitis G, Wilson R. Effects of Backrest Elevation of Transport Stretcher/Gurney on Sacral Interface Pressure. [poster] *Topics in Spinal Cord Rehabilitation* 2011;16(1):62.
13. Dechter S, Roach MJ, Nemunaitis G, Mejia M. Nocturnal Home Turning Schedule for Pressure Relief among Persons with SCI Living in the Community. [Poster] *Topics in Spinal Cord Rehabilitation* 2011;16(1):64.

14. Nagy J, Roach MJ, Mejia M, Boninger M, Nemunaitis G. Pushrim Kinetics During Advanced Wheelchair Skills in Manual Wheelchair Users With Spinal Cord Injury [oral] Topics in Spinal Cord Rehabilitation 2011;16(1):21.
15. Wu G, Mejia M, Nemunaitis G, Bogie K. Multifactorial tissue health assessment of at-risk users and effects of weight shifting with a dynamic cushion. [poster] Topics in Spinal Cord Rehabilitation 2011;16(1):29.
16. Michaluk M, Nemunaitis J, Roach MJ, Hefzy S, Nagy J, Mejia M, Nemunaitis G. Redesign of the Spine board for the Reduction of Pressure Ulcer Formation in Individuals with Spinal Cord Injury, Part II. J of Spinal Cord Med 2010;33(2):178.
17. Michaluk M, Nemunaitis J, Nagy J, Roach MJ, Tyler D, Hefzy S, Mejia M, Nemunaitis G. Redesign of the Spine board for the Reduction of Pressure Ulcer Formation in Individuals with Spinal Cord Injury. Am J PM&R 2010;89(4): S1-S87.
18. Nagy J, Nemunaitis G, Roach M, Winslow A, Marlow J, Boninger M, Oyster M. Wheelchair Breakdown Frequency for Wheelchair Users with SCI. J of Spinal Cord Med 2009;32(4):461.
19. DiMarco A, Kowalski K, Geertman R, Hornyak D, Frost F, Nemunaitis G. Spinal Cord Stimulation (SCS) Cough System: Clinical Impact and Patient Satisfaction. J of Spinal Cord Med 2009;32(4):486
20. Nemunaitis G, Boninger M, Nagy J, Oyster M, Marlow J, Roach M, McClure L. Evacuation Readiness for Wheelchair Users. J of Spinal Cord Med 2009;32(4):462
21. Nemunaitis G, Triolo R, Boggs L, Murray L, Miller M, Roach M, Nagy J, Marlow J, Nicolacakis K, Mejia M. Physiologic Impact of Neuromuscular Electrical Stimulation on Trunk Stability. J of Spinal Cord Med 2009;32(4):468.
22. M. Tsarouhas, J. Chae, M. Mejia, G. Nemunaitis, M. Roach. Vitamin D Deficiency in Individuals With Orthopedic Injuries Admitted to the Rehabilitation Service: A Case Series [abstract] Arch of Phy Med Rehabil 2008;89(11):74
23. Boulet M, Nemunaitis G, Kaufman B, Nagy J, Clark G, Buzanowska K. The effect of a liner on the dispersion of backboard interface sacral skin pressures. J Spinal Cord Med 2008;31(2):224.

Publications

1. Staas W, Nemunaitis G, Management of Reflex Sweating in SCI patients", Arch Phys Med 1989;70(7):544-546.
2. Nemunaitis G, Herbison G. "Cosmetic, Functional, Independent: Self Help Aids" Arch Phys Med. 1991;72(5):334-335.
3. Hefzy M, Nemunaitis G, Hess M. Design and Development of a Pressure Relief Seating Apparatus for Individuals with Quadriplegics. Assistive Technol, 1996;8(1):14-22.
4. DiMarco AF, Kowalski KE, Geertman RT, Hromyak DR, Frost FS, Creasey GH, Nemunaitis GA. Lower thoracic spinal cord stimulation to restore cough in patients with spinal cord injury: results of an NIH sponsored clinical trial. Part II: clinical outcomes. Arch Phys Med Rehabil 2009;90:726-32.
5. Jay C, Nemunaitis G, Nemunaitis J, Senzer N, Hinderlich S, Darvish D, Ogden J, Eager J, Tong A, Maples P. Preclinical Assessment of wt GNE Gene Plasmid for Management of Hereditary Inclusion Body Myopathy 2 (HIBM2). Gene Regulation and Systems Biology, Jun 20, 2008, 2008(2):243-252.

6. Triolo R, Boggs L, Miller M, Nemunaitis G, Nagy J, Nogan-Bailey S. Implanted Electrical Stimulation of the Trunk for Seated Postural Stability and Function After Cervical Spinal Cord Injury: A Single Case Study. *Arch Phys Med Rehabil* 2009;90(2) 340-347.
7. Phadke A, Jay C, Chen S, Haddock C, Wang Z, Yu Y, Nemunaitis D, Nemunaitis G, Templeton N, Senzer N, Maples P, Tong A and Nemunaitis J. Safety and in vivo Expression of a GNE-Transgene: A Novel Treatment Approach for Hereditary Inclusion Body Myopathy-2. *Gene Regulation and Systems Biology* 2009;3 89–101.
8. Jay C, Levonyak N, Nemunaitis G, Maples P and Nemunaitis J. Hereditary inclusion body myopathy (HIBM2). *Gene Regulation and Systems Biology* 2009;3:181–190.
9. Nemunaitis G, Mejia M, Roach MJ, Nagy J, Wolf T. A descriptive study on vitamin D levels in individuals with spinal cord injury in an acute inpatient rehabilitation setting. *PMR* 2010;2(3):202-208.
10. Nemunaitis G, Maples P, Jay C, Gahl W, Huizing M, Tong A, Phadke A, Pappen B, Bedell C, Templeton N, Kuhn J, Senzer N, and Nemunaitis J. Hereditary Inclusion Body Myopathy (HIBM): Single Patient Response to GNE Gene Lipoplex Therapy. *J Gene Med*. 2010;12(5); 403-12.
11. Roach MJ, Nemunaitis G, Powell H, and Harrington A. Cell Phone Ownership and Social Interaction in Persons with Spinal Cord Injury. *Special Issue of Arch. Phys. Med*. 2010;92(3):472-6.
12. McClure L, Nemunaitis G, Boninger M, Nagy J, Oyster M, Marlow J, Roach MJ. Breakdown of Evacuation Readiness for Wheelchair Users. *Arch. Phys. Med*. 2010;92(3):491-8.
13. Chen Y, Deutsch A, DeVivo MJ, Johnson K, Kalpakjian C, Nemunaitis G, Tulskey D. Current research outcomes from the spinal cord injury model systems. *Arch Phys Med Rehabil* 2011;92(3):329-31.
14. Werman HA, Erskine T, Caterino J, Riebe JF, Valasek T, Members of the Trauma Committee of the State of Ohio EMS Board. Development of statewide geriatric patient's trauma triage criteria. *Prehosp Disaster Med* 2011;26(3):1–10.
15. Nemunaitis G, Jay CM, Maples PB, Gahl WA, Huizing M, Yardeni T, Tong AW, Phadke AP, Pappen BO, Bedell C, Allen H, Hernandez C, Templeton NS, Kuhn J, Senzer N, Nemunaitis J. Hereditary inclusion body myopathy: single patient response to intravenous dosing of GNE gene lipoplex. *Hum Gene Ther*. 2011 Nov;22(11):1331-41.
16. Nagy J, Winslow A, Brown J, Adams L, O'Brien K, Boninger M, Nemunaitis G. Pushrim Kinetics During Advanced Wheelchair Skills in Manual Wheelchair Users With Spinal Cord Injury. *Top Spinal Cord Inj Rehabil* 2012;18(2):140–140
17. Worobey L, Oyster M, Nemunaitis G, Cooper R, Boninger ML. Increases in Wheelchair Breakdowns, Repairs, and Adverse Consequences for People with Traumatic Spinal Cord Injury. *Am J Phys Med Rehabil*. 2012 Apr 30. [Epub ahead of print].

Book Chapters

1. Nemunaitis G. Cardiovascular interventions: Inferior vena cava filter placement and removal. In: *Common Problems in Rehabilitation Medicine: Spinal Cord Injury*. Edited by Thomas Bryce. Demos Medical Publishing; New York, NY, 2009.
2. Nemunaitis G, Triolo R, Kobetic R, Kilgore K, Creasey G, Anthony DiMarco A. (2008). Neuromuscular Electrical Stimulation in Spinal Cord Injury. In: *Spinal Cord Injury*

- Medicine. Edited by S Kirschblum, D Campagnolo, J Delisa, et al. Lippincott, Williams & Wilkins; Philadelphia, Pa, 2011.
- 3.Hefzy M, Nemunaitis G. The University of Toledo Projects, In: NSF 2005 Engineering Senior Design Projects to Aid the Disabled, Chapter 17, Edited by John Enderle and Brooke Hollowell, Copyright 2006 by Creative Learning Press, Inc., pp 285 – 306.
 - 4.Hefzy M, Nemunaitis G. The University of Toledo Projects, In: NSF 2004 Engineering Senior Design Projects to Aid the Disabled, Chapter 18, Edited by John Enderle and Brooke Hollowell, Copyright 2005 by Creative Learning Press, Inc., pp. 335-358.
 - 5.Hefzy M, Naganathan N, Nemunaitis G. The University of Toledo Projects, In: NSF 2003 Engineering Senior Design Projects to Aid the Disabled, Chapter 18, Edited by John Enderle and Brooke Hollowell, Copyright 2005 by Creative Learning Press, Inc., pp. 321-346.
 - 6.Hefzy M, Naganathan N, Nemunaitis G. The University of Toledo Projects, In: NSF 2002 Engineering Senior Design Projects to Aid the Disabled, Chapter 20, Edited by John Enderle and Brooke Hollowell, Copyright 2004 by Creative Learning Press, Inc., pp. 263-286.
 - 7.Hefzy M, Naganathan N, Nemunaitis G. The University of Toledo Projects, In: NSF 2001 Engineering Senior Design Projects to Aid the Disabled, Chapter 20, Edited by John Enderle and Brooke Hollowell, Copyright 2002 by Creative Learning Press, Inc., pp. 279-302.

Biosketch, Co-Investigator, J Claridge

Jeffrey Claridge, MS, MD
MetroHealth Medical System, Div. of Trauma
2500 MetroHealth Dr.
Cleveland, OH 44109

Current Professional Position

2008-present	Division Director of Trauma, Critical Care and Burns MetroHealth Medical Center
--------------	--

Education

2008	M.S., Clinical Investigation Case Western Reserve University School of Medicine Cleveland, Ohio
1996	M.D. with Honors University of Rochester Rochester, New York
1992	B.S. with High Honors Rochester Institute of Technology Rochester, New York

Faculty Appointments

June 2010 – Present	Division Director of Trauma, Critical Care and Burns MetroHealth Medical Center Cleveland, Ohio
January 2010 – Present	Medical Director of Northern Ohio Trauma System (NOTS) Cleveland, Ohio
December 2009 – Present	Director of Trauma, MetroHealth Medical Center Cleveland, Ohio
July 2005 – Present	Assistant Professor of Surgery General Surgery, Trauma, Surgical Critical Care Department of Surgery MetroHealth Medical Center Case Western Reserve University, School of Medicine Cleveland, Ohio
July 2004 – June 2005	Clinical Instructor Trauma/Critical Care/General Surgery Department of Surgery University of Tennessee Memphis, Tennessee

Licensure

USMLE: Passed both Step one and two.
Ohio, 2003 – present, #86505
Tennessee, 2003 -2005, #MD0000037815

Certifications

American Board of Surgery, General Surgery; March, 2004 (#48947)
American Board of Surgery, Surgical Critical Care; October, 2004 (#2100)

Professional Organizations

Eastern Association for the Surgery of Trauma, 2006 - Present
The American Association for the Surgery of Trauma, 2008 - Present
Surgical Infection Society, 2006 - Present
 Councilman, 2009 - Present
 Member of Scientific Investigation Committee, 2006 - 2009
 Part of Retreat “planning for organization”, 2008
Cleveland Surgical Society, 2005 - Present
 Secretary/Treasurer - Present
Society of Critical Care Medicine, 2003 - Present
American College of Surgeons, Fellow, 2006 - Present
Southeastern Surgical Congress, 2000 - Present
Association of Surgical Educators (ASE), 2002
Alpha Omega Alpha, 1995 - Present

Association for Academic Surgery, 2008 - Present

Muller Jones Society - University of Virginia Surgical Society, Member, 2003

Selected Publications

1. Como JJ, Leukhardt WH, Anderson JS, Wilczewski PA, Samia H, **Claridge JA**. Computed Tomography Alone May Clear the Cervical Spine in Obtunded Blunt Trauma Patients: A Prospective Evaluation of a Revised Protocol. *Journal of Trauma*. 2011 Feb;70(2):345-51.
2. Sandhu SK, Mion LC, Khan RH, Ludwick R, **Claridge JA**, Pile JC, Harrington M, Winchell J, Dietrich MS. Effect of situational and clinical variables on the likelihood of physicians ordering physical restraints. *J Amer Geriatric Society*. 2010 Jul;58(7):1279-88.
3. **Claridge JA**, Golob JF, Leukhardt WH, Kan JA, Como JJ, Yowler CJ, Malangoni MA. Trauma team activation can be tailored by pre-hospital criteria. *American Surgeon*. 2010 Dec;76(12):1401-7.
4. Sandhu SK, Mion LC, Khan RH, Ludwick R, **Claridge JA**, Pile JC, Harrington M, Winchell J, Dietrich MS. Likelihood of Ordering Physical Restraints: Influence of Physician Characteristics. *J Am Geriatric Society*. 2010 Jun.
5. Fadlalla MA, Golob JF, and **Claridge JA**. Enhancing the “Fever Workup” Utilizing a multi-technique modeling approach to more accurately diagnose infections. *Surgical Infections (Larchmt)*. 2010 Jul 28.
6. **Claridge JA**, Leukhardt WH, Golob JF, McCoy AM, Malangoni MA. Moving beyond traditional measurement of mortality after injury: evaluation of risks for late death. *J Am Coll Surg*. 2010 May;210(5):788-94, 794-6.

7. **Claridge JA**, Pang P, Leukhardt WH, Golob JF, Carter JW, Fadlalla AM. Critical analysis of empiric antibiotic utilization: establishing benchmarks. *Surgical Infections* (Larchmt). 2010 Apr;11(2):125-31.

Book Chapters

1. **Claridge JA**. Clinical and Laboratory Diagnosis of Infection. *ACS Surgery: Principles and Practice*. WebMD Professional Publishing. (IN REVIEW).
2. **Claridge JA**, Carter JW. Evaluation of Abdominal Trauma. *BMJ Point of Care*. BMJ Publishing Group, 2009.
3. **Claridge JA**, Carter JW. Abdominal Pain and Hypotension in a 79-Year-Old Female (Case 9). *Surgery - A Competency-Based Companion* - Barry D., M.D. Mann, Saunders Elsevier, 2009.

Trauma and Rehabilitation Registry Merge

Review of the Literature/Historical Perspectives

Trauma Registries allow for trauma systems to collect the necessary data for understanding the nature, epidemiology and management of traumatic injuries. The addition of the Trauma Rehabilitation Registry in the state of Ohio strengthens the ability of the Ohio EMS and Trauma systems to assess outcomes along the continuum of care for victims of trauma. Since the implementation of the Trauma Rehabilitation Registry in 2005, the State has yet to merge the two registries or analyze the rehabilitation data in relation with the trauma data. The purpose of this study is to merge MetroHealth Medical Center's (MH) Trauma and Rehabilitation registry databases and analyze the effects of pre-hospital and trauma centered variables on rehabilitation outcomes. This project emphasizes the importance of merging the trauma and rehabilitation datasets to be able to effectively evaluate the quality of health care across all phases of care and determine which variables in both registries define and /or alter outcomes. Findings from this study can assist the State in the modification or implementation of policies and / or protocols that will improve current and future delivery of care and improve outcomes of trauma patients.

Injuries remain a major global public health problem. Worldwide, 5.8 million deaths are attributed to injury per year.¹ The National Trauma Data Bank's (NTDB) 2010 Annual Report reviewed the year 2009 admissions from 682 U.S. Hospitals, with 681,990 records having valid trauma diagnoses. Of these, 654,825 (96%) survived and 27,166 (4.0%) died.² In the state of Ohio, 151,244 individuals were entered in the Ohio Trauma Registry (OTR) from 2005 to 2009, of which 144,622 (95.6%) survived and 6,622 (4.4%) died.³ Trauma is a well-known leading cause of lost years of life to an individual, especially in those who sustain multiple life-threatening injuries.⁴ Injuries definitely impact not only the lives of affected persons and families, but also the society as a whole. Short- and long-term effects are associated with

Trauma and Rehabilitation Registry Merge

injuries; hence, positive outcomes greatly depend on the availability of an effective delivery of care by a trauma system.

The existence of integrated Trauma Systems and trauma registries have proven to be essential in improving survival rates and diminishing the likelihood of sustaining life-long disabilities.^{5,6} This can be attributed to improved and effective triage systems at the field and the evolution of care in highly specialized regional trauma centers that can provide necessary service in a timely and expeditious manner. A recent meta-analysis revealed a 15% reduction in mortality with the establishment of trauma systems further justifying their importance.^{7,8}

The inception of systematic trauma care in 1922 by the American College of Surgery did not come to fruition until 1966, with the release of the National Academy of Sciences - National Research Council report, “*Accidental Death and Disability – The Neglected Disease of Modern Society*”, that the need for a system of trauma care has been recognized.⁹ This report paved the way for the development of the Emergency Medical Services (EMS) system (under the auspices of the Department of Transportation) in 1973. The EMS Systems Act identified trauma systems as one of 15 essential components of an EMS system and from thereon, concerted efforts were undertaken to ascertain that the delivery of trauma care is at its optimum.

In Ohio, the roots of the EMS system can be traced back to 1969, (through the leadership of Dr. James Warren) with the creation of the Heartmobile Program (mobile coronary care unit), heralding the provision of advanced pre-hospital care across the nation. It was not until 1992, when the Division of EMS was established within the Ohio Department of Public Safety (ODPS). In the same year, Senate Bill 98 was passed creating the State Board of EMS to development and implement prehospital systems of care in the state. In 1999 the Ohio Trauma Registry was set up within the Division of EMS requiring hospitals to submit data on trauma

Trauma and Rehabilitation Registry Merge

victims to the state. The Ohio Trauma Registry was designed to address data collection issues, to ensure quality of trauma care delivery and to monitor trauma outcomes. House Bill (HB) 138 was passed in July of 2000 which aims to establish a statewide trauma system, to create the Ohio Trauma Committee, to define the trauma patient and, to establish standards for trauma centers. The Ohio Trauma Committee was established to assist the State Board of EMS in its objectives to develop a quality trauma system of care for injured patients. The trauma patient was defined as:

Patient's first or initial admission for at least 48 hours or transfer into the hospital for at least one injury ICD-9 diagnosis code in the range of 800-959.9 including burns, hypothermia, smoke inhalation, hanging, drowning, abuse, DOAs, patients that die after receiving any evaluation or treatment while on hospital premises, and patients who transfer out of the hospital.

HB 138 also provided for two commissions to study injury prevention and post-critical trauma care. It mandated seven special studies to examine trauma care in the State at the time. In November of 2003 the Post Critical Trauma Commission was completed “to determine how to improve the accessibility, affordability, quality, and cost effectiveness of post-critical adult and pediatric trauma care.”¹⁰ After intense review of Ohio's trauma system, 7 recommendations were made to address identified shortcomings in the current delivery system. The recommendations for improving the rehabilitation component focused on:

- Recognizing the needs of those undergoing rehabilitation and recovery
- Identification of rehabilitation services
- Establishing a resource system to facilitate access to information and services
- Developing educational re-entry programs
- Identification of opportunities for substance use prevention and treatment
- Establishing a registry for the follow-up of long-term complications and outcomes

Trauma and Rehabilitation Registry Merge

Recognizing the serious impact of injury and the need to assess and document long term functional outcomes led to the establishment of the Trauma Rehabilitation Registry in 2005 as a component of the Ohio Trauma Registry. In November 2007, at the request of the Ohio Trauma Committee, the Ohio Society of Trauma, Nurse Leaders (OSTNL) met to design an assessment process for Ohio utilizing the Model Trauma Systems Planning and Evaluation (MTSPE) document.¹¹ In March, 2008, the Ohio Trauma Committee convened to assess Ohio's statewide trauma system. A general assessment was conducted on the system's current strengths and weaknesses, as well as potential opportunities and threats to future development. In 2009, a task force was formed by the Ohio Trauma Committee to develop a strategic plan for Ohio's trauma system. In October of 2010, a final report, "A Framework for Improving Ohio's Trauma System" was completed and approved by the Ohio State Board of EMS.¹² The document focused on 113 indicators by which a state trauma system may be evaluated and the gaps that existed within the current trauma system. The final product was to use as a reference guide for the development of Ohio's statewide trauma system to advance the care of trauma victims. The document focused on eight major areas including:

- Leadership
- Injury Prevention
- Emergency/Disaster Preparedness Plan
- Prehospital Care
- Definitive Care – Acute Care Hospitals and Trauma Centers
- Definitive Care – Rehabilitation
- Evaluation, Quality Management & Performance Improvement
- Trauma System Registry Infrastructure
- Professional Education and Public Information and People with Functional Needs

The creation of a Trauma Rehabilitation Registry is an important step towards an integrated Trauma system that has the ability to examine outcomes through the continuum of care from the pre-hospital to rehabilitation settings.

Trauma and Rehabilitation Registry Merge

A query of the Ohio Trauma Registry (OTR) data from January 2005 through December 2009 showed that 151,244 individuals sustained traumatic injuries. Of those, 144,622 (95.6%) individuals survived, with 2,249 spinal cord injuries (SCI), 63,019 traumatic brain injury (TBI) and 23,090 polytrauma ($ISS \geq 17$). Out of those, 8,213 were discharged from a hospital trauma service into an acute rehabilitation center.³ A review of the MetroHealth Trauma Registry (MTR) data from 2005 to 2009 showed that 339 individuals with SCI, 3,195 individuals with TBI, and 2,803 individuals with Polytrauma were admitted to MetroHealth Medical Center. Of those 31% were discharged to MetroHealth's rehabilitation center, MetroHealth Rehabilitation Institute of Ohio (MRIO). A review of the MetroHealth Rehabilitation Registry (MRR) data from 2005 to 2009 documented that 158 individuals with SCI, 182 individuals with TBI, and 703 individuals with Polytrauma ($ISS \geq 17$) were admitted to MRIO.

The data gathered in the Rehabilitation Registry from inpatient rehabilitation facilities however, have not been used in Trauma system evaluation reports, creating a shortcoming in the system, as identified by several prior reports.^{10,12} Currently, there has been an absence of data reporting and data linkage between the Trauma and Rehabilitation registries. Thus, while the Trauma registry can gauge success of the delivery of trauma care, little is known about outcomes and quality of life in the 95% of persons who survive a traumatic injury. Minimal outcome data are available to assess pre-hospital and hospital care other than victim survival.

This project used MH's Trauma Registry and Rehabilitation Registry data sent to the State, the methods of this study can be replicated in the State Trauma and Rehabilitation Registries. The evaluation of functional outcomes over time will allow further investigation into the fine tuning of pre-hospital and hospital care to better assess impact on outcomes other than life or death.

Conceptual Framework

As stated in the American College of Surgeons *Systems Consultation Guide for Regional Trauma Systems*, the events of September 11, 2001 has led to an increased awareness of the need for collaboration between emergency care and public health systems.¹³ It became evident that an effective trauma system should be able to interface very well with public health services as reflected in the Health Resources and Services Administration's (HRSA) Model Trauma System Planning and Evaluation (MTSPE) document released in 2006.¹¹ Thus, the concept that traumatic injury is a disease that can be prevented or its deleterious effects reduced forms the basis for the application of the public health model to trauma systems. Rehabilitation is an intrinsic component of the trauma system, and is facilitatory in promoting better outcomes and reduction of disability whenever possible. Rehabilitation services and specialists are integrated into the multidisciplinary advisory committee to ensure that pertinent issues to the delivery of care will be addressed appropriately.

Effective trauma systems therefore, invoke cohesive partnerships among varied trauma systems, health care providers and public health agencies, with the goal of reducing the burden of injury and improving the provision of care to those who sustained catastrophic injuries. While trauma registries provide a better understanding of the underlying injury and management, they contain minimal information on how interactions with other phases of care (ie. prehospital, hospital and rehabilitation) influence outcomes of the injured patient. Foremost in addressing this limitation is in emphasizing the role of linkage of data between the Trauma and Rehabilitation registries to evaluate the quality of service rendered across all phases of care and determine which variables inherent in both registries define and / or alter outcomes.

This project was conceptualized to address the need to enhance the ability of the combined Trauma and Rehabilitation registries to ascertain any inherent associations between

Trauma and Rehabilitation Registry Merge

key data variables that can define outcomes for trauma patients. The initial steps in achieving this goal will include merging of the datasets from the Trauma and Rehabilitation Registries. This will be followed by determining which variables from the registries affect long-term outcomes in persons who sustained catastrophic injuries.

Methods

This was an administrative data management and analysis project with the purpose of illuminating the importance of a combined longitudinal database for trauma victims that encompasses the scene of the injury through acute rehabilitation. The study sample consisted of all traumatic spinal cord injury, traumatic brain injury and polytrauma victims from 2005 through 2010 who came to MH's ED and subsequently were admitted and discharged from MH's inpatient rehabilitation facility. To accomplish this goal, we partnered with the data managers from the MH Trauma Registry and the MH Rehabilitation Registry to merge the data sets.

The project began by matching the MH Trauma Registry patients with their individual data located in the MH Rehabilitation Registry using the patients' unique Medical Record Numbers (MRN). To verify the matches, date of birth and gender were used. Discrepancies were resolved by direct review of the patient's electronic medical record. The merged dataset provided an account of trauma victims' clinical records from time of injury in the pre-hospital setting through acute rehabilitation. The merged dataset was analyzed to investigate the relationships between the key data points from the trauma registry and key data points found in the rehabilitation registry (i.e. length of stay, function, discharge disposition and survival).

Table 1 describes the variables used in the analysis, and which database contained the variables prior to the merge. The data fields from the MH Trauma Registry and MH

Trauma and Rehabilitation Registry Merge

Rehabilitation Registry were organized in terms of key data including: demographics, co-morbidity, scene data, injury type, injury mechanism, anatomic site of injury, physiologic data, injury score, and outcome in terms of length of stay, Functional Independence Measure (FIM), discharge disposition, and survival. Key data from the time of injury with pre-hospital management to the Emergency Room, through the Trauma hospital and ultimately to the Rehabilitation Hospital were followed to assess the factors affecting functional outcomes for persons with SCI, TBI and Polytrauma.

Table 1. List of variables for analysis and original database location				
Variables	Database Location			
	Trauma Data Registry			Rehab Registry
Demographics	Pre-Hospital	Emergency Room	Inpatient Trauma	Inpatient Rehabilitation
MR#		X		X
DOB	X	X	X	X
Sex	X	X	X	X
Race	X	X	X	X
Payment Source		X	X	X
Co-Morbidity				
Alcohol/Drug Use	X	X		
Scene of Accident				
Incident Zip Code	X			
Trauma Scene Time	X			
Total Time: from Time Unit Notified to Time Unit en Route	X			
Endotracheal Tube Intubation	X			
Injury Type				
Blunt	X	X		
Penetrating		X		
Mechanism of Injury				
Motor Vehicle Accident	X	X		
Fall	X	X		
Violence (Assault/Fight/GSW/Stab)	X	X		
Motor Cycle Collision	X	X		
Pedestrian	X	X		
Anatomic Site of Injury				
Traumatic Spinal Cord Injury		X	X	X
Traumatic Brain Injury		X	X	X
Polytrauma (ISS \geq 17)		X	X	
Physiologic Data				
Glasgow Coma Score	X	X	X	X

Trauma and Rehabilitation Registry Merge

Systolic Blood Pressure	X	X	X	X
Respiratory Rate	X	X	X	X
Pulse Rate	X	X	X	X
Injury Score				
Abbreviated Injury Scale (AIS)		X		
Injury Severity Score (ISS)		X		
Revised Trauma Score (RTS)		X		
Outcomes				
Length of Stay		X	X	X
FIM				X
Discharge Disposition		X	X	X
Survival	X	X	X	X

Ohio Trauma Registry and Rehabilitation Registry Data Fields Description

Demographics:

The Ohio Registry Annual Data Report of 2003 identified that ninety-five percent (95.4%) of patients treated at a hospital for an injury severe enough to be reported to the OTR survived to be discharged.¹⁴ Persons who are older, males, Black have higher mortality rates, more comorbid conditions, longer lengths of stay and higher health care utilization and health care costs.¹⁵

1. **Age** is recognized as a significant factor that affects the occurrence and severity of injury and outcomes.¹⁶⁻¹⁸ Age was included as a continuous variable. And to look at differences among age groups, the analysis will group individuals into three age categories: pediatric (0-16 years old), adult (17-69 years old), and elderly (≥ 70 years old).¹⁹
2. **Sex** is a binary variable coded as male or female. It has been shown that males who have a blunt trauma have a significantly increased risk of death compared to females.¹⁶
3. **Racial** differences exist, and in the 2003 report, Blacks have the highest overall injury rate of all other racial groups.¹⁴ Race has been shown to be a significant determinant of rehabilitation outcomes, with Blacks having more comorbid conditions, poorer functional outcomes, and higher rates of secondary conditions after injury than any other racial group.²⁰ Race was a race categorical variable defined as White (not of Hispanic origin),

Black (not of Hispanic origin), Hispanic, American Indian or Alaskan Native, Asian or Pacific Islander, Other and Not documented (ND).

4. *Payment Source* has been shown to be a predominant predictor of health outcomes and health disparities even after controlling for other socioeconomic variables, such as race, age and sex.²¹⁻²³ The source of payment during hospitalization gave an estimate of how health care is reimbursed, which affects access to care post-injury, and ultimately long-term health outcomes. The primary payment source responsible for the incurred charges was categorized as: Commercial, Medicare Non-MCO, Medicare MCO, Medicaid Non-MCO, Medicaid MCO, Other Government (e.g. TRICARE, Developmental Disabilities Services and State Vocational Rehabilitation), Workers' Compensation, Self-pay, Uninsured and Not documented (ND).

Pre-existing co-morbidity factors

Alcohol or Drug abuse / misuse is a known contributor to traumatic injury. A recent review of records from the National Trauma Data Bank (NTDB) showed that pre-injury alcohol and drug use, while not associated with worse outcomes, do contribute to increased complications, thereby impacting length of stay and higher hospitalization costs.^{24,25} De Guise and colleagues also found that pre-injury alcohol abuse was related to longer length of stays and longer duration of post-traumatic amnesia in traumatic brain injury.²⁶ Testing positive for alcohol was coded as 'yes or no' and testing positive for non-prescription drugs was coded as 'yes or no'.

Scene Data

There were several types of places where injuries occurred and were assigned values from 0-9. The site of injury either occurred at home, farm, mine/quarry, industrial, recreation/sport place, street/highway, public building, residential institution, other specified place, and

unknown/unspecified/not documented. Scene data variables included incident zip code, trauma scene time, total time from notification to time unit en route and endotracheal intubation.

1. ***Incident Zip Code*** was used to geocode. The geocodes were linked to US Census data and then those codes were used to map the distance from the scene location to a Level I trauma center. The geocoding was also used to describe urban vs. rural make-up of the scene location. It is possible that limitations in access to a trauma center can potentially lead to worse outcomes.²⁷
2. ***Trauma scene time, Total Time from Notification to time unit enroute*** was coded as exact time and used as continuous variables in the analysis. Time data has been shown to affect trauma outcomes, such as survival.²⁸
3. ***Endotracheal Intubation*** was coded as a binomial variable (yes/no). A review of field resuscitation techniques and application of advanced life-support protocols (e.g. establishing airway access via intubation or cricothyrotomy) can help assess long term outcomes in trauma patients.²⁹⁻³² Intubation was coded as ‘yes/no’.

Injury Type

Traumatic injury is categorized as either “blunt” or “penetrating”. ***Penetrating injuries*** are a direct result of penetration into a body cavity (e.g. knife and bullet wounds), whereas ***blunt injuries*** are generally from non-penetrating causes (e.g. motor vehicle crash or a fall). Most injuries reported in 2003 are from blunt injuries (89.2%). The mortality rate related to penetrating injuries is significantly higher than those who sustained blunt trauma.³³

Mechanism of Injury

The ***injury mechanism*** is reported as the External Cause of Injury code or E-code. Standard ICD-9 E-code groupings are presented in the form of a matrix (Table 2) and are depicted as

Trauma and Rehabilitation Registry Merge

mechanism vs. intent of injury. All cells in the matrix are mutually exclusive. The Centers for Disease Control and Prevention in collaboration with members of the American Public Health Association's Injury Control and Emergency Health Services Section (ICEHS) placed E-codes into groupings reflective of similar causes of injury.³⁴

It has been recognized that injuries sustained from a *fall, motor vehicle crash, assault / fight, motorcycle crash and pedestrian-related accidents* comprise the majority of the known injury mechanisms which can impact the quality of life and outcomes in trauma patients.¹⁴

Table 2. E-Code Grouping Matrix table with assignment of E codes for injury mortality data MMWR August 29, 1997

Mechanism/ cause	Manner/ intent				
	Unintentional	Suicide	Homicide	Undetermined	Other
Cut/pierce	E920.0–.9	E956	E966	E986	E974
Drowning/ submersion	E830.0–.9, E832.0.9, E910.0–.9	E954	E964	E984	
Fall	E880.0–E886.9, E888	E957.0–.9	E968.1	E987.0–.9	
Fire/burn	E890.0–E899, E924.0–.9	E958.1,.2,.7	E961; E968.0,.3	E988.1,.2,.7	
Firearm	E922.0–.9	E955.0–.4	E965.0–.4	E985.0–.4	E970
Machinery	E919.0–.9				
MV traffic	E810–E819 (.0–.9)	E958.5		E988.5	
Pedal cyclist, other	E800–E807 (.3); E820–E825 (.6); E826.1,.9; E827–E829 (.1)				
Pedestrian, other	E800–E807 (.2), E820–E825 (.7), E826–E829 (.0)				
Transport, other	E800–E807 (.0,.1,.8,.9), E820–E825 (.0–.5,.8,.9), E826.2–.8, E827–E829 (.2–.9), E831.0–.9, E833.0–E845.9	E958.6		E988.6	
Natural/ environmental	E900.0–E909, E928.0–.2	E958.3		E988.3	
Overexertion	E927				
Poisoning	E850.0–E869.9	E950.0–E952.9	E962.0–.9	E980.0–E982.9	E972
Struck by, against	E916–E917.9		E960.0, E968.2		E973, E975
Suffocation	E911–E913.9	E953.0–.9	E963	E983.0–.9	
Other specified, Classifiable	E846–E848, E914–E915, E918, E921.0–.9, E923.0–.9, E925.0–E926.9, E929.0–.5	E955.5,.9; E958.0,.4	E960.1, E965.5–.9, E967.0–.9, E968.4	E985.5; E988.0,.4	E971, E978, E990–E994, E996, E997.0–.2
Other specified, not elsewhere classifiable	E928.8, E929.8	E958.8, E959	E968.8, E969	E988.8, E989	E977, E995, E997.8, E998, E999
Unspecified	E887, E928.9, E929.9	E958.9	E968.9	E988.9	E976, E997.9
All injury	E800–E869, E880–E929	E950–E959	E960–E969	E980–E989	E970–E978, E990–E999

Anatomic Site of Injury

Anatomic site of injury is determined by the same standards of the Ohio Trauma Registry. Site of injury is based on the *International Classification of Disease, 9th Revision, with*

Clinical Modification (ICD-9-CM) described in The Barell Injury Diagnosis Matrix.³⁵ Table 3 outlines the ICD-9 codes associated with type of injury and severity of injury.

Table 3. Anatomic Site of Injury based on ICD-9-CM Code		
Type of Injury	Severity	ICD-9 Codes
Traumatic Spinal Cord Injury	Cervical	806(.0-.1), 952.0
	Thoracic	806(.2-.3), 952.1
	Lumbar	806(.4-.5), 952.2
	Sacrum/Coccyx	806(.6-.7), 952(.3-.4)
	Spine and Back Unspecified	806(.8-.9), 952(.8-.9)
	Cervical	806(.0-.1), 952.0
Traumatic Brain Injury	Type 1	800,801,803, 804 (.1-.4,.6-.9), (.03-.05,.53-.55), 850 (.2-.4), 851-854, 950 (.1-.3), 995.55
	Type 2	800,801,803, 804 (.00,.02,.06,.09) (.50,.52,.56,.59), 850 (.0,.1,.5,.9)
	Type 3	800,801,803,804(.01, .51)
Polytrauma	Injury Severity Score (ISS) \geq 17	

Classification by body region includes head and neck, spine and back, torso, extremities, and unclassifiable by site. There is lack of a validated or consensus definition of polytrauma, leading to multiple descriptions over the years.³⁶ For this study, we adapted the polytrauma definition proposed by Keel to be that of an Injury Severity Score \geq 17.³⁷

Physiologic Data

1. The *Glasgow coma scale (GCS)*, *systolic blood pressure* and *respiratory rate* are part of the physiologic data reported. GCS provides an index of coma depth by documenting the patient's verbal, eye opening and motor responses on a scale of 3 to 15, with higher scores indicating increased level of functioning.³⁸ The GCS has been used to correlate early injury severity measures and outcome after injury (Table 4).

Table 4. Glasgow Coma Score		
	Response	Score
Eye Opening (E)	Spontaneous	4
	To voice	3
	To pain	2
	None	1

Verbal Response (V)	Normal conversation	5
	Disoriented conversation	4
	Words, but not coherent	3
	No words.....only sounds	2
	None	1
Motor Response (M)	Normal	6
	Localizes to pain	5
	Withdraws to pain	4
	Decorticate posture	3
	Decerebrate	2
	None	1
Total = E+V+M		46

2. Hypotension, defined as *systolic blood pressure (SBP)* less than 90 mm Hg, is a well-recognized sign of hemorrhagic shock and is a validated prognostic indicator. A recent study showed that optimization of blood pressure portends to improved mortality and outcomes in those who present with hemorrhagic shock at the scene.^{39,40} The *respiratory rate (RR)* is an important parameter measured in the field. It has been demonstrated that increased mortality and worsened disability is associated with patients who sustained hypoxic insults (pulse oximetry <92%).^{41,42} Along with *GCS and SBP, the Respiratory Rate* define the Revised Trauma Score (described below) which is a physiologic score that can predict outcomes.

3. *Heart rate (HR)* measurements can aid in the determination of the shock index, which is a ratio of the HR and the SBP. It has been suggested that optimizing HR in trauma patients can improve outcomes.⁴³

Injury Score

The Anatomic measures (i.e. AIS, ISS, and RTS) are standard measures used at MH to assess injury severity and as a tool to triage patients. The Ohio Trauma Registry also collects AIS and ISS data to measure injury acuity.

Abbreviated Injury Scale (AIS)

The Abbreviated Injury Scale (AIS, first introduced in 1969) outlined in Table 5 is a simple method for grading and comparing injuries by severity^{44,45}. It is a consensus-derived, anatomically based system of grading injuries on an ordinal scale ranging from 1 (minor injury) to 6 (lethal injury). The AIS does not reflect the combined effects of multiple injuries; however, it forms the foundation of the Injury Severity Score (ISS). The most recent revision is from 1998. The AIS is monitored by a scaling committee of the Association for the advancement of Automotive Medicine.

Table 5. Abbreviated Injury Scale	
Injury	AIS Score
1	Minor
2	Moderate
3	Serious
4	Severe
5	Critical
6	Unsurvivable

A recent study by Clark and colleagues found that an AIS for head and other body regions of 3, 4 or 5 to be strongly associated with mortality.⁴⁶

Injury Severity Score (ISS)

The Injury Severity Score (ISS) was also determined from the Trauma database. This is an anatomical scoring system introduced in 1974 as a means of providing an overall score for patients with multiple injuries.⁴⁷ Each injury is assigned an AIS score and is allocated to one of six body regions (head, face, chest, abdomen, extremities and bony pelvis and external structures). Only the highest AIS score in each body region is used. The ISS is thus defined as the sum of the squares of the highest AIS grade in the most severely injured body regions. Only

one injury per body region is allowed. The ISS ranges from 1-75, and an ISS of 75 is assigned to anyone with an AIS score of 6.

The ISS is the only anatomical scoring system in use and correlates linearly with mortality, morbidity, hospital stay and other measures of severity. It has also been a consistent risk factor predictor for post-injury multiple-organ failure (MOF). However, any error in the AIS scoring increases the ISS error, so accuracy is imperative. Also, many different injury patterns can yield the same ISS score and injuries to different body regions are not weighted. The AIS limits the total number of contributing injuries to 3, which impairs its use in penetrating injuries. The AIS is not recommended as a triage tool, but as a predictor of mortality.

Revised Trauma Score (RTS)

The Revised Trauma Score (RTS) uses 3 specific physiologic parameters: GCS, SBP and RR. The scoring system is outlined below in Table 6. The RTS has two purposes: 1) field triage and 2) quality assurance and outcome prediction. Depending on the purpose, the formula for calculating the score varies. When used for field triage, the RTS is determined by adding each of the coded values together. Thus, the RTS ranges from 0-12 (as above). When used for quality assurance or outcome prediction, the GCS, SBP and RR are added together.

Table 6 Revised Trauma Score			
Glasgow Coma Scale (GCS)	Systolic Blood Pressure (SBP in mm Hg)	Respiratory Rate (RR breaths/min)	Coded Value
13-15	>89	10-29	4
9-12	76-89	>29	3
6-8	50-75	6-9	2
4-5	1-49	1-5	1
3	0	0	0

The RTS has a high inter-rater reliability and accuracy in predicting death than the Trauma Score.^{48,49} However, it can be very difficult to calculate in the field. This is especially

true for the GCS, which is difficult to employ in patients who are intubated and mechanically ventilated. In addition, it is hard to score patients who are pharmacologically paralyzed or who are under the influence of alcohol or drugs. To combat these difficulties, best motor response and the eye-opening responses have been used to predict the verbal response. Substitution of the best motor response for the GCS can predict trauma mortality as well as or better than other trauma severity score.

Outcomes

Outcome measures for analyses consist of the length of stay, Functional Independence Measure (FIM), discharge disposition (e.g. home, nursing home, sub-acute nursing facility) and survival.

Length of Stay (REHAB LOS)

Length of stay can be used as a gauge of the utilization of healthcare resources and severity of the injury. In the years 2005 to 2009 the OTR reported an average REHAB LOS for trauma victims of 5.97 days. Data reported for REHAB LOS are for those that occurred in inpatient trauma, and do not include data from inpatient rehabilitation. The OTR was queried for REHAB LOS of trauma victims with SCI, TBI, and Polytrauma from 2005 to 2009. REHAB LOS for individuals with a diagnosis of SCI was 11.2 days, for TBI, 6.65 days and for polytrauma, 9.84 days.³ The Metro Trauma Registry (MTR) from the years 2006 to 2010 reported an average REHAB LOS of 11.6 days for individuals with a diagnosis of SCI and 6.4 days for individuals with a diagnosis of TBI and 9.8 days for individuals with a diagnosis of Polytrauma.

Functional Independence Measure (FIM)

The **FIM** is the primary assessment tool used for measuring rehabilitation outcomes. The FIM was developed to create a minimal data set that could be uniformly applied as a valid measure of patient disability.⁵⁰ This allows health care providers and researchers to have a reliable method of tracing disability from rehabilitation admission through discharge, and follow-up. The FIM assesses physical functioning in 6 domains (self-care, sphincter control, mobility, locomotion, communication and social cognition) using an 18-item, 7 point Likert Scale with 7 being able to do an activity totally independently to 1 needing total assistance with an activity (Table 7).^{51,52} FIM data will be collected during admission to inpatient rehabilitation and at discharge to provide functional detail on the outcome of trauma victim survivors.

Table 7. Functional Independence Measure (FIM)		
FUNCTION DOMAINS		CODING SCHEME
Self-Care		No Helper
1. Grooming		7 Complete Independence
2. Bathing		6 Modified Independence
3. Dressing-Upper Body		
4. Dressing-Lower Body		Helper-Modified Dependence
5. Toileting		5 Supervision
Sphincter Control		4 Minimal Assistance
1. Bladder		3 Moderate Assistance
2. Bowel		
Transfers		Helper-Complete Dependence
1. Bed, chair, wheelchair		2 Maximal Assistance
3 Toilet		1 Total Assistance
2 Tub Shower		
Locomotion		
1. Walking or Wheelchair		
2. Mode of Locomotion		
3. Stairs		
Communication		
1. Comprehension		
2. Expression		
Social Cognition		
1. Social Interaction		
2. Problem Solving		
3. Memory		

The FIM has good inter-rater reliability,⁵³ but while it has broad domain coverage, FIM

does not measure specific functional skills, i.e. fine motor ability, speed, ease and quality of task execution. Nevertheless, the FIM remains valuable in measuring burden of care and activity restrictions and serves as an important tool in outcomes research and in assessing the quality of a rehabilitation program.⁵⁴

Discharge Disposition

Discharge disposition from Trauma Service was coded into categories: home, died, MetroHealth System, and outside MetroHealth System (i.e. AMA, other hospital system, jail/prison, homeless/shelter, protective services, and hospice). Those discharged to the MetroHealth System were further categorized into admitted to MetroHealth Acute Rehabilitation, admitted another MetroHealth System service, or left AMA. The population for analyses consists of only those persons discharged from the Trauma Service to Acute Rehabilitation. ***Discharge disposition*** from Acute Rehabilitation was coded as Home or Not discharged home. None of the patients admitted to Acute Rehabilitation had a discharge disposition as deceased.

The OTR reported discharge disposition for trauma survivors in 2005 to 2009 as: 55% home, 5.7% Rehabilitation, 20.3% ECF/NH/SNF and 13.8% other. A data query of the OTR also reported data on discharge disposition for SCI (25% home and 32% Rehab), for TBI (45 % home and 12% Rehab), and for Polytrauma (37 % home and 15% Rehab).³ The Metro Trauma Registry (MTR) from the years 2006 to 2010 reported that of 339 individuals with a diagnosis of SCI, 158 (46.6 %) went to rehab; of 3,195 individuals with a diagnosis of TBI, 182 (5.7%) went to rehab; and of 2,803 individuals with a diagnosis of Polytrauma, 703 (30%) went to rehab.

Survival

Survival was reported and broken down by changes in survival by location including: prehospital, emergency department (ED), inpatient trauma and inpatient rehabilitation. In the years 2005 to 2009, the OTR reported 95.6% survival of the 151,244 trauma victims reported. Data reported for death are for those that occurred in the hospital setting (ED or inpatient trauma), and does not include those who die at the injury site or inpatient rehabilitation. The OTR was queried for survival of trauma victims with SCI, TBI, and Polytrauma from 2005 to 2009. Two thousand two hundred forty nine individuals were admitted with a diagnosis of SCI, and of those, 83.5% survived; 63,019 individuals were admitted with a diagnosis of TBI, and of those, 86.6% survived, and 23,090 individuals were admitted with a diagnosis of Polytrauma, and of those, 81.8% survived.³ A review of the MTR data from 2006 to 2010 showed that 339 individuals were admitted with a diagnosis of SCI, and of those, 283 (83.5%) survived; 3,195 individuals were admitted with a diagnosis of TBI, and of those, 2,814 (88.1%) survived; 2,803 individuals were admitted with a diagnosis of Polytrauma, and of those, 2,317 (82.7%) survived.

Analysis

Analysis consists of standard descriptive statistics: frequencies, averages, t-test, and chi-square. For continuous outcome variables, such as the FIM, two staged linear regression was used to investigate the relationship between trauma variables and functional outcomes. In the modeling, demographic and number of comorbidities/complications were controlled allowing for the direct effects of the trauma variables to be illuminated. For the binary outcome of rehabilitation discharge disposition (home/not home) a logistic regression technique was employed. Again, demographic and number of comorbidities/complications were controlled for in this analysis.

Trauma and Rehabilitation Registry Merge

In our original grant proposal, survival was noted as one of the outcomes to be investigated. None of the patients admitted to acute rehabilitation from the MetroHealth Trauma Service died; therefore, we did not include survival in our final analyses of the data. We did, however, look at Trauma Service discharge disposition, for which, survival was one of our outcomes.

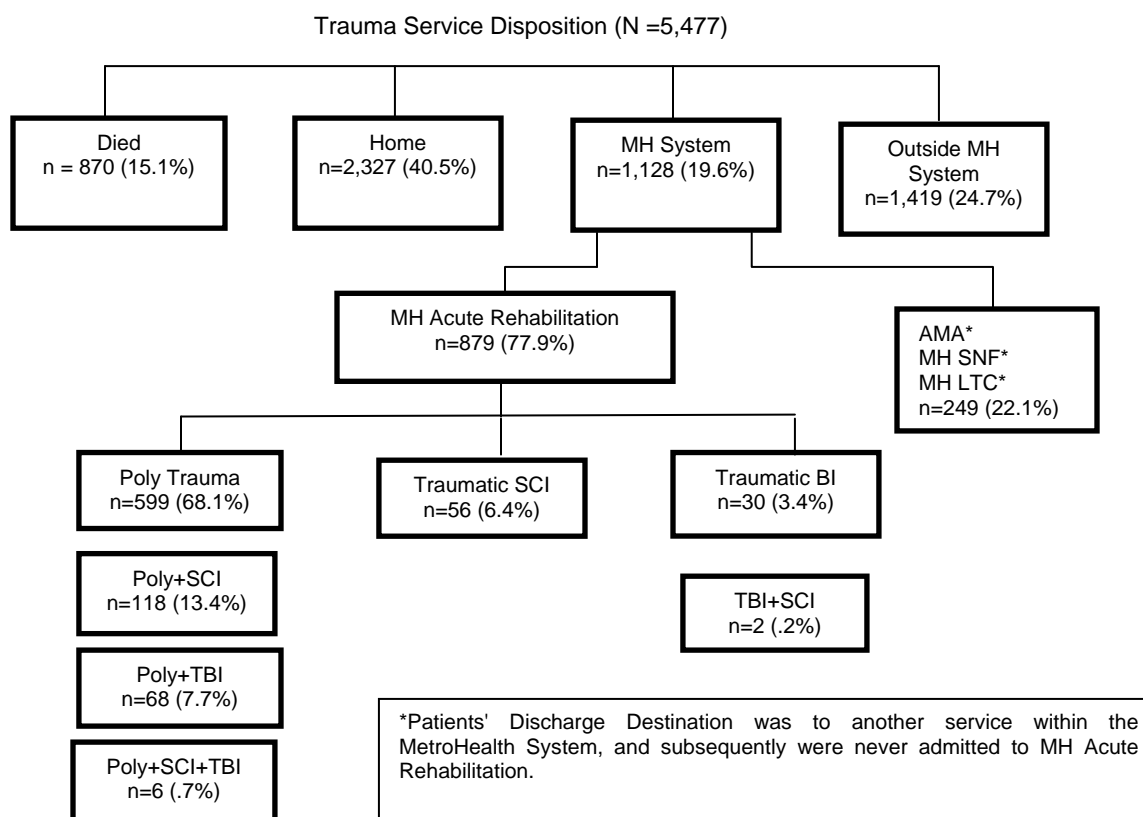
Results

Aim 1: To link the MetroHealth Trauma and MetroHealth Rehabilitation Registry Data.

We were able to link the Trauma and Rehabilitation Registries using patient medical record numbers (MR), birthdate and gender. The two databases linked and we did not have any patients in the Rehabilitation Registry not link back to their trauma data in the Trauma Registry.

Figure 1 displays the study sample generation from the Trauma Registry. Almost 15% of the trauma patients coming to the MH Emergency Department (ED) died prior to being discharged from the ED. Forty percent of patients were sent home from the ED and 24.7% were discharged to a health care facility outside of the MH System. Almost 20% were admitted to a MH service (i.e. acute care, SNF, LTC, or acute rehabilitation). Out of those admitted to a MH System service (1,128), 77.9% were admitted to acute rehabilitation. The total study samples consisted of 879 persons. Of those 879 trauma patients, 600 were Poly traumas, 116 had both Poly trauma and traumatic SCI, 58 SCI patients, 34 were TBI and 2 patients had a TBI and traumatic SCI.

Figure 1 Study Sample Inclusion Flow Chart



Sample Characteristics

Table 8 gives the descriptive statistics for the sample characteristics for the total sample and for the 3 traumatic injury groups. The traumatic SCI and TBI groups include patients who had a singular identification as having a SCI or TBI as documented by the appropriate ICD-9 code. The Poly trauma group includes persons with the ICD-9 code for poly trauma, which may include a SCI or TBI.

Looking at the Total Sample column in Table 8 below, the mean age of the study sample was 42.75 (\pm 18.04), 71.9% were discharged to home from acute rehabilitation, 27.2% had government health insurance, mean number of complications and comorbidities was 7.57 (\pm 3.59), mean Glasgow Coma Score was 15.39 (\pm 7.58), mean ISS was 25.53 (\pm 9).

Trauma and Rehabilitation Registry Merge

55), average total FIM Gain was 29.91 (± 17.21), 42.1% were intubated at some time prior to rehabilitation admission, and 27% tested positive for drug use.

Table 8 Descriptive Statistics for all Data Points

	Total Sample N = 879		Poly Traumas n=785		Traumatic SCI n=58		Traumatic BI n=36	
Demographics	Percent		Percent		Percent		Percent	
Gender								
Male	76.8		76.6		82.8		72.2	
Female	23.2		23.4		17.2		27.8	
Race								
White	73.2		73.6		66.7		75.0	
Black	23.2		22.7		33.3		22.2	
Other	3.1		3.3		0.0		0.0	
Marital Status								
Married	33.1		28.9		40.2		36.1	
Not married	66.5		71.1		59.8		63.9	
Health Insurance								
Commercial	47.4		47.4		48.3		47.2	
Government	27.2		27.3		25.9		27.8	
Uninsured	25.4		25.4		25.9		25.0	
	Mean	±	Mean	±	Mean	±	Mean	±
Age	42.75	18.04	42.27	17.91	45.36	19.26	48.83	11.99
Number of Comorbidities/Complications	7.57	3.59	7.62	3.60	7.84	3.67	6.19	2.90
Trauma Data Points								
ISS	25.53	9.55	26.15	9.11	26.34	14.54	25.75	9.805
Glasgow Coma	15.39	7.58	12.54	3.90	14.29	1.81	13.25	3.96
Total Scene Time	15.39	7.58	14.94	7.41	20.5	7.72	missing	----
	Percent		Percent		Percent		Percent	
Intubated pre-rehabilitation								
Yes	42.1		45.2		12.1		22.2	
Tested Positive for Drugs								
Yes	27.0		27.9		17.2		22.2	
No	24.9		25.0		31.0		13.9	
Not Tested	48.1		47.1		51.7		63.9	
Rehabilitation Outcomes	Mean	±	Mean	±	Mean	±	Mean	±
Total FIM Motor Gain	24.69	13.64	24.69	13.74	45.36	19.27	22.33	10.16
Total FIM Cognitive Gain	5.23	5.89	5.53	6.02	2.48	4.16	3.25	3.62
Total FIM Gain	29.91	17.21	30.22	17.54	28.41	15.12	25.58	11.94
Rehabilitation REHAB LOS	20.80	14.45	20.74	14.24	25.66	17.10	12.63	6.10
	Percent		Percent		Percent		Percent	
Rehab Discharge Disposition								
Home	71.9		71.2		72.4		86.1	

Trauma and Rehabilitation Registry Merge

The columns representing the different trauma categories indicate that the 3 sub-samples are very similar on demographic characteristics. The SCI group is made up of less white (66.7%) than the Poly (73.6%) and TBI (75.0%) groups. The TBI group is slightly older (48.83 years old vs. 42.27 and 45.36). The largest difference is that the TBI group has a higher percentage of patients discharged home (86.1%) than the Poly (71.2%) and SCI (72.4%) groups. In terms of scene time, the SCI group had longer average minutes at the scene (20.5) than the Poly group (14.94). Scene time was missing on all 36 of the TBI patients.

When looking at health characteristics, the SCI group has higher Total FIM Motor Gain (45.36) than the Poly (24.69) and the TBI (22.33) groups. The SCI group had lower intubation rates (12.1%) than the other two groups (45.2% and 22.2%) and lower positive test for drug use (17.2% vs. 27.9% and 22.2%).

Aim 2: To identify variables from the Trauma Registry that are associated with long term outcomes for persons who sustained a poly trauma, traumatic SCI, or a traumatic brain injury.

Pearson correlations were conducted to first uncover which independent variables had an association with the outcome variables of interests (Length of Stay, FIM scores and Rehabilitation discharge disposition). Below in Table 9 are the results of the Pearson correlations and significance level.

Trauma and Rehabilitation Registry Merge

Table 9 Pearson Correlations Between the Independent Variables and Outcomes

	ISS	GCS	Age	P/Drugs	N/Drugs	NT/Drugs	Sex	Married	Race	Intubated	G_Health	C_Health	U_Health	CCs	TST
REHAB LOS	.194**	-.090*	-.014	-.014	.000	.012	-.056	-.025	-.078*	.110*	.099*	-.029	-.068*	.178**	.037
Rehab Discharge Disposition	-.097**	-.059	-.261**	-.013	-.009	-.056	-.010	.038	.040	.031	-.198**	.183**	-.008	-.335**	.001
Total FIM Gain	-.055	-.304**	-.187**	-.040	-.013	-.077*	-.059	-.048	.058	.254**	-.150**	.080*	.061	-.264**	.025
FIM Motor Gain	-.095**	-.199**	-.200	-.020	-.027	-.056	-.066*	-.036	.019	.154**	-.138**	.071*	.059	-.261**	.053
FIM Cognitive Gain	.058	-.425**	-.106**	-.070*	.024	-.094*	-.018	-.057	.125**	.383**	-.119**	.069*	.043	-.164**	.049*

*p≤.05 **p≤.001

ISS=Injury Severity Score
GCS=Glasgow Coma Score
P/Drugs=Tested Positive for Drugs
N/Drugs=Tested Negative for Drugs
NT/Drugs=Was Not Tested for Drugs
G_Health=Government health insurance
C_Health=Commercial health insurance
U_Health=Uninsured
CCs=Comorbidities/Complications
TST=Total Scene Time
FIM=Functional Independence Measure

Trauma and Rehabilitation Registry Merge

ISS, intubation pre-rehabilitation, government health insurance have, and numbers of comorbidities/complications have statistically significant positive associations with REHAB LOS. Higher ISS, being intubated prior to rehabilitation, having government health insurance are associated, and more comorbidities/complications the longer lengths of hospital stay. Higher Glasgow Coma scores and having commercial health insurance are associated with shorter length of hospital stays.

Higher ISS, older persons, having government health insurance, and fewer comorbidities/complications are associated with not being discharged from rehabilitation to home. Having commercial insurance is associated with going home after acute rehabilitation.

Higher Total FIM Gain is associated with lower Glasgow Coma scores, being younger, being intubated pre-rehabilitation, not having government health insurance, having commercial insurance, and lower number of comorbidities/complications. Not having been tested for drugs is associated with lower Total FIM Gain.

FIM Motor Gain is negatively associated with ISS, Glasgow Coma score, age, sex, number of comorbidities/complications, and commercial health insurance. The higher the ISS, Glasgow Coma score, older persons, females, being female and having government health insurance the lower the FIM Motor Gain. Higher FIM Motor Gain is associated with having commercial health insurance and being intubated prior to rehabilitation.

Higher Glasgow Coma scores, older persons, more comorbidities/complications, those with government health insurance, testing positive for drugs, and not being tested for drugs were associated with lower FIM Cognitive Gain. On the other hand, higher FIM Cognitive gain was associated with being white, intubated prior to rehabilitation, and having commercial health insurance.

Total Length of Stay (REHAB LOS) from Trauma Service Admission through Acute Rehabilitation

Table 10 shows the results of the multiple linear regression analysis results. The full regression model explained 9.7% of the variance in REHAB LOS. In Stage I, race ($B = -3.289$; $p = .040$; blacks coded as '0' and whites coded as '1'), government health insurance ($B = 4.438$; $p = .020$) and number of comorbidities/complications ($B = .659$; $p = .000$) had statistically significant effects on REHAB LOS. Whites had shorter REHAB LOS, having government health insurance increased a patient's REHAB LOS by 4.438 days and for every increase in comorbidities/complications, REHAB LOS increased by .757 days.

Table 10. Multiple Linear Regression for Rehabilitation Length of Stay (REHAB LOS) (N = 714)

STAGE I	Unstandardized Coefficients		Standardized Coefficients
Model	B	Std. Error	Beta
(Constant)	19.535**	2.2216	
Age	-.089*	.040	-.107
Sex	-.588	1.500	-.016
Race	-3.289*	1.594	-.091
Married	.701	1.524	.021
Commercial Health Insurance ^a	2.455	1.635	.081
Government Health Insurance ^a	4.438*	1.835	.130
Number of Comorbidities/Complications	.757**	.182	.190
STAGE II			
(Constant)	17.253**	4.188	
Age	-.044	.042	-.053
Sex	-.355	1.493	-.010
Race	-4.410*	1.618	-.122
Married	.798	1.511	.024
Commercial Health Insurance	1.753	1.644	.057
Government Health Insurance	4.328*	1.827	.127
Number of Comorbidities/Complications	.659**	.174	.166
Intubated at any time pre-rehab	.187	1.977	.006
Tested Positive for Drugs ^b	-1.661	1.578	-.049
Tested Negative for Drugs ^b	-1.031	1.579	-.029
ISS	.236**	.067	.151
Glasgow Comma Score	-.332	.187	-.113

Trauma and Rehabilitation Registry Merge

Total Scene Time	.017	.045	.016
$R^2 = .097^{**}$			

^a Referent is Commercial Insurance ^b Referent is Tested Positive for Drugs

* $p \leq .05$ ** $p \leq .001$

Looking at Stage II of the regression model, we find that race, having government health insurance and number of comorbidities/complications remain statistically significant indicating direct effects on REHAB LOS. ISS ($B=.236$; $p=.000$) had a statistically significant relationship with REHAB LOS in a positive direction. For every one unit increase in ISS, REHAB LOS is increased by .236 days. Looking at the standardized coefficients in Stage II, we find that being that number of comorbidities/complications ($Beta=.166$) is the strongest contributor to variation in REHAB LOS.

Acute Rehabilitation Discharge Disposition

Binary Logistic Regression was conducted to look at predictors of acute rehabilitation discharge disposition. Table 11 displays the results of the binary logistic multiple regression analysis for rehabilitation discharge disposition. Rehabilitation discharge disposition is affected by a patient's age, race, marital status, type of health insurance, number of comorbidities/complications and their ISS. Older persons are less likely to be discharge home ($OR = -.961$) after rehabilitation than younger persons. Persons with higher numbers of comorbidities/complications and having higher ISS are also less likely to go home after rehabilitation ($OR = .812$; $OR = .979$ respectively). Whites, married individuals and persons with commercial health insurance compared to those with no health insurance are more likely to be discharged home. ($OR = 1.077$; $OR = 1.731$; $OR = 1.980$ respectively).

Table 11. Binary Logistic Multiple Regression on Rehabilitation Discharge Disposition (N = 712)

Predictor	B	Std. Error	Odds Ratio (OR) Exp(B)	95% CI for EXP(B)	
				Lower	Upper
Age	-.040**	.007	.961	.948	.973
Sex	.118	.232	1.125	.714	1.773
Race	.074*	.239	1.077	.675	1.720
Married	.549*	.228	1.731	1.107	2.709
Commercial health insurance ^a	.683*	.251	1.980	1.210	3.241
Government health insurance ^a	.123	.267	1.131	.670	1.909
Number of Comorbidities/Complications	-.208**	.028	.812	.769	.859
Intubated pre-rehabilitation	-.203	.289	.817	.463	1.439
Tested Positive for Drugs ^b	.043	.240	1.044	.652	1.671
Tested Negative for Drugs ^b	.086	.234	1.089	.689	1.722
ISS	-.021*	.009	.979	.961	.997
Glasgow Comma Score	.007	.028	1.007	.954	1.063
Total Scene Time	-.005	.006	.995	.984	1.007
(Constant)	4.470**	.641	87.323		

^a Referent is Uninsured ^b Referent is Not Tested for Drugs* $p \leq .05$ ** $p \leq .001$ *Total FIM Gain*

Table 12 gives the results of the multiple regression analysis for total FIM gain. The total regression model explains 17.6% of the variance in Total FIM Gain score. In Stage I of the regression model, for every one year of increase in age, Total FIM Gain score decreases by .119 points. For every unit increase in the number of comorbidities/complications there is a decrease of 1.085 points in a Total FIM Gain.

Table 12. Multiple Linear Regression of Total FIM Gain (N = 713)

STAGE I	Unstandardized Coefficients		Standardized Coefficients
Model	B	Std. Error	Beta
(Constant)	42.774**	2.271	
Age	-.119*	.040	-.124

Trauma and Rehabilitation Registry Merge

Sex	-2.163	1.514	-.051
Race	2.365	1.597	.056
Married	-.650	1.529	-.017
Commercial Health Insurance ^a	.575	1.827	.016
Government Health Insurance ^a	-3.277	1.827	-.083
Number of Comorbidities/Complications	-1.085**	.569	-.226
STAGE II			
(Constant)	53.002**	4.002	
Age	-.069*	.041	-.072
Sex	-2.110	1.474	-.050
Race	.017	1.577	.000
Married	-.336	1.480	-.009
Commercial Health Insurance	.262	1.591	.007
Government Health Insurance	-2.838	1.779	-.072
Number of Comorbidities/Complications	-1.006**	.173	-.209
Intubated at any time pre-rehab	2.942	1.929	.083
ISS	-.165*	.065	-.091
Tested Positive for drugs ^b	-.571	1.537	-.014
Tested Negative for drugs ^b	.565	1.519	.014
Glasgow Comma Score	-.706**	.138	-.207
Total Scene Time	.042	.126	-.027
R ² = .176**			

^a Referent is Uninsured ^b Referent is Not Tested for Drugs

* $p \leq .05$ ** $p \leq .001$

Turning to Stage II of the regression analysis, we find that age and number of comorbidities/complications continue to have statistically significant direct relationships with Total FIM Gain in the negative direction. ISS and Glasgow Coma Score both have statistically significant direct effects on Total FIM Gain. For every unit increase in number of comorbidities/complications Total FIM Gain decreases by 1.006 points and for every unit increase in Glasgow Coma Score Total FIM Gain decreases by .706 points.

The Standardized Coefficients in Stage II indicate that number of comorbidities/complications (Beta=-.209) and Glasgow Coma Score (Beta=-.207) have the strongest contributions to the variance in Total FIM GAIN.

Total FIM Motor Gain

Table 13 gives the results of the multiple linear regression analysis for total FIM motor gain. The total model explains 13.8% of the variance in total FIM motor gain. Looking at Stage I of the regression model, we find that for every year added to age, there is a drop in total FIM motor gain by .104 points. With every unit gain in number of comorbidities/complications there is a decrease of .851 points in total FIM motor gain.

Table 13. Multiple Linear Regression for Total FIM Motor Gain (N = 713)

STAGE I	Unstandardized Coefficients		Standardized Coefficients
Model	B	Std. Error	
(Constant)	35.885**	1.799	
Age	-.104**	.032	-.138
Sex	-1.736	1.99	-.052
Race	.712	1.265	.021
Married	.125	1.211	.004
Commercial Health Insurance ^a	.350	1.279	.013
Government Health Insurance ^a	-2.260	1.447	-.073
Number of Comorbidities/Complications	-.851**	.140	-.224
STAGE II			
(Constant)	44.417**	3.235	
Age	-.094*	.033	-.124
Sex	-1.761	1.192	-.053
Race	-.395	1.274	-.012
Married	.199	1.196	.007
Commercial Health Insurance	.321	1.286	.012
Government Health Insurance	-1.947	1.438	-.063
Number of Comorbidities/Complications	-.767**	.140	-.202
Intubated at any time pre-rehab	-.021	.031	-.024
ISS	-.180**	.053	-.126
Tested Positive for drugs ^b	-.508	1.243	-.016
Tested Negative for drugs ^b	.055*	1.228	.002
Glasgow Coma Score	-.375*	.148	-.139
Total Scene Time	-.021*	.031	-.024
R ² = .138**			

^a Referent is Uninsured ^b Referent is Not Tested for Drugs

* $p \leq .05$ ** $p \leq .001$

After adding trauma registry variables into the model, Stage II shows that age and number of comorbidities/complications continue to have a statistically significant relationship with total FIM motor gain. This indicates that age and number of comorbidities/complications have direct relationships with total FIM motor gain. ISS, tested negative for drugs, Glasgow coma score and total scene time have statistically significant relationship with total FIM motor gain. Higher ISS, Glasgow Coma Score and total scene time reduce total FIM motor gain; while testing negative for drugs increases the motor gain score. The standardized coefficients in Stage II of the regression model indicate that ISS (Beta=-.126) and Glasgow Coma Score (Beta=-.139) are the strongest predictors of FIM Motor Gain in the model.

Total Cognitive FIM Gain

Table 14 gives the results of the multiple linear regression analysis for total cognitive FIM gain. The full model explains 22.1% of the variance in total FIM cognitive gain. Stage I of the model finds age, race and number of comorbidities/complications having statistically significant relationships with total FIM cognitive gain. For every added year in age, total cognitive gain is reduced by .015 points. Whites have an increase of 1.654 point in cognitive FIM gain compared to Blacks and for every increase in number of comorbidities/complications there is a decrease of .234 points in total FIM cognitive gain.

Table 14. Multiple Linear Regression for Total Cognitive FIM Gain (N = 713)

STAGE I	Unstandardized Coefficients		Standardized Coefficients
Model	B	Std. Error	Beta
(Constant)	6.889**	.804	
Age	-.015*	.014	-.045
Sex	-.427	.536	-.030
Race	1.654*	.565	.113

Trauma and Rehabilitation Registry Merge

Married	-.775	.541	-.058
Commercial Health Insurance ^a	.226	.571	.019
Government Health Insurance ^a	-1.017	.647	-.075
Number of Comorbidities/Complications	-.234**	.062	.142
STAGE II			
(Constant)	8.585**	1.340	
Age	.025	.014	.077
Sex	-.349	.494	-.024
Race	.412	.528	.028
Married	-.535	.495	-.040
Commercial Health Insurance	-.058	.533	-.005
Government Health Insurance	-.890	.595	-.066
Number of Comorbidities/Complications	-.239**	.058	-.145
Intubation at any time pre-rehab	2.127**	.646	
ISS	.014	.022	.036
Tested Positive for drugs ^b	-.062	.515	-.005
Tested Negative for drugs ^b	.510	.508	.036
Glasgow Coma Score	-.331**	.061	-.282
Total Scene Time	-.009	.013	.023
R ² = .221**			

^a Referent is Uninsured ^b Referent is Not Tested for Drugs

* $p \leq .05$ ** $p \leq .01$

In Stage II of the regression model, age and race are no longer statistically significant; indicating that age and race have an indirect effect on total FIM cognitive gain through the Trauma Registry variables. Number of comorbidities/complications continues to be significant, indicating a direct effect on total FIM cognitive gain. Intubation at any time pre-rehabilitation and Glasgow Coma Score are the Trauma Registry data points that have direct statistically significant effects on total FIM cognitive gain. Being intubated at any time pre-rehabilitation (B=2.127) increases total FIM cognitive gain. Higher Glasgow Coma Scores (B = -.331) decreases total FIM cognitive gain. Glasgow Coma Score is the strongest predictor in the full regression model (Beta=-.282).

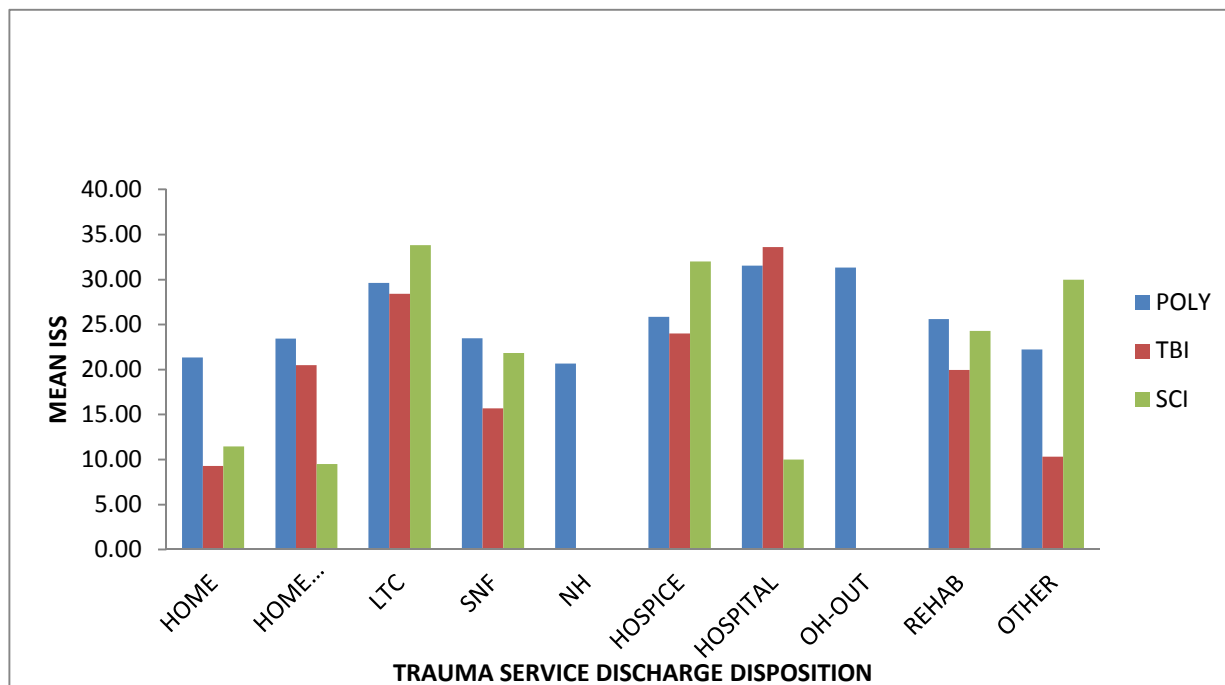
Trauma Service (TS) Discharge Disposition and Traumatic Injury

Although not specified in the grant application, we decided to look at ISS in relation to where patients were discharged to from the Trauma Service (TS). This was seen as a way of evaluating if ISS could be a useful in deciding where patients should be discharged to best serve their health care needs. Table 15 shows the mean ISS for each of the traumatic injury groups and their TS discharge disposition.

Table 15 Mean ISS for Trauma Service Discharge Disposition and Traumatic Injury (N = 5,754)

TRAUMA SERVICE DISCHARGE DISPOSITION	INJURY TYPE MEAN ISS					
	POLY		TBI		SCI	
	Mean	Stdv	Mean	Stdv	Mean	Stdv
Home	21.35	6.25	9.29	6.24	11.44	8.14
Home with Home Health	23.43	8.13	20.5	2.12	9.50	.71
LTC	29.61	11.44	28.43	14.65	33.83	18.36
SNF	23.48	7.05	15.69	7.01	21.84	16.04
NH	20.67	3.39	---	---	---	---
Hospice	25.87	6.35	24.00	NA	32.00	8.3
Hospital	31.54	15.61	33.60	25.99	10.00	NA
Outside Ohio Hospital Systems	31.33	5.60	---	---	---	---
Rehabilitation	25.61	8.64	19.96	8.15	24.29	13.58
Other	22.23	6.55	10.31	5.72	30.00	NA
Total Mean FIM Gain for MetroHealth Rehab patients	31.15	17.81	21.01	14.35	16.89	3.61

Chart 1. Mean ISS by Trauma Type and Trauma Services Discharge Disposition



Conclusions and Recommendations

Trauma data, especially ISS and GCS, should be included in research and quality projects when trying to determine and understand long-term outcomes of persons with traumatic injuries. The quality and effectiveness of trauma systems and care can be enhanced by merging of Trauma and Rehabilitation registries. Further standardization and utilization of the trauma and rehabilitation registries (i.e. criteria for inclusion and scoring methods) across institutions can define long term outcomes for those who survive SCI. Further improvements in medical informatics will allow for the creation of a repository of data within an institution and across collaborating Trauma systems. It is possible then to effectively link with ease databases from EMS, Trauma and Rehabilitation Services. This comprehensive Trauma system will then have the capability of fully assessing the quality of care being delivered through a continuum of services. This in turn can assist the State with its goals of establishing a well-integrated Trauma System that can define long-term outcomes in persons who sustain catastrophic injuries.

Future Research Directions

Our continued research with this combined database will be to look at the three trauma groups (Poly, SCI and TBI) separately to determine if different trauma variables affect outcomes of the three groups. In addition, we plan to look at the GCS components (verbal, eye and motor) and their independent effects on outcomes. It may be that the GCS for motor response is an important predictor of outcomes for the SCI group, but not for the TBI group. The GCS for verbal response maybe important for the TBI group, but not for the SCI group. A limitation of this study mainly revolve around the discovery of multiple data points for the other trauma

Trauma and Rehabilitation Registry Merge

variables (eg. GCS, BP) and incompleteness of other available records (especially for patients who have been transferred from outside trauma facilities), making it an arduous task for data extrapolation and analysis. It is the hope that further finetuning of the databases will yield a larger merged study population from which trends and outcomes can be sufficiently derived.

Trauma and Rehabilitation Registry Merge

References

1. http://www.cdc.gov/traumacare/pdfs/Global_Trauma_factsheet-a.pdf and World Health Organization (WHO). Injuries and Violence: The Facts. Geneva, Switzerland: WHO; 2010.
2. National Trauma Data Bank 2010 Annual Report. The American College of Surgeons Committee on Trauma. Download at: www.facs.org/trauma/ntdb/pdf/ntdbannualreport2010.pdf
3. Ohio Trauma Registry Database 2005 to 2009. Ohio Department of Public Safety, Division of Emergency Medical Services, Ohio Trauma Registry, ID#DCR 11-011.
4. Gross CP, Anderson GF, Powe NR. The Relationship between Funding by the National Institutes of Health and the Burden of Disease. *N Engl J Med*, 1999;340:1881-1887.
5. Boyd DR, Lowe RJ, Baker RJ, Nythus LM. Trauma Registry. New Computer Method for Multifactorial Evaluation of a Major Health Problem. *JAMA*, 1973;223(4):422-428.
6. Jurkovich GJ, Mock C. Systematic Review of Trauma System Effectiveness Based on Registry Comparisons. *J Trauma*, 1999;47(3 Suppl):S46-55.
7. MacKenzie EJ, Rivara FP, Jurkovich GJ, et al. A National Evaluation of the Effect of Trauma Center Care on Mortality. *N Engl J Med*, 2006;354(4):366-378.
8. Celso B, Tepas J, Langland-Orban B et al. A Systematic Review and Meta-Analysis Comparing Outcome of Severely Injured Patients Treated in Trauma Centers Following the Establishment of Trauma Systems. *J Trauma*, 2006;60:371-378.
9. Division of Medical Sciences, Committee on Trauma and Committee on Shock. Accidental Death and Disability: The Neglected Disease of Modern Society, Washington, D.C.: National Academy of Sciences-National Research Council, September 1966.
10. Report of the Post-critical Trauma Care Commission, Ohio Department of Public Safety, 2003. Download at: http://www.publicsafety.ohio.gov/links/ems_pctc_%20report_final.pdf
11. Model Trauma System Planning and Evaluation. Health Resources and Services Administration, 2006. Download at <http://www.facs.org/trauma/hrsa-mtspe.pdf>
12. A Framework for Improving Ohio's Trauma System, Ohio Department of Public Safety, 2010. Download at: http://www.publicsafety.ohio.gov/links/EMS_tsframework.pdf
13. Regional Trauma Systems: Optimal Elements, Integration and Assessment A Systems Consultation Guide. Committee on Trauma, American College of Surgeons. Trauma System Evaluation and Planning Committee. 2008;1-66.

14. Ohio Trauma Registry Annual Report 2003, Division of Emergency Medical Services, Ohio Department of Public Safety, 2005. Download at: www.publicsafety.ohio.gov/links/ems_otr_ar03.pdf
15. Varma A, Hill EG, Nicholas J, Selassie A. Predictors of Early Mortality After Traumatic Spinal Cord Injury: A Population-Based Study. *Spine*, 2010;35(7):778-783.
16. George R, McGwin G, Metzger J, Chaudry IH, and Rue LW. Association between Gender and Mortality among Trauma Patients as Modified by Age. *J Trauma*, 2003;54(3):464-471.
17. Inaba K, Goecke M, Sharkey P, Brenneman F. Long-Term Outcomes after Injury in the Elderly. *J Trauma*, 2003;54(3):486-491.
18. Kelley-Quon L, Min L, Morley E et al. Functional Status After Injury: A Longitudinal Study of Geriatric Trauma. *Am Surg*, 2010;78(10):1055-1058.
19. Geriatric Trauma Task Force Report and Recommendations. Trauma Committee, State of Ohio State Board of Emergency Medical Services, 2007. Download at: www.publicsafety.ohio.gov/links/ems_geriatric_triage.pdf
20. Berry C, Ley EJ, Mirocha J, Salim A. Race Affects Mortality after Moderate to Severe Traumatic Brain Injury. *J Surg Res*, 2010;163(2):303-308.
21. Brown RL. Epidemiology of Injury and the Impact of Health Disparities. *Curr Opin Peiatr*, 2010;22(3):321-325.
22. Greene WR, Oyetunji TA, Bowers U et al. Insurance Status is a Potent Predictor of Outcomes in both Blunt and Penetrating Trauma. *Am J Surg*, 2010;199(4):554-557.
23. Alban RF, Berry C, Ley E, Mirocha J, Margulies DR, Tillou A, Salim A. Does Health Care Insurance Affect Outcomes After Traumatic Brain Injury? Analysis of the National Trauma Databank. *Am Surg*, 2010;76(10):1108-1111.
24. Cowperthwaite MC, Burnett MG. Treatment Course and Outcomes following Drug and Alcohol-related Traumatic Injuries. *J of Traum Manag Outcomes*, 2011;5(3):1-9
25. Corrigan JD. Substance Abuse as a Mediating Factor in Outcome from Traumatic Brain Injury. *Arch Phys Med and Rehabil* 1995;76:302-309.
26. DeGuise E, Leblanc J, Dagher J, Lamoureux J, Jishi AA, Maleki M, Marcoux J, Feyz M. Early Outcome in Patients with Traumatic Brain Injury, Pre-injury Alcohol Abuse and Intoxication at Time of Injury. *Brain Inj*, 2009; 23(11):853-865.

27. Hsia R, Shen YC. Possible Geographical Barriers to Trauma Center access for Vulnerable Patients in the United States: An Analysis of Urban and Rural Communities. *Arch Surg*, 2011;146(1):46-52.
28. Newgard CD, Schmicker RH, Hedges JR et al. Emergency Medical Services Intervals and Survival in Trauma: Assessment of the “Golden Hour” in a North American Prospective Cohort. *Ann Emerg Med*, 2010;55(3):235-246.
29. Spaite DW, Tse DJ, Valenzuela TD, et al. The Impact of Injury Severity and Pre-hospital Procedures on Scene Time in Victims of Major Trauma. *Ann Emerg Med*, 1991;20:1299-1305.
30. Spaite DW, Joseph M. Prehospital Cricothyrotomy: An Investigation of Indications, Technique, Complications and Patient Outcome. *Ann Emerg Med*, 1990;19(3):279-285.
31. Stiell IG, Nesbitt LP, Pickett W. The OPALS Major Trauma Study: Impact of Advanced Life Support on Survival and Morbidity. *Can Med Assoc J*, 2008;178(9):1141-1152.
32. Eckstein M, Chan L, Schneir A, Palmer R. Effect of Prehospital Advanced Life Support on Outcomes of Major Trauma Patients. *J Trauma*, 2000;48(4):643-648.
33. Ottochian M, Salim A, DuBose J et al. Does Age Matter? The Relationship between Age and Mortality in Penetrating Trauma. *Injury*, 2009;40(4):354-357.
34. McLoughlin E, Annett JL, Fingerhut LA, et al. Recommended Framework for Presenting Injury Mortality Data. *MMWR Recommendations and Reports*, 1997;46:RR-14.
35. Barell V, Aharonson-Daniel L, Fingerhut L, et al. An Introduction to the Barell Body Region by Nature of Injury Diagnosis Matrix. *Inj Prev*, 2002; 8(2):91-96.
36. Butcher N, Balogh Z. The Definition of Polytrauma: The Need for International Consensus. *Injury*, 2009; 40(S4):12-22.
37. Keel M, Trentz O. Pathophysiology of Polytrauma. *Injury*, 2005;36(6):691-709.
38. Teasdale G, Jennett B. Assessment of Coma and Impaired Consciousness: A Practical Scale. *Lancet*, 1974;2:81-83.
39. Edwards M, Ley E, Mirocha J et al. Defining Hypotension in Moderate to Severely Injured Trauma Patients: Raising the Bar for the Elderly. *Am Surg*, 2010;76(10):1035-1038.
40. Bilello JF, Davis JW, Lemaster D et al. Prehospital Hypotension in Blunt Trauma: Identifying the “Crump Factor”. *J Trauma Inj Inf and Crit Care*, 2009;20:1-5.

41. Chi JH, Knudson MM, Vassar MJ, et al. Prehospital Hypoxia Affects Outcome. *J Trauma*, 2006;61:1134–1141.
42. Minardi J, Crocco TJ. Management of Traumatic Brain Injury: First Link in Chain of Survival. *Mt Sinai J of Med*, 2009;76:138-144.
43. Ley EJ, Berry C, Salim A. Mortality is Reduced for Heart Rate 80-89 After Traumatic Brain Injury. *J Surg Res*, 2010;163(1):142-145.
44. Copes WS, Sacco WJ, Champion HR, Bain LW, "Progress in Characterizing Anatomic Injury", In Proceedings of the 33rd Annual Meeting of the Association for the Advancement of Automotive Medicine, Baltimore, MA, USA 205-218.
45. Greenspan L, McLellan BA, Greig H. Abbreviated Injury Scale and Injury Severity Score: A Scoring Chart. *J Trauma*, 1985;25:60-64.
46. Clark DE, Hannan EL, Wu C. Predicting Risk-Adjusted Mortality for Trauma Patients: Logistic versus Multilevel Logistic Models. *J Am Coll Surg*, 2010;211(2):224-231.
47. Baker SP et al, The Injury Severity Score: A Method for Describing Patients with Multiple Injuries and Evaluating Emergency Care. *J Trauma*, 1974;14:187-196.
48. Champion HR, Sacco WJ, Copes WS et al. A Revision of the Trauma Score. *J Trauma*, 1989;29:623-629.
49. Champion HR, Sacco WJ, Carnazzo AJ et al, Trauma Score. *Crit Care Med*, 1981;9:672-676.
50. Granger CV, Gresham GE, eds. *Functional Assessment in Rehabilitation Medicine*. Baltimore: Williams and Wilkins, 1984.
51. Granger CV, Hamilton BB. The Uniform Data System for Medical Rehabilitation Report of First Admissions for 1990. *Am J Phys Med and Rehabil*, 1992;71(2):108-113.
52. Data Management Service of the Uniform Data System for Medical Rehabilitation and the Center for Functional Assessment Research: Guide for Use of the Uniform Data Set for Medical Rehabilitation, State University of New York at Buffalo, 82 Farber Hall, SUNY-South Campus, Buffalo, version 3.1, March 1990.
53. Hamilton BB, Laughlin JA, Granger CV, Kayton RM. Interrater Agreement of the Seven Level Functional Independence Measurement (FIM). *Arch Phys Med Rehabil*, 1991;72:572.

54. Dodds TA, Martin DP, Stolov WC, et al: A Validation of the Functional Independence Measurement and its Performance among Rehabilitation Inpatients. Arch Phys Med Rehabil, 1993;74:531-536.
55. Wright, J. (2000). The FIM™. The Center for Outcome Measurement in Brain Injury. <http://www.tbims.org/combi/FIM>.
56. Tinetti ME. Performance-oriented Assessment of Mobility Problems in Elderly Patients. J Am Geriatr Soc, 1986;34:119–126.

Appendix

Chart 1. Study Population Frequency of Trauma Type N = 879

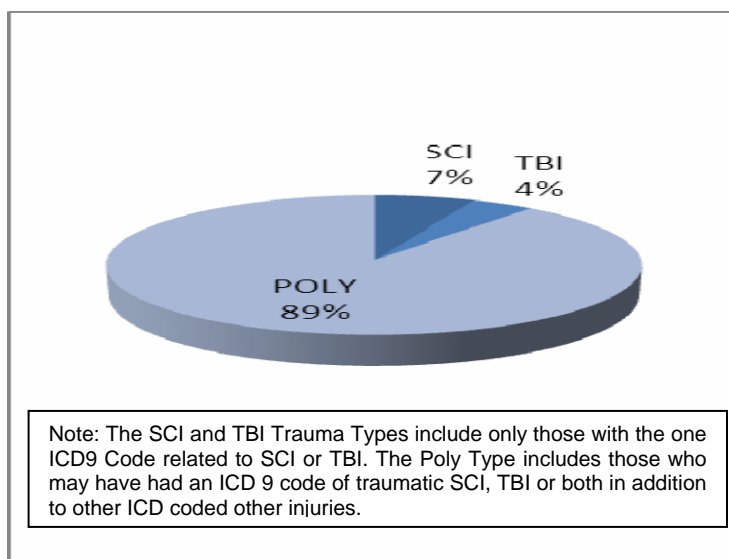


Chart 2. Number of Patients Discharged from Rehabilitation to Home

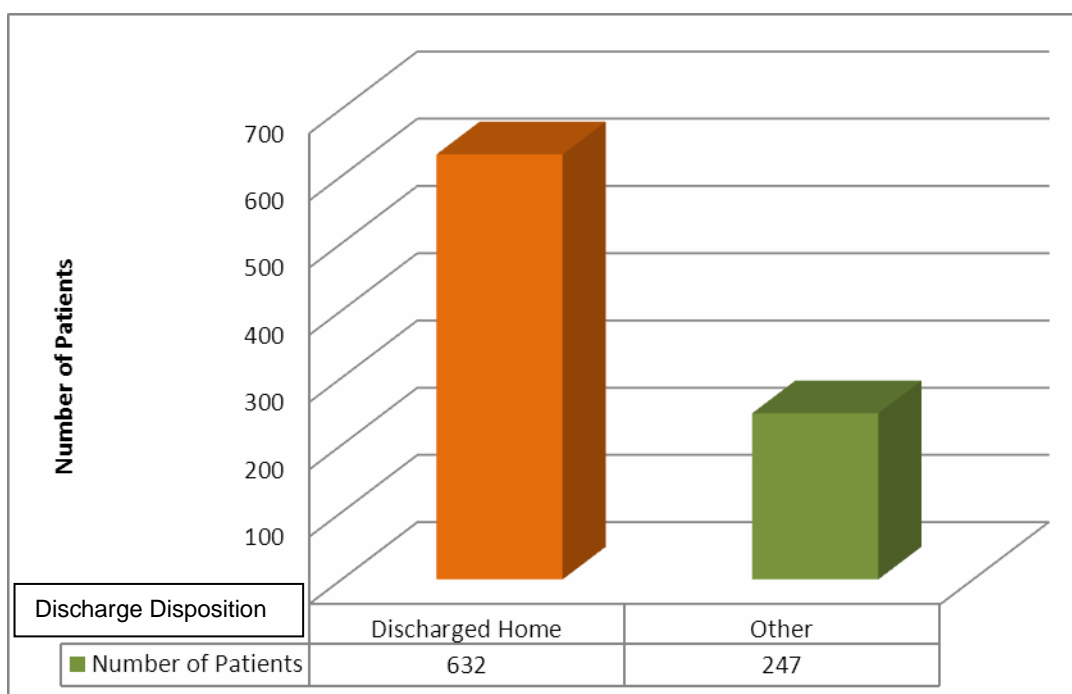


Chart 3. Percent of Patient Discharged Home from Rehabilitation by ISS Category

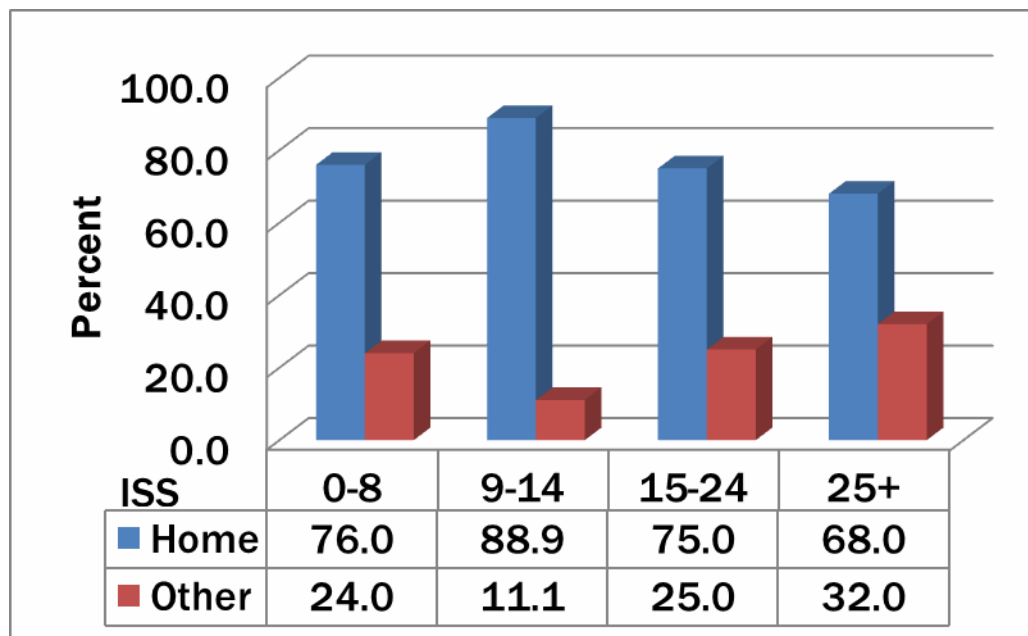


Chart 4. Percent of Patients Discharged Home from Rehabilitation by GCS Category

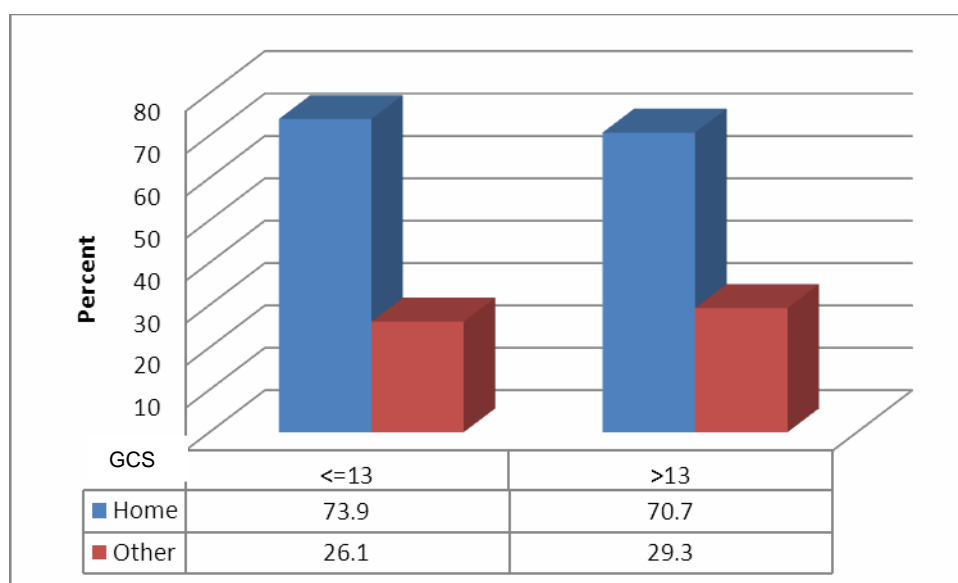


Chart 5. Mean REHAB LOS by Age Category

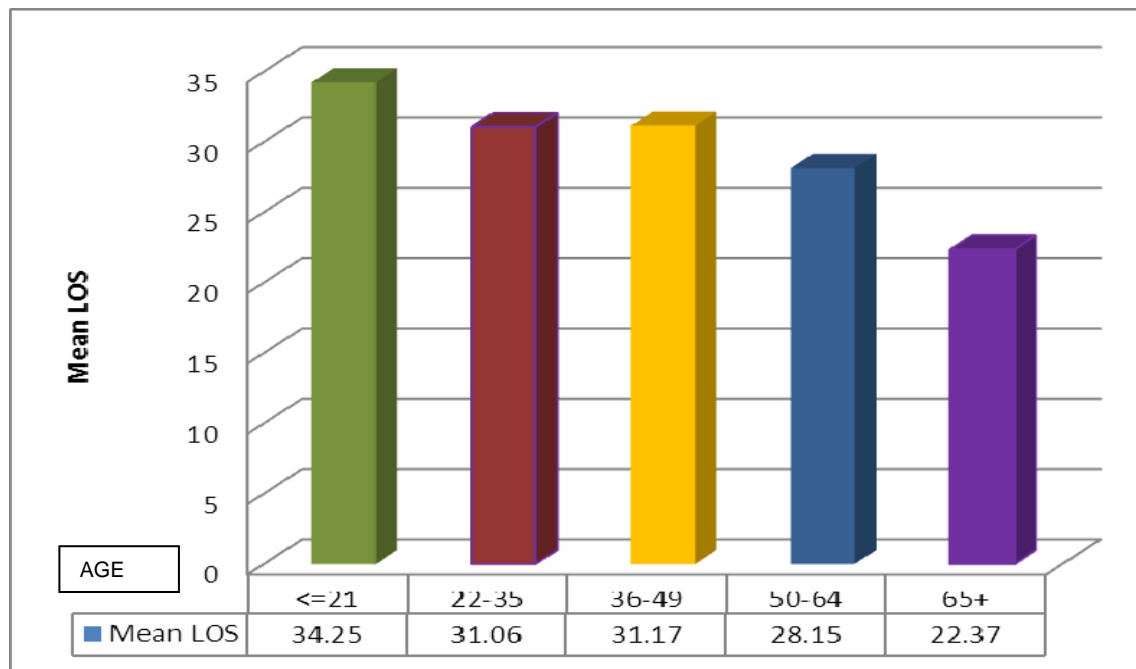


Chart 7. Mean REHAB LOS by ISS Category

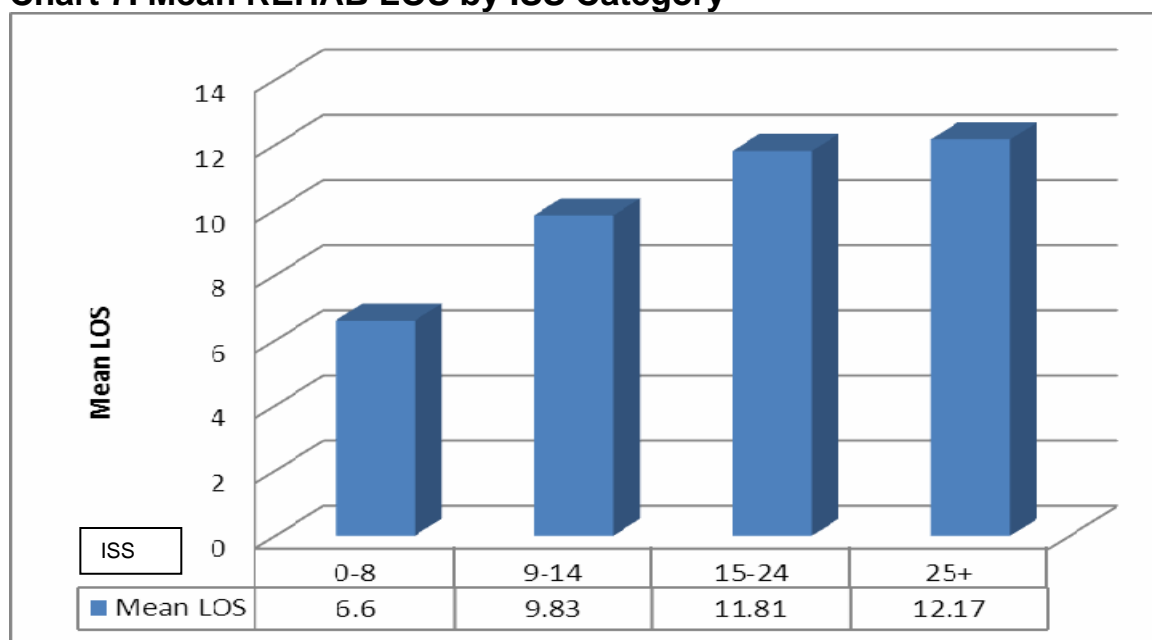


Chart 8. Mean REHAB LOS by GCS Category

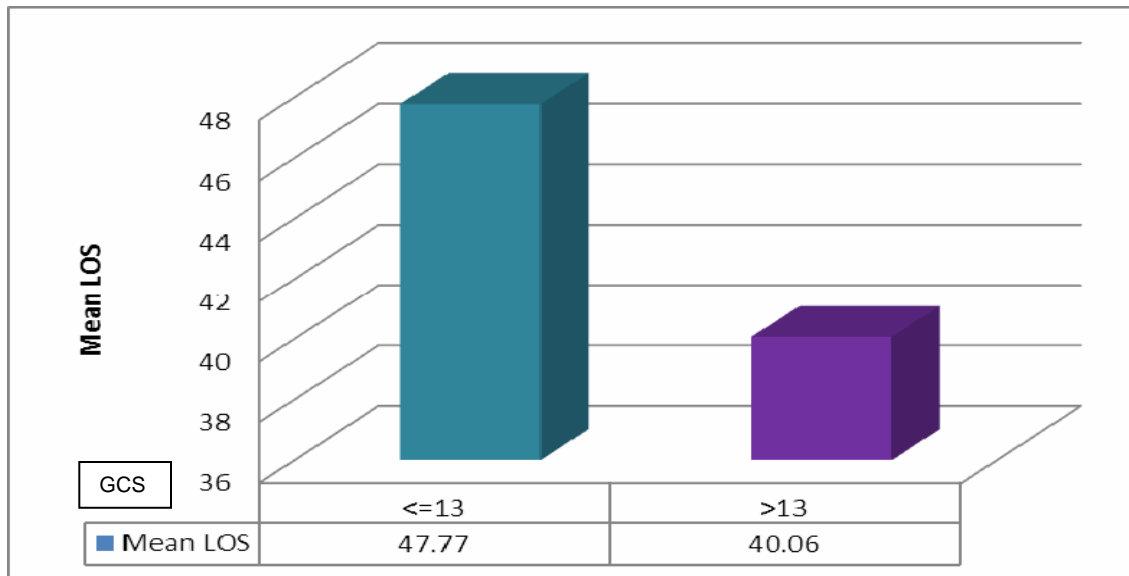


Chart 9. Mean FIM Total Gain by ISS Category

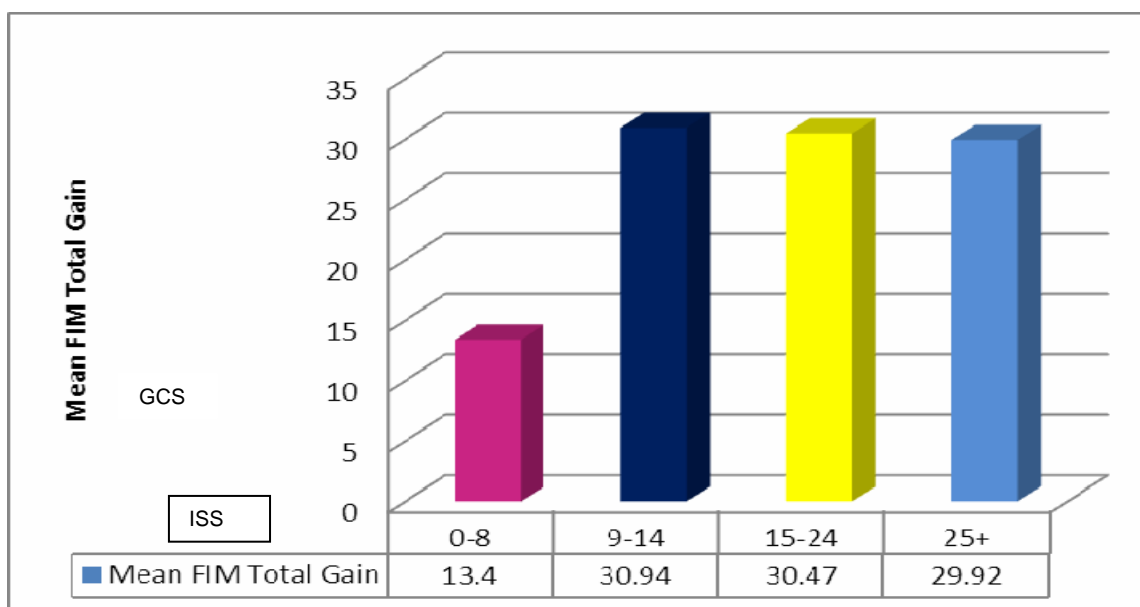
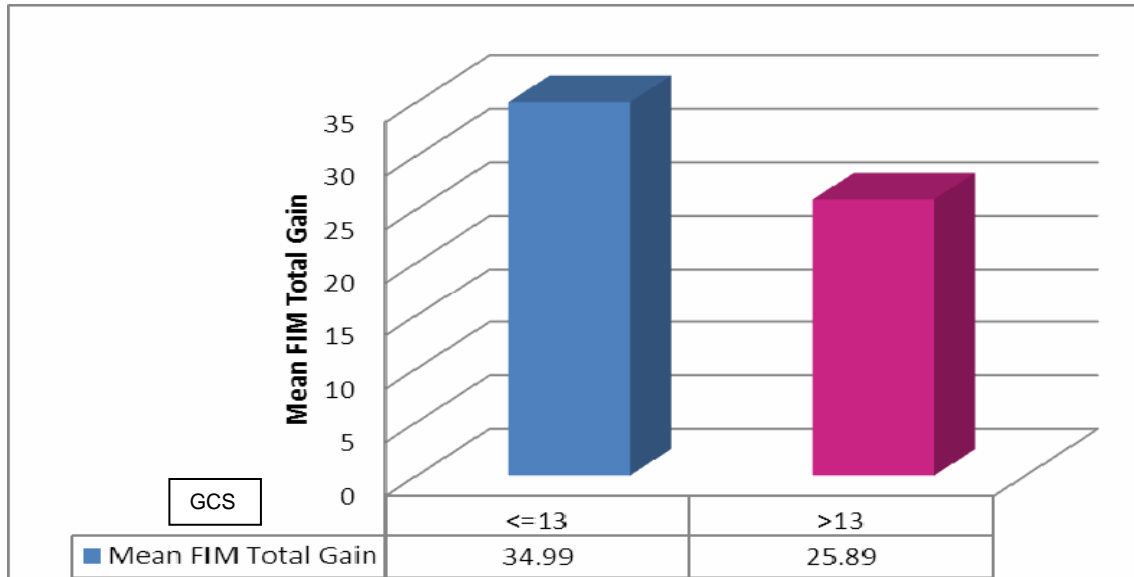


Chart 10. Mean FIM Total Gain by GCS Category



FISCAL REPORT – Financial Issues and Considerations

A total of \$57,733.61 out of the \$63,695 award was expended for salaries, based on the effort devoted to the project by each budgeted investigator. \$5,961.39 was unexpended; a reimbursement check will be issued by our Accounting/AP Department and mailed to you within a few weeks.

The unexpended balance is due to the fact that:

- 1) The \$1,226 budgeted for travel was not utilized at all.
- 2) The budget accounted for a salary increase in early October of 2011, per MetroHealth's usual pattern. However, that increase did not take effect until April 29, 2012, nearly eight months later.
- 3) Fringe was budgeted at an average rate of 26%, but was charged based on the actual rate for each employee, per MetroHealth's normal policy. The average fringe rate for the employees who worked on this grant was only 20.02%.

An Award Summary Report and detailed report of personnel charges follows.

Award Summary Report

GM400 Date 08/28/12
Time 13:57

Award Summary Report
Activities: 8971011199

Period to Date For Period 08 of 2012 Budget 1 Currency

Activity: 8971011199
Investigator:
Division: PMR
Department:
Dates: 07/01/11 - 06/30/12
Award Closed:
Contract PO#:
Account Unit: 62005750

P-DEFINING TRAUMA OUTCOMES
PHYSICAL MEDICINE AND REHAB
PHYS MED & REHAB - RESEARCH

DEFINING TRAUMA OUTCOMES THROUGH AN INVESTIGATION OF ASSOCIA
Award Type: GOVT-STATE
Direct Sponsor: 1
Award Number:
Prime Sponsor:
or Prime Sponsor Code:
Prime Award Number:

Revenue	Total Budget	PTD Amount	LTD Amount	All Commitments	Remaining Balance	Budget Percent
70000 GRANT REVENUE			63,695.00		63,695.00	0.000
Total Revenue			63,695.00		63,695.00	0.000

Cost	Total Budget	PTD Amount	LTD Amount	All Commitments	Remaining Balance	Budget Percent
70111 PHYSICIAN/PHD PAYROL	45,482.00		45,234.73		247.27	.544
70132 STUDY COORDINATOR PA			3,033.92		3,033.92	0.000
70133 RESEARCH ASST, PAYRO	3,987.00				3,987.00	100.000
70191 FRINGE - PERS/FICA			7,377.26		7,377.26	0.000
70192 HEALTH/LIFE INSURANC	13,054.00		2,087.70		10,966.30	84.007
72502 TRAVEL	1,172.00				1,172.00	100.000
Total Costs	63,695.00		57,733.61		5,961.39	9.359

Trauma and Rehabilitation Registry Merge

EMS/TRAUMA Research Grant - 8971011199
7-1-11 to 6-30-12

			ACTUAL
DESCRIPTION	ACCT CAT	Data	Total
MEJIA, MELVIN S.	salary	Sum of AMOUNT	17445.75
		Sum of HRS	209.6
	fringe	Sum of AMOUNT	2932.26
		Sum of HRS	0
MEJIA, MELVIN S. Sum of AMOUNT			20378.01
MEJIA, MELVIN S. Sum of HRS			209.6
NEMUNAITIS, GREG	salary	Sum of AMOUNT	4662.58
		Sum of HRS	46.8
	fringe	Sum of AMOUNT	1011.85
		Sum of HRS	0
NEMUNAITIS, GREG Sum of AMOUNT			5674.43
NEMUNAITIS, GREG Sum of HRS			46.8
NOWAK, MICHAEL	salary	Sum of AMOUNT	3806.42
		Sum of HRS	98
	fringe	Sum of AMOUNT	776.41
		Sum of HRS	0
NOWAK, MICHAEL Sum of AMOUNT			4582.83
NOWAK, MICHAEL Sum of HRS			98
ROACH, MARY J.	salary	Sum of AMOUNT	22353.9
		Sum of HRS	510
	fringe	Sum of AMOUNT	4744.44
		Sum of HRS	0
ROACH, MARY J. Sum of AMOUNT			27098.34
ROACH, MARY J. Sum of HRS			510
Total Sum of AMOUNT			57733.61
Total Sum of HRS			864.4

OHIO EMERGENCY OPERATIONS PLAN

BASE PLAN

I. FOREWORD

- A. Section 5502.22 of the Ohio Revised Code requires the State of Ohio to develop and maintain a statewide Emergency Operations Plan. The Ohio Emergency Operations Plan (Ohio EOP) is an all-hazards plan that encourages a cooperative, seamless relationship between all levels of official public response to emergencies and disasters.
- B. The Ohio EOP establishes a framework through which state-level departments and agencies and other designated non-governmental agencies assist local jurisdictions to respond to and recover from disasters that affect the health, safety, and welfare of the citizens of Ohio. The Ohio EOP follows the Emergency Support Function structure as outlined in the U.S. Department of Homeland Security's National Response Framework (NRF), and incorporates the National Incident Management System (NIMS), which includes the Incident Command System (ICS).
- C. The Ohio EMA is the central point of coordination within the state for response to, and recovery from, disasters. Established under Section 5502.22 of the Ohio Revised Code, the Ohio EMA coordinates state-level assistance and resources during an emergency and prepares the state for all hazards through planning, training, exercises and funding activities at the state and local level. These activities include providing planning assistance and administering state and federal funding/grant assistance to individuals and governmental entities recovering from disaster damage and costs.
- D. In carrying out and prioritizing emergency operations and in assigning resources under this Plan, the State of Ohio's response priorities are to: save lives, stabilize the incident, protect property, and conserve the environment. The primary focus of Ohio EMA when not in a response or recovery mode is to lead planning and mitigation efforts against the effects of future incidents and to ensure that the state, and the more than 11 million citizens residing in it, are prepared to respond to emergencies. The Executive Director of Ohio EMA is responsible for coordinating all activities of all agencies for emergency management within the state.
- E. The Ohio EOP's Base Plan describes the structure and processes that comprise Ohio's approach to all-hazards emergency management and the integration of the resources of Federal, State, local, and nongovernmental organizations. The Base Plan includes an Introduction, Background, Roles and Responsibilities, Concept of Operations, and two Tabs: the Primary and Support Agency Chart and Terms and Acronyms.

F. Emergency Support Functions

1. The Ohio EOP is structured according to 15 Emergency Support Functions (ESF) that correspond to the format of the NRF. In the State of Ohio, the ESF is the primary mechanism through which federal assistance to the state and state assistance to local governments is managed during emergencies. ESFs detail the roles and responsibilities of state, federal and other public and private agencies that are charged with carrying-out functional missions to assist local jurisdictions in response to disasters.
 2. Each ESF is headed by a Primary Agency that coordinates and reports activity for that ESF.
 3. The Primary Agency is supported by a number of Support Agencies, which are selected based upon their legislative authorities, knowledge, resources, and capabilities for responding to a specific type of disaster.
 4. Any of the Primary or Support Agencies to an ESF can function as a Lead Agency by taking the lead for and carrying out missions that are assigned to the ESF through the State EOC.
 5. State assistance can include the allocation of state resources and technical assistance, and the coordination of federal, interstate, intra-state, local government and non-government agencies in response to emergency events or incidents.
 6. Each primary and support agency has internal plans and procedures that detail how it will address response and recovery responsibilities during state-level emergencies.
 7. Primary and Support Agencies address their emergency response or recovery responsibilities in accordance with the legal authority governing their agency.
 8. Primary and Support agencies will be activated and notified for activation of the State of Ohio's Emergency Operations Center (SEOC) by Ohio EMA. Agency activation will be based upon the requirements for emergency response and recovery and the agencies that are activated will vary depending on those requirements.
- G. The Ohio EOP is promulgated annually. The 2012 edition of the Ohio EOP is the result of the cooperative effort of a number of state, federal and non-governmental organizations over the past year to update and/or create Ohio EOP elements. Eight major elements of the Ohio EOP were updated and/or created during the 2011 Planning Year.
- H. The Ohio EOP is updated continuously, with changes and additions to Plan elements occurring to respond to issues that arise. The date that appears at the lower right of each page is the date that each element was last updated.
- I. The Ohio EOP is available electronically from the Ohio EMA website at www.ema.ohio.gov. Questions regarding the Ohio EOP should be sent to the State of Ohio EOP Planner via email at baschwartz@dps.state.oh.us, or via mail at:

Ohio Emergency Management Agency
State EOP Planner
2855 W. Dublin-Granville Road
Columbus, Ohio 43235-2206

II. BACKGROUND

A. Ohio Hazard Analysis and Risk Assessment

1. According to the 2010 U.S. Census, Ohio is the most densely populated state in the Midwest with a population of 11,536,504, making it the 7th most populous state in the nation. Ohio's population rose by less than 200,000 persons between the years 2000 and 2010.
2. In its history, Ohio has responded to 46 Presidential declarations and thousands of natural and manmade incidents, resulting in many millions of dollars in losses and casualties. The January 2011 State of Ohio Hazard Identification and Risk Analysis (HIRA) identifies hazards that the State of Ohio faces. The HIRA groups these hazards into Natural, Human-Caused and Technological Hazards. The Natural Hazards are sub-grouped into Biological, Geological and Meteorological Hazards, and the Human-Caused Hazards are sub-grouped into Accidental and Intentional Hazards.
 - a. Natural Hazards - Biological
 - i. Human Diseases – Emerging disease, plague, smallpox, anthrax, West Nile Virus, Severe Acute Respiratory Syndrome (SARS), pandemic disease
 - ii. Animal Diseases– Foot-and-mouth disease, Bovine Spongiform Encephalopathy (mad cow disease)
 - iii. Animal or Insect Infestation or Damage
 - b. Natural Hazards - Geological
 - i. Earthquake
 - ii. Landslide, Mudslide, Subsidence
 - c. Natural Hazards - Meteorological
 - i. Areal and riverine flooding
 - ii. Windstorms
 - iii. Tornadoes
 - iv. Seiche Waves
 - v. Flash Floods
 - vi. Winter Storms - snow, ice, hail, sleet
 - vii. Extreme Cold

- viii. Extreme Heat
- ix. Drought
- x. Fire - forest, range, urban, wildland, urban interface
- xi. Geomagnetic Storms - temporary disturbance of atmosphere causing communications disruption
- xii. Lightning Strikes

d. Human-Caused Hazards - Accidental

- i. Radiological Incidents at Nuclear Power Generating Facilities
- ii. Water Control Structure Failures – dams and levees
- iii. Building/Structure Collapse - bridges and transportation tunnels
- iv. Fires
- v. Explosions
- vi. Fuel/Resource Shortages
- vii. Hazardous Materials - explosive, flammable liquid, flammable gas, flammable solid, oxidizer, poison, radiological, corrosive spill or release
- viii. Product Defects and/or Contaminations
- ix. Mine Collapses
- x. Energy/Power/Utility Failures
- xi. Air/Water Pollution and Contamination
- xii. Communications System Interruptions
- xiii. Transportation Accidents
- xiv. Space Debris

e. Human-Caused Hazards - Intentional

- i. Terrorism - chemical, biological, radiological, nuclear, explosive
- ii. Civil Disturbances, Public Unrest, Mass Hysteria, Riots
- iii. Cyber Attacks
- iv. Criminal Activity - vandalism, arson, theft, fraud, embezzlement, data theft

f. Technological Hazards - Accidental/Intentional

- v. Energy/Power/Utility Failures
- vi. Communications System Interruptions

3. Cyber System Failure/Attack Response

- a. Governmental jurisdictions, corporations, educational institutions, utilities, chemical companies, transportation systems, dams, and other critical infrastructure points in Ohio could all be vulnerable to damages and/or system failures due to cyber system infiltration and/or attack from either a domestic or foreign source. The “cyber system” is a fragmented collection of individual entities’ operating

systems that are loosely and indirectly connected via the internet. Although there have been a few recent documented attacks to systems that have originated from outside the country where the attack occurred, most cyber system attacks have originated from inside the country where the attack occurs.

- b. The above-mentioned entities have varying levels of capability and capacity to detect and respond to attacks/failures to their operating systems that create, store, and transmit data and information; or control the operations of critical infrastructure, including power generation, water purification and delivery, control of dams, transportation systems and traffic control, emergency responder dispatch, etc.
- c. The State's SEOC-based response to an incident caused by an attack/failure to/of an entity's operating system would be similar to a non-cyber-based incident response. Depending on the nature of the entity that is impacted, a cyber-generated SEOC-based response could be to a transportation system incident, a communication system incident, a dam failure incident, a hazmat incident, a power outage incident, etc. Additional SEOC-based facilitation and coordination activities in response to a cyber system attack and/or failure could include connecting an impacted entity to the U.S. Computer Emergency Response Team (US-CERT) or another organization that could assist them in recovering from the impacts.
- d. US-CERT (Computer Emergency Readiness Team) is charged with providing response support and defense against cyber-attacks for the Federal Civil Executive Branch (.gov) and with information sharing and collaboration with state and local government, industry and international partners. US-CERT interacts with federal agencies, industry, the research community, state and local governments, and others to disseminate reasoned and actionable cyber security information to the public.

B. Planning Assumptions

- 1. All local jurisdictions in Ohio are in compliance with the requirements of the Ohio Revised Code Sections 5502.21 through 5502.99 regarding the development and maintenance of local Emergency Operations Plans.
- 2. Emergencies and/or disasters requiring state-level assistance may occur at any time.
- 3. Communications equipment and capabilities are adequate to provide a coordinated state-level response.
- 4. All State of Ohio Departments and Agencies that have Primary and/or Support Agency ESF roles and responsibilities have identified personnel and resources and developed internal Standard Operating Procedures to ensure compliance with this plan and the ability to adequately and effectively respond to emergencies and/or disasters.

The procedures that are developed by Primary and Support Agencies to the Ohio EOP are documented and implemented through:

- a. Checklists
 - b. Resource listings
 - c. Maps, charts and other pertinent information
 - d. Staff notification and activation mechanisms
 - e. Processes for obtaining and using equipment, supplies and vehicles
 - f. Methodologies for obtaining mutual aid
 - g. Mechanisms for reporting information to Multi-Agency Coordination Systems, including Departmental Operation Centers and County and State Emergency Operations Centers
 - h. Communication System operating instructions, including systems to provide connectivity with private-sector and non-governmental organizations
5. All State of Ohio Departments and Agencies of state government will support the Ohio EOP to the level of their abilities, resources and expertise.

C. Authorizations

The following list of Authorizations and References includes Executive Orders, Department or Agency Directives, statutes, rules, plans and procedures that provide authorization and operational guidelines for the allocation and assignment of state resources in response to emergencies.

1. Federal

- a. “The Robert T. Stafford Disaster Relief and Emergency Assistance Act”, as amended, 42 U.S.C. Sections 5121, et seq.
- b. National Plan for Telecommunications Support in Non-Wartime Emergencies
- c. Executive Order 12148, Formation of the Federal Emergency Management Agency
- d. Executive Order 12656, Assignment of Federal Emergency Responsibilities
- e. Homeland Security Presidential Directive/HSPD-5, Management of Domestic Incidents, 2003
- f. Homeland Security Presidential Directive/HSPD-8, National Preparedness, 2003
- g. Uniform Administrative Requirements for Grants and Cooperative Agreements to state and Local Governments, 44 CRF Parts 13 and 206.

2. State

- a. Ohio Revised Code, Sections 5502.21 through 5502.51 and 5502.99, Emergency Management

- b. Ohio Administrative Code, Chapter 4501:3
- c. Ohio Revised Code Chapter 3750, State Emergency Response Commission
- d. Ohio Revised Code Chapter 4937, Utility Radiological Safety Board
- e. Ohio Administrative Code, Rules, Chapter 3750
- f. Ohio Administrative Code, Rules, Chapter 4937

D. References

1. Federal

- a. National Response Framework, 2008
- b. The National Incident Management System, 2008

2. State

- a. State of Ohio Hazard Analysis and Risk Assessment, 2011
- b. State of Ohio Enhanced Mitigation Plan, 2011
- c. Ohio Plan for Response to Radiation Emergencies at Licensed Nuclear Facilities

E. Overview of Emergency Support Functions

ESF-1 - Transportation addresses emergency-related transportation issues including assessing damage to, restoring, and maintaining land, air and water transportation routes during emergencies in coordination with governmental and private organizations as required; transporting state personnel, materials, goods, and services to emergency sites; and supporting evacuation and re-entry operations for threatened areas.

ODOT is the Primary Agency for ESF-1. ODOT liaisons will staff the SEOC and coordinate with appropriate support organizations to answer the needs of affected communities. These needs can include damage and situational assessments; repairs to bridges, culverts and other transportation infrastructures; repair of slips and slides; debris clearance; hauling and movement of personnel, materials and goods; and support of local evaluation activities.

ESF-2 – Communications and Information Technology ensures the provision of communication to support state, county, and federal communications efforts. ESF-2 coordinates with communications assets available from state agencies, voluntary groups, the telecommunications industry, county agencies and the federal government. Ohio EMA is the Primary Agency for ESF-2.

ESF-3 – Engineering and Public Works addresses most engineering concerns that are not related to transportation systems, therefore, ODNR serves as the Primary Agency for this function. ESF-3 agencies become involved in a wide array of mission types to assist local governments in response and recovery efforts. These missions could include damage inspection and assessment; demolition and stabilization missions; reconnaissance; emergency repairs; temporary and permanent construction; and debris management.

ESF-4 – Firefighting agencies and departments are responsible for fire suppression in rural, urban, and wildland settings that result from naturally-occurring, technological or man-made emergency incidents. Local jurisdictions have the responsibility of providing basic fire service protection. The Ohio Department of Commerce, Division of State Fire Marshal is the Primary Agency for ESF-4.

ESF-5 – Information and Planning is an element of the Multi-agency Coordination System within the SEOC and is consistent with information and planning activities addressed in the National Response Framework. ESF-5 manages the collection, processing, and analysis of information for dissemination to operational elements. It responds to the information requirements of assessment, response, and recovery personnel. It supports the identification of overall priorities for state-level emergency activities by conducting planning and research and developing displays and briefings as directed by the Executive Director of Ohio EMA, in his/her capacity as the State EOC Director.

In the activated SEOC, ESF-5 personnel report to the Information and Planning Section Coordinator. ESF-5 does not collect raw data in the field, but collects information from state and local personnel in the field, from personnel within Ohio EMA, from state personnel in other ESFs, from private and volunteer organizations, from local EMAs and EOCs, from agency-based Subject Matter Experts (SMEs), from hazard-specific experts, and from federal personnel. Ohio EMA is the Primary Agency for ESF-5.

ESF-6 – Mass Care addresses, coordinates and reports on the emergency mass care activities of state-level organizations responsible for sheltering, feeding, counseling, providing first aid, and related social services and welfare activities required to assist disaster survivors. The primary and support organizations of ESF-6 work as a team in the State Ohio Emergency Operations Center (SEOC) and at the site of an incident to address the emergency mass care needs of Ohio residents, visitors and transients. As the Primary Agency for ESF-6, Ohio EMA coordinates and reports on mass care activities throughout disaster response and recovery.

ESF-7 – Resource Support and Logistics Management provides logistical and resource support to state and local entities involved in emergency response and recovery. This support includes locating, procuring, and issuing resources including equipment, supplies, and services required by emergency responders and disaster survivors. The Ohio Department of Administrative Services is the Primary Agency for ESF-7.

ESF-8 – Public Health and Medical Services addresses public health and medical services concerns during emergency events or incidents. Public health concerns can include: assessment and surveillance of health needs of the affected communities; provision of health related services and supplies; identification of areas where health problems could occur; testing of products for public consumption; and environmental testing.

Medical services concerns can include: logistical support for state health personnel in the field; supply and restocking of health-related equipment and supplies; testing and/or disposal of food, medicine and related products affected by the disaster; assistance in assessing potable water and wastewater/solid waste disposal issues and coordination/equipment; assessment of medical needs of the affected communities in coordination with local emergency medical personnel; provision of medical-related services and supplies that support the affected communities; and assistance and support for mass fatality and triage sites. The Ohio Department of Health is the Primary Agency for ESF-8.

ESF-9 – Search and Rescue provides for the guidance and organization of state agencies that may be employed during Search and Rescue (SAR) operations. SAR operations include, but are not limited to, the location, recovery, and extrication of victims who become lost or entrapped as the result of a major disaster or life-threatening emergency. The Ohio Department of Natural Resources is the Primary Agency for Search and Rescue operations in Ohio.

ESF-10 – Hazardous Materials provides guidance to coordinate state agencies and resources to assist local jurisdictions with the response to a hazardous materials incident. In the plan, the Ohio Environmental Protection Agency is the Primary Agency for ESF-10 coordination; however the Lead Agency designation depends on the hazardous material involved. The Ohio Environmental Protection Agency takes the lead for chemical-related hazmat incidents; the Ohio Department of Health, Bureau of Infectious Disease Control takes the lead for biological-related hazmat incidents; the Ohio Department of Health, Bureau of Radiation Protection takes the lead for radiological-related hazmat incidents; and the Ohio Department of Commerce, Division of State Fire Marshal takes the lead for flammables- and explosives-related incidents.

ESF-10 responsibilities can also include: assisting local agencies in the assessment of, response to, and recovery from hazardous materials incidents; ensuring that prompt measures are taken to contain, remove, and dispose of spilled hazardous materials; and advising the public, in concert with local agencies, of the situation, potential dangers, and precautionary actions that should be taken.

ESF-11 – Food and Agriculture addresses concerns regarding agriculture functions in the State of Ohio during natural disasters. These concerns could include: assessment and surveillance of agriculture needs of affected areas; provision of agriculture related services and supplies; testing of products for public consumption; identification of food assistance needs; identification and application of appropriate agriculture assistance

programs; and obtaining and delivering emergency food supplies in coordination with USDA. The Ohio Department of Agriculture is the Primary Agency for ESF-11.

ESF-12 – Energy coordinates with energy utilities and related governmental and private organizations to provide information for state-level assessment, response and recovery operations related to fuel shortages, power outages, and capacity shortages that may impact Ohio citizens during disasters. The ESF-12 Team also provides information available on the transportation of fuel, sources for the provision of emergency power to support immediate response operations and the restoration of normal energy supplies to energy-affected communities. The Public Utilities Commission of Ohio is the Primary Agency for ESF-12.

ESF-13 – Law Enforcement response and recovery activities can include the following: maintaining law and order within legal authority; assisting with the dissemination of alerts, warnings and notifications; coordination of law enforcement activities from local EOCs and command centers as needed to manage resources and personnel; staffing, on order, roadblocks, traffic control points and other sites; providing evacuation/relocation support; providing communications to support agencies; supporting the relocation and temporary detention of persons confined to institutions; and maintaining and protecting logs, records, digests and reports essential to government and emergency operations. The Ohio State Highway Patrol is the Primary Agency for ESF-13.

ESF-14 – Recovery and Mitigation supports local government jurisdictions in the restoration of communities damaged by disasters. This support may involve coordination of state and federal disaster assistance. Recovery efforts includes coordination with state field personnel, interaction and cooperation with information and planning (ESF -5) personnel, and the Federal Emergency Management Agency (FEMA) for damage assessment and information gathering in order to develop disaster-specific recovery plans and to direct interaction with state and local officials for state recovery efforts. The Ohio EMA is the Primary Agency for ESF-14. Initial coordination efforts will be conducted from the SEOC. If warranted, coordination activities may continue from a FEMA Joint Field Office.

ESF-15 – Emergency Public Information and External Affairs ensures that sufficient state assets are deployed during incidents of a major disaster, emergency or statewide incident of significance to provide accurate, coordinated, and timely information to affected populations, governments, legislators and the media. Ohio EMA is the Primary Agency for ESF-15.

F. Overview of Annexes

The Ohio EOP's 15 ESFs are supported by two Support Annexes and three Incident Annexes. Table BP-2, below, lists the five Annexes and the Primary and Support Agencies that have assigned roles and responsibilities for each Annex.

The Annexes provide guidance and describe the functional processes and administrative requirements necessary to ensure efficient and effective implementation of Ohio EOP objectives.

The **Donations and Volunteer Management Support Annex** documents the design and operations of the state-level donations volunteer management system. The system is designed to manage the receipt, processing and distribution of a wide variety of donated goods and services that are given to assist emergency and disaster victims, and to gather and organize volunteers. This system is intended to be flexible to direct donors to other charitable organizations. Support agencies to this Annex are responsible for addressing and maintaining their own policies and operational structures.

The **Financial Management Support Annex** provides basic financial management guidance to state departments that assist communities in responding to and recovering from disasters. The intent is to ensure that funds are provided expeditiously and that operations are conducted in accordance with established laws and policies.

The **Drought Incident Annex** provides an effective and systematic means for the State of Ohio to assess and respond to a drought. It defines drought as it applies to Ohio, the types of drought and the drought indicators. Ohio EMA activates the Drought Assessment Committee to coordinate drought response, monitor trends, provide reports and make recommendations on response actions.

The **Terrorism Incident Annex** addresses the directives of the Homeland Security Presidential Directive - 8 and the Presidential Decision Directive 39 (PDD - 39) "United States Policy on Counterterrorism" (1995) that directs that specific efforts be made to reduce the overall vulnerability of the U.S. to acts of terrorism. These include the basic actions necessary to enhance the ability to manage both the initial and long-term phases of domestic terrorist events or incidents. Additional actions are detailed within the Annex to address issues stemming from the employment of Weapons of Mass Destruction (WMD).

The **Hazardous Materials Incident Annex**, which described the roles and coordinating mechanisms for managing hazardous materials incidents in the State of Ohio and delineated the responsibilities of each of the primary state agencies that regulate various hazardous materials under the statutory authority of the Ohio Revised Code (including substances considered Weapons of Mass Destruction (WMD) – chemical agents, biological agents, radiological/nuclear material, and explosive devices – has been incorporated into ESF-10, Hazardous Materials.

A chart of ESF and Annex Primary and Support Agency assignments for each organization appears in Tab A to the Base Plan.

III. INTRODUCTION

The threat environment in the United States and in the State of Ohio includes not only the traditional spectrum of manmade and natural hazards – wildland and urban fires, floods, hazardous materials releases, transportation accidents, tornadoes, winter storms, drought, pandemics, and disruptions to the information technology infrastructure – but also the threat of devastating terrorist attacks using chemical, biological, radiological, nuclear, and high explosive weapons.

The National Strategy for Homeland Security; Homeland Security Act of 2002; Homeland Security Presidential Directive-5 (HSPD-5), Management of Domestic Incidents; and Homeland Security Directive-8 (HSPD-8), National Preparedness, establish clear objectives for a concerted national effort to prevent terrorist attacks within the United States; reduce America’s vulnerability to terrorism, natural disasters, and other emergencies; and minimize the damage and hasten the recovery from attacks, natural disasters, and other emergencies that might and will occur.

Ohio has adopted the incident management constructs described in the National Incident Management System (NIMS) and the National Response Framework (NRF) (ORC Section 5502.28). These two documents provide details of a response system for addressing an all-hazards approach to emergency and disaster management.

The NRF is predicated on the NIMS that aligns a variety of Federal special-purpose incident management and emergency response plans into an effective and efficient incident management structure. The NRF and the NIMS together integrate the capabilities and resources of various governmental jurisdictions, incident management and emergency response disciplines, non-governmental organizations, and the private sector into a cohesive, coordinated, and seamless framework for emergency management.

The NIMS provides a nationwide template to enable Federal, State and local governments, and private sector and nongovernmental organizations to work together effectively and efficiently to prevent, prepare for, respond to, and recover from emergency and disaster incidents regardless of cause, size, or complexity. The NRF, using the NIMS, is an all-hazards plan that provides the structure and mechanisms for policy and operational direction for emergency and disaster incident management. Consistent with the model provided in the NIMS, the NRF can be partially or fully implemented, in the context of a threat, anticipation of a significant event, or in response to a significant event.

Using the NRF and the NIMS as a guide, the Ohio EOP establishes a framework through which State of Ohio Agencies assist local jurisdictions to respond to and recover from disasters that affect the health, safety, and welfare of the citizens of Ohio.

A. Purpose

The purposes of the Ohio EOP are to:

1. Ensure that a documented system exists to manage the prompt and efficient deployment of state-level emergency response and recovery resources, and that the system is coordinated with and communicated to agencies that will be responsible for resource deployment.

2. Ensure that a documented system exists to effectively implement and employ systems, plans, and resources necessary to preserve the health, safety, and welfare of persons affected by an emergency.
3. Ensure that a documented system exists to provide state-level resources to persons in need and for the rapid and orderly restoration and rehabilitation of persons and property affected by emergencies.

B. Scope and Application

1. The Ohio EOP

- a. Establishes a concept of operations spanning emergencies from initial monitoring through post-disaster response and recovery.
- b. Defines interagency coordination to facilitate the delivery of state and federal assistance to local jurisdictions when emergency needs exceed their capability or have exhausted local resources.
- c. Provides a system for the assignment of missions to state agencies to address local needs for emergency assistance.
- d. Assigns specific functional responsibilities to appropriate state agencies, private sector groups and volunteer organizations.

2. Phases Of Emergency Management

Emergency management operations are carried out within four distinct phases: mitigation, preparedness, response, and recovery. The scope of this plan includes response and recovery responsibilities for state government.

a. Mitigation

Mitigation includes actions that are taken before or after an emergency to eliminate or reduce the long-term risk to human life and property from natural, technological, and civil hazards. The goals of mitigation activities are to protect people and property and to reduce the costs of response and recovery operations.

Mitigation actions are identified in State and local mitigation plans. The mitigation planning process includes the identification of hazards that have or could occur and the identification of populations and assets that are vulnerable to each identified hazard.

b. Preparedness

Pre-emergency activities that assure that designated organizations will effectively respond to emergencies. Emergency management for preparedness involves four primary activities; training, exercising, planning and resource identification and acquisition.

Because it is not possible to mitigate completely against every hazard that poses a risk, preparedness measures can help to reduce the impact of the remaining hazards by taking certain actions before an emergency event occurs. Preparedness includes plans or other preparations made to save lives and facilitate response and recovery operations. Preparedness measures involve all of the players in the integrated emergency management system – local, State, and Federal agencies, the private sector, non-governmental agencies and citizens.

c. Response

Response actions are taken during or directly after an emergency to save lives, to minimize damage to property and enhance the effectiveness of recovery. Response begins when an emergency event is imminent or immediately after an event occurs. Response encompasses all activities taken to save lives and reduce damage from the event. Good planning, training, and exercising before an event occurs can help reduce cascading events and their effects.

d. Recovery

Post-emergency short-term activities that return infrastructure systems at the site of an incident to minimum operating standards and long-term activities designed to return the site to normal conditions. Recovery begins right after the emergency. Some recovery activities may be concurrent with response efforts. Long-term recovery includes restoring economic activity, rebuilding community facilities and housing, and meeting the incident related needs of the private sector. Long-term recovery (stabilizing all systems) can sometimes take years.

3. The Ohio Emergency Operations Center

a. The State of Ohio Emergency Operations Center (SEOC) is a permanent facility that is located at 2855 West Dublin-Granville Road, Columbus, Ohio 43235-2206. The 24-hour emergency number for the SEOC is 1-614-889-7150.

b. State of Ohio EOC (SEOC) Capabilities:

- i. The SEOC is composed of the following functional areas: Assessment Room, Executive Room, Operations Room, Communications Center and the Joint Information Center.
- ii. The Operations Room has fifty-two work stations for state agencies and workstations for the SEOC staff. These workstations accommodate up to 104 personnel.
- iii. The SEOC uses a Duty Officer system to take incident reports when not activated.

- iv. The SEOC has a one-megawatt diesel-powered generator for emergency back-up power. An emergency well with pumps and alternative water treatment provides a back-up water supply.
- v. The SEOC has a Protection Factor of 140 to ensure viability in the event of nuclear attack. Air filters in a self-contained ventilation system protect personnel in the event of hazardous material releases.
- vi. ESF-2 – Information Technology and Communications, contains information on the SEOC's communications and computing capabilities, as well as information on secure communication equipment and capabilities.

c. Continuity of Operations

- i. Ohio EMA maintains a Continuity of Operations Plan (January 2010) that outlines the Continuity of Operations Program (COOP) for the Agency. The document, in conjunction with supporting Division/Branch COOP procedures and the COOP Functions Database, provides the framework and tools to maintain operations, if the functionality of the Agency's building is compromised or the ability to staff essential functions is degraded. The Agency's COOP Plan provides policy and guidance for Agency personnel, to ensure that critical operations are continued in the event of an emergency or threat of an emergency.
- ii. The goal of the COOP plan is to be able to restore operations of essential functions at an Alternate Working Location (AWL) within 12 hours and to maintain them at the AWL for 30 days.
- iii. Implementation of the plan will be at the discretion of the Ohio EMA's Director or his/her designee.
- iv. In order to continue essential internal operations and to provide support to the operations of county and external agencies during a catastrophic event, Ohio EMA's State Emergency Operations Center (EOC) must be able to continue limited operations, if the primary EOC is damaged or destroyed, as part of the transition to and stand-up of the alternate EOC. The Plan provides a mechanism for this to be done within 1- 2 hours, through an alternate facility and/or a virtual EOC using the EOC's software, which is backed up on the ODPS server. Limited operations will entail, at a minimum, the continued flow of messages through the EOC software, while other task such as mission tracking and situation analysis may be postponed until the EOC's AWL is operational.
- v. The Continuity of Operations Plan will be activated when the functionality of the building is no longer sustainable, either because of damage to the building or because of a decreased number of available staff, due to injury or illness. This includes day-to-day operations in which the Emergency Operations Center (EOC) is not activated or needed, as well as when it is activated.

- vi. If the building is damaged and rendered non-functional, and the damage is localized to the immediate area, then operations will be moved to the Agency's primary AWL, which is located at a state-owned facility within the City of Columbus. If the building is damaged in an incident that impacts a much wider area, including the primary AWL, then operations will be moved to the secondary AWL, which is located at a state-owned facility approximately one hour travel time from the agency's primary facility. If damage is limited to the primary facility, and if Primary AWL is unavailable, Ohio EMA management will work with the Department of Administrative Services to locate one or more offices to house daily operations until the primary facility can be restored to functionality.

4. Cooperative Relationships between Levels of Government

- a. When county-level capabilities are not sufficient to address a disaster, the chief executive or their designee may declare an emergency for their affected jurisdiction and request state assistance in coordination with the County EMA Director by contacting the Ohio Emergency Management Agency.
- b. Depending upon the scope and intensity of the event, the Governor may declare a state of emergency, which will activate state resources and allow them to assist in local response outside of their normal operating constraints. All state assistance is designed to support ongoing local response efforts.
- c. State ESFs address emergency response/recovery missions given to them by county EMA Directors through the SEOC. It is the responsibility of the state to determine how to prioritize, plan for, and address the incident needs expressed by County EMA Directors. State missions will be closely coordinated with local EMA officials and responders through county EOCs throughout the duration of the emergency or incident.
- d. Ohio EMA will contact FEMA Region V in Chicago, Illinois to alert them if it is determined that the Governor will be submitting a formal request for federal disaster assistance. The state request, including a FEMA review of eligibility, will be channeled through FEMA Region V to FEMA Headquarters in Washington D.C. for submission to the President. FEMA is authorized to use the full authority of the Stafford Act and may deploy a Liaison Officer or the Federal Emergency Response Team (ERT) to the SEOC.
- e. Through implementation of the NRF, assistance will be provided to Ohio through federal ESFs. Federal and state ESFs will establish a direct liaison relationship with one another at the SEOC, at the JFO and at the site of the incident or event. These state-federal ESF relationships will remain in effect throughout response and recovery operations, or until the federal ESFs are deactivated.
- f. The Governor, through the Executive Director of Ohio EMA, is responsible for overall decision-making and coordination of state emergency operations.

5. Whole of Community Planning

- a. The State of Ohio continues to move toward having a system for emergency operations planning and response that fully involves the whole community. The State of Ohio promotes FEMA's "Whole of Community" initiative that encourages jurisdictions and response agencies at all levels to involve a wide array of public, private-sector and non-governmental sector agencies that represent the full spectrum of personal need in the emergency operations plan and agency-based operational plan review and development process. The Whole of Community approach is being incorporated into all PPD-8 deliverables, including the National Preparedness Goal, National Preparedness System description, National Planning Frameworks
- b. As defined by FEMA, the Whole of Community approach to planning "is a means by which residents, emergency management practitioners, organizational and community leaders, and government officials can collectively understand and assess the needs of their respective communities and determine the best ways to organize and strengthen their assets, capacities, and interests."
- c. Ohio has long been a pioneer in forwarding the Whole of Community approach to emergency operations planning. As the State continues to expand our use of Whole of Community concepts in the plan development process, we will attempt to engage the full capacity of the private and nonprofit sectors, including businesses, faith-based and disability organizations, and the general public to help us plan better to prevent, protect against, mitigate, respond to, and recover from any type of threat or hazard effectively.
- d. It is the State's hope that expanding the use of Whole of Community concepts in State-level emergency management operations will make emergency operations planning, response and recovery outcomes more efficient, more effective, and more responsive to the needs of Ohio's residents, communities and businesses.

D. Incident Management Structure

1. CAS Level #1 – Situational Awareness and Monitoring

The activation of the SEOC's Assessment Room at CAS Level #1 will start a monitoring and assessment process designed to create situational awareness, stimulate communication within the Ohio EMA staff, and structure ongoing information sharing and consultation with local jurisdictions and/or state organizations to assess and monitor the incident from the time of inception to transition to Joint Field Office operations.

The Planning & Information Section Coordinator will organize ESF #5 personnel, Ohio EMA management, and state agency representatives to facilitate a briefing in the Assessment Room of the SEOC. In the Assessment Room, information is gathered and the event is monitored in cooperation with local emergency management personnel. Representatives of a Core Group of State Agencies report on information they are obtaining through their local resources and activities they are performing as part of their agency's normal mission requirements. Depending upon the course of development of the incident, CAS Level #1 is either brought to closure or is transitioned to CAS Level #2.

2. CAS Level #2 – Increased Monitoring/State Agency Response

Under CAS Level #2, Ohio EMA state liaison personnel are sent to the site of an incident to assess damage, provide information relevant to emergency event or incident and to assess the needs of the political jurisdiction as the situation or incident escalates. State-agency field liaisons are sent to the site of the emergency event or incident to evaluate the situation and to provide information to the SEOC. The affected local jurisdiction may declare emergency if local resources have been exhausted and the need arises to employ state resources. If assistance from state agencies is required, the Governor of the State of Ohio will declare a state of emergency and representatives of State Agencies respond to the EOC to work and report any assigned missions and brief them in the EOC at scheduled times.

Ohio EMA will keep FEMA Region V, and any other appropriate local, state, federal or private partner informed of situational issues during CAS Level #2 in a Situation Report or other appropriate means. If the incident warrants, state resources may be pre-positioned at the site of a potential incident and/or event. If state assistance is not needed, the state will continue to monitor the incident until the incident is closed or is transitioned to CAS Level #1.

3. CAS Level #3 – State Resources and Federal Response Assistance

Activation of the SEOC with Operations Room staffing at various levels from day-time hours through 24-hour staffing and with the activation of State ESF's occurs at CAS Level #3. The Governor of Ohio may declare a state of emergency for the affected jurisdiction, and FEMA Region V monitoring may increase to the point that a Federal Emergency Support Team (FIRST) or a FEMA Emergency Response Team – Advance (ERT-A) team is sent to Ohio and federal resources are pre-positioned for federal response assistance.

State-level damage assessments, need assessments and information-gathering operations will continue. If the incident continues to escalate and state resources are inadequate to address response and/or recovery needs, then the Governor of the State of Ohio may request response and recovery resources and assistance from the federal government.

4. Ohio EMA will coordinate emergency response with the federal Joint Field Office (JFO) as appropriate, and State Agencies that have assigned ESF responsibilities in the Ohio EOP as Primary and Support Agencies will coordinate activities with their federal ESF counterparts. In CAS Level #3, the state maintains close coordination with local emergency management agencies to assess the incident. Operations staff will continue to monitor the situation and coordinate the application of state resources to identified missions until CAS Level #3 is brought to a close or is transitioned to CAS Level #2 or CAS Level #1.

IV. CONCEPT OF OPERATIONS

- A. Local Jurisdiction Response – All emergency incidents begin locally and initial response is carried out by local jurisdictions' response resources under the coordination and facilitation of county EMAs. It is only after local emergency response resources are exhausted or local resources do not exist to address a given emergency that state emergency response resources and assistance may be requested by local authorities.
- B. State-level response in support of local incidents and disasters, including the assignment of State-level response resources will be directed toward addressing the critical tasks of saving lives; stabilizing the incident; protecting and preserving property; and conserving the environment.
- C. The National Incident Management System establishes a clear progression of coordination and communication from the local level to state to regional to national level. Local incident command structures (ICP(s) and Area Command) are responsible for directing on-scene emergency management and maintaining command and control of on-scene incident operations. Support and coordination components consist of multi-agency coordination centers/emergency operations centers (EOCs), and multi-agency coordination entities.

EOCs provide central locations for operational information sharing and resource coordination in support of on-scene efforts. EOCs aid in establishing priorities among the incidents and associated resource allocations, resolving agency policy conflicts, and providing strategic guidance to support incident management activities. In accordance with NIMS processes, emergency response resource and policy issues are addressed at the lowest organizational level practicable. If the emergency response issues cannot be resolved at that level, then they are forwarded up to the next level for resolution.

D. Adoption of National Response Framework and the National Incident Management System

- 1. The NRF organizational structure addresses both site-specific incident management activities and the broader regional or national issues related to the incident, such as impacts to the rest of the country, immediate regional or nationwide actions required to avert or prepare for potential subsequent events, and the management of multiple threats or incidents; particularly those that are non-site-specific, geographically dispersed or evolve over a long period of time.
- 2. The Ohio Emergency Management Agency has made it a policy to adopt, where possible, the organizational structure and concepts presented in the National Response Framework (NRF). Ohio has taken the following actions in adopting the NRF structure and its concepts:
- 3. Adoption of the National Incident Management System
 - a. Section 5502.28 of the Ohio Revised Code requires all departments, agencies and political subdivisions within the state to utilize the National Incident Management System (NIMS) as the standard procedure for incident management in the State of

Ohio. Ohio EMA has carefully reviewed the Ohio EOP and has incorporated a number of NIMS concepts and has incorporated NIMS concepts into the operational structure of the State EOC.

b. Facilitation of NIMS Training and Adoption at the State and County Level

Ohio EMA, through its Training Section, has encouraged and facilitated NIMS training at the state and local level by making available NIMS course materials and tracking the completion of NIMS training. NIMS training at all levels from first responders to elected officials has been made a requirement for the receipt of federal preparedness, including but not limited to Homeland Security and Emergency Management funding that passes through from the state to local jurisdictions.

Since its inception, Ohio EMA has facilitated and coordinated the completion of the NIMSCAST Assessment by assisting counties and other jurisdictions in the completion of their NIMS compliance assessments by assisting them with entering into, logging on to and coordinating the entry of information into the NIMSCAST system at the county and city/township level.

c. Organization and Support of Regional Multi-Agency Coordination Systems

Ohio EMA participated with the Homeland Security Division of the Ohio Department of Public Safety in the creation and coordination of the Ohio Response System (ORS). ORS is an effort to coordinate emergency response in a unified manner, utilizing existing associations and organizations as lead agencies. ORS capabilities focus on the overwhelming impact of a natural or man-made incident that quickly exceeds local resources. The responses of regional resources supplement the resources of local jurisdictions and operate under the control of the jurisdiction.

Development of the ORS meets a requirement of the Ohio Homeland Security Strategic Plan. Under the ORS, emergency response is provided through a tiered arrangement of strategically located local, county and regional response capabilities.

d. Integration of ICS into Operational Standards

Ohio EMA uses an ICS-based Multi-Agency Coordination System structure for the operation of the State Emergency Operations Center. Ohio EMA also supports the adoption and employment of ICS concepts and operational constructs through training and through support of the efforts of other state agencies that have adopted ICS as their emergency response organizational model.

e. Critical Statewide Protective Actions

- i. Ohio's homeland security efforts have been strengthened by the establishment of functions within the Ohio Department of Public Safety, Ohio Homeland Security Division (OHS) that oversee critical statewide protective actions. Through the Division, the Department has a goal of ensuring that Ohio is taking every possible

measure to protect the safety and well-being of our citizens. OHS's mission is to work with federal, state and local governments to ensure that Ohio's citizens and assets are protected from the possibility of a terrorist attack.

- ii. The roles and responsibilities of Ohio EMA and OHS are organized according to the National Response Framework's five phases; Prevention, Protection, Response, Recovery, and Preparedness.
- iii. OHS is responsible for **Prevention** activities that gather, analyze and share intelligence (primarily the Strategic Analysis and Information Center) and **Protection** activities that identify and protect Ohio's critical infrastructure (primarily OHS's Critical Infrastructure Protection program). OHS keeps these functions aligned with law enforcement through their Domestic Preparedness program.
- iv. Ohio EMA is responsible for **Response** activities that develop plans for response to all hazards, including terrorism, and managing the overall direction and control of the state's emergency response; and **Recovery** activities that restore impacted areas to pre-event conditions.
- v. Preparedness activities are a component of each of the four phases (Prevention, Protection, Response and Recovery) and preparedness responsibilities remain with the agency that has responsibility for that phase. OHS takes responsibility for preparedness activities related to prevention and protection, and Ohio EMA takes responsibility for preparedness activities related to response and recovery.

d. Coordination with Federal-Level Facilities and Organizational Entities

- i. The **Joint Field Office** (JFO) is a temporary Federal facility established to coordinate the delivery of Federal assistance to affected jurisdiction(s). The JFO is a multi-agency coordination center that provides a central point for Federal, State, local, tribal, nongovernmental and private sector organizations with primary responsibility for incident oversight, direction, and/or assistance. The JFO enables the effective and efficient coordination of Federal and State incident-related prevention, preparedness, response, and recovery actions.

The JFO utilizes the scalable organizational structure of the NIMS ICS. The JFO organization adapts to the magnitude and complexity of the situation at hand, and incorporates the NIMS principles regarding span of control and organizational structure: command, operations, planning, logistics, and finance/administration.

- ii. The **Federal Coordinating Officer** (FCO) manages Federal resource support activities related to *Stafford Act* events and incidents. The FCO has the authority under the *Stafford Act* to request and/or direct Federal agencies to utilize authorities and resources granted to it under Federal law (including personnel, equipment, supplies, and managerial, technical, and advisory services) in support of State and local assistance efforts. The FCO assists the Unified Command and/or the Area

Command. The FCO works closely with the SFLEO (Senior Federal Law Enforcement Official) and other SFOs (Senior FEMA Official). In *Stafford Act* situations, the FCO provides overall coordination for the Federal components of the JFO and works in partnership with the SCO to determine and satisfy State and local assistance requirements.

- iii. The **Federal Resource Coordinator** (FRC) manages Federal resource support activities related to non-*Stafford Act* Incidents of National Significance when Federal-to-Federal support is requested from DHS. In non-*Stafford Act* situations when a Federal department or agency acting under its own authority has requested the assistance of the Secretary of Homeland Security in obtaining support from other Federal departments and agencies, DHS designates an FRC to coordinate Federal assistance. In these situations, the FRC coordinates support from other Federal departments and agencies using interagency agreements and memoranda of understanding rather than the mission assignment process used for *Stafford Act* incidents. Relying on the same skill set, DHS will select the FRC from the FCO cadre. The FRC is responsible for coordinating the timely delivery of resources to the requesting agency.
- iv. The **Senior Federal Law Enforcement Official** (SFLEO) is the senior law enforcement official from the agency with primary jurisdictional responsibility as directed by statute, Presidential directive, existing Federal policies, and/or the Attorney General. The SFLEO directs intelligence/investigative law enforcement operations related to the incident and supports the law enforcement component of the Unified Command on-scene. In the event of a terrorist incident, this official will normally be the FBI SAC.
- v. **Senior Federal Officials** (SFOs): The JFO Coordination Group may also include other Federal department or agency officials representing agencies with primary statutory responsibility for incident management. SFOs utilize existing authorities, expertise, and capabilities to assist in management of the incident working in coordination with the FCO, SFLEO, and other members of the JFO Coordination Group.
- vi. When activated, a **Disaster Recovery Center** (DRC) is a satellite component of the JFO and provides a central facility where individuals, businesses and private non-profits that have been affected by an incident can obtain information on disaster recovery assistance programs from various Federal, State, local, tribal, private sector, and voluntary organizations.

E. Federal Response Actions

1. Once an incident occurs, federal response priorities shift from prevention, preparedness, and incident mitigation to immediate and short-term response activities to preserve life; stabilize the incident; protect property and the environment; and preserve the social, economic, and political structure of the community. In the context of a terrorist threat, simultaneous activities are initiated to assess regional and national-

level impacts, as well as to assess and take appropriate action in response to other potential threats. Reinforcing the initial response to an incident, some Federal agencies may operate in the Incident Command Post as Federal first responders and participate in the Unified Command structure. Once the JFO is established, the JFO Coordination Group sets Federal operational priorities. The JFO provides resources in support of the Unified Command and incident management teams conducting on-scene operations through the State and local EOCs.

2. Federal response activities include elevating the level of activation for the HSOC, including both the Operational Information and Intelligence and the Resource Management Branches. The National and/or the Regional Response Coordination Centers (NRCC/RRCC) activate the appropriate federal ESFs as needed to mobilize assets and the deployment of resources to support the incident. The NRCC and/or the RRCCs facilitate the deployment and transportation of the ERT, and other teams, such as teams under the National Disaster Medical System, or Urban Search and Rescue teams. Other response actions include the establishment of the JFO and other field facilities, and providing a wide range of support for incident management, public health, and other community needs.
3. Federal response actions include immediate law enforcement, fire, and medical service actions; emergency flood fighting; evacuations; transportation system detours; emergency public information; minimizing additional damage; urban search and rescue; the establishment of facilities for mass care; the provision of public health and medical services, food, ice, water, and other emergency essentials; debris clearance; the emergency restoration of critical infrastructure; control, containment and removal of environmental contamination; and protection of responder health and safety.
4. During the response to a terrorist event, law enforcement actions to collect and preserve evidence and to apprehend perpetrators are critical. These actions take place simultaneously with response operations necessary to save lives and protect property, and are closely coordinated with the law enforcement effort to facilitate the collection of evidence without impacting ongoing life-saving operations.
5. In the context of a single incident, once immediate response missions and lifesaving activities conclude, the emphasis shifts from response to recovery operations and, if applicable, hazard mitigation. The JFO Planning Section develops a demobilization plan for the release of appropriate components.

F. Recovery Actions

1. Recovery involves actions needed to help individuals and communities return to normal when feasible. The JFO is the central coordination point among Federal, State, local, and voluntary organizations for delivering recovery assistance programs. The JFO Operations Section includes the Individual Assistance Branch, the Public Assistance Branch, and the Mitigation Branch. The Individual and Public Assistance Branches of the JFO Operations Section assess State and local recovery needs at the outset of an incident. FEMA coordinates disaster recovery programs with federal

agencies and departments identified in the NRF during response. These activities may transition to the recovery phase of the event. FEMA also ensures programs identified in the Stafford Act are implemented, when appropriate.

2. The federal Individual Assistance Branch coordinates delivery of recovery programs to meet disaster related needs of the private sector, including individuals, families and businesses: coordinates with volunteer organizations; and establishes Disaster Recovery Centers, if needed, with federal, state, local and voluntary organization representation.
3. The federal Public Assistance Branch of the JFO coordinates short term delivery of the Stafford Act authorized public assistance program (PA). PA reimburses eligible applicants, State and local governments and eligible private nonprofit organizations, for costs associated with emergency protective measures, debris removal, and repair or replacement of incident-damaged facilities.
4. FEMA and the Ohio EMA coordinate with other federal, state and local officials to assess the long-term impacts of an incident to identify available resources, and facilitate the development of a course of action to most efficiently apply those resources to restore and revitalize impacted communities.
5. The above branches assist in identifying appropriate assistance programs to meet applicant needs, synchronizing assistance delivery, and encouraging incorporation of hazard mitigation measures where possible in the Recovery process. See Section D, below for more detailed information regarding Mitigation.
6. The Ohio EMA Disaster Recovery Branch (DRB) provides training, guidance and technical assistance regarding supplemental disaster assistance programs. DRB provides guidance to county/local/state officials for preliminary damage assessment (PDA) activities following events, coordinates the Joint Federal/State PDA, and drafts federal disaster assistance request letter(s). The branch also has a role in administering the Individual Assistance and Public Assistance Programs. Specific long and short term responsibilities vary by program. These programs are designed to assist the public (state and local governments and certain eligible private non-profit organizations) and private (individuals, families and businesses) sectors following declared disasters.
7. The Disaster Recovery Branch
 - a. Administers applicable disaster assistance programs for the private and public sectors.
 - b. Coordinates local governments' requests for technical and financial assistance from the state following a local or gubernatorial disaster declaration.
 - c. Conducts damage assessment to determine the impact of an incident and the types of supplemental assistance needed to recover from uninsured losses or damages to the private and public sectors.

- d. Provides disaster recovery assistance training for state, county and local governments, voluntary organizations and members of the general public.
- e. Provides technical assistance to public officials regarding emergency management programs and types of available disaster assistance.

G. Mitigation Actions

1. The mission of the Mitigation Branch is to integrate hazard mitigation principles in a variety of ways to make Ohio communities more sustainable and to make citizens more resilient to future disaster incidents. This mission is implemented through projects and planning efforts that are aimed to reduce the cost of damage caused by disasters, and to minimize the impact on citizens, businesses, and properties. The Mitigation Branch maintains the State's All Hazard Mitigation Plan, coordinates the State Hazard Mitigation Team (SHMT), is the state entity responsible for implementing FEMA's Hazard Mitigation Assistance programs, and assists Ohio communities in their mitigation planning efforts.
2. Hazard Mitigation Planning – Hazard mitigation planning involves identifying potential hazards, assessing potential risk they pose (frequency and magnitude), assessing the vulnerability of the built and natural environment to those risks, and identifying mitigation goals/objectives/actions to reduce risk and vulnerability. The Mitigation Branch assists Ohio communities with the development and update of local mitigation plans through training, funding, and technical assistance. State and local mitigation plans must be developed and updated to ensure continued mitigation program funding through FEMA.
3. Hazard Mitigation Grant Program – The purpose of the Hazard Mitigation Grant Program is to reduce the loss of life and property due to natural disasters, and to enable mitigation measures to be implemented during the immediate recovery from an incident. Projects utilizing these grant funds may be used for mitigation planning activities, innovative mitigation actions that may be difficult to quantify from a benefit/cost perspective, and traditional mitigation projects such as protecting buildings and property from damages resulting from natural hazard events.
4. Mitigation Grant Programs that are administered in the State of Ohio include the Flood Mitigation Assistance Program, the Pre-Disaster Mitigation Competitive Program, the Repetitive Flood Claims program, and the Severe Repetitive Loss program.

H. Demobilization and Transition

1. When a centralized Federal coordination presence is no longer required in the affected area, the JFO Coordination Group implements the demobilization plan to transfer responsibilities and close out the JFO. After the closing of the JFO, long-term recovery program management and monitoring transitions to individual agencies' regional offices and/or headquarters, as appropriate.

2. Similarly, at the state level, the state's Disaster Recovery Branch participates in operations from the beginning of a disaster through the completion of long-term recovery assistance. Ohio EMA maintains a procedure (Procedure #506, Disaster Recovery Branch) to ensure a smooth transition of duties, programs, personnel and equipment from the SEOC to the FEMA Joint Field Office (JFO). This procedure also includes the transition of duties, programs, personnel and equipment back to Ohio EMA/SEOC from the FEMA JFO upon closure of the JFO facility by FEMA.
3. During the Emergency Response Operations phase, Recovery Branch personnel collect private and public damage information from local jurisdictions. During the Recovery Operations phase, the Recovery Branch coordinates and staffs onsite Disaster Recovery Centers where disaster victims can come to apply for and receive financial and other assistance.

I. Remedial Actions and After-Action Reporting

1. The State of Ohio's roles and responsibilities in working to carry out remedial actions and after-action reporting include, but are not limited to:
 - a. Establishing, maintaining and revising After-Action Procedures.
 - b. Facilitating the collection of feedback from all agencies and individuals involved in incidents or exercises, including the utilization of After-Action Meetings and After-Action Surveys.
 - c. Proposing, assigning, and tracking the progress of corrective actions.
 - d. Disseminating the results of corrective actions and lessons learned.
2. Ohio EMA engages in an after-action process through ESF-5, Information and Planning. The after-action effort is an effective processes for capturing the key issues that arise during incidents or exercises in order to develop corrective action plans to resolve problems, or to disseminate best practices. The After-Action Team provides the means for Ohio EMA and other State and local agencies to make inquiries and recommendations through After-Action Survey forms, which can be submitted at any time, and via participation in After-Action Meetings.
3. Ohio's after-action feedback mechanisms contribute to the creation of an after-incident preliminary Corrective Action Plan. The Corrective Action Plan presents issues and inquiries raised by State and local agencies, and recommended improvements and corrective action measures that are assigned to the appropriate Ohio EMA branches for follow-up. Individuals in Ohio EMA are responsible for following-up on their assigned issue(s), following progress of its resolution from beginning to end, and providing progress updates to the After-Action Team throughout the process. Progress updates are sent to all affected agencies, some of whom may be actively cooperating in the resolution of the issues.

J. Emergency Operations Plan Maintenance – Ohio EMA’s Plans Branch has the responsibility to work with state agencies and non-governmental organizations to update, revise and maintain the Ohio EOP ESFs, Annexes and other elements. The Plans Branch works initially with Primary Agencies and then with Support Agencies to review agency’s assigned roles and responsibilities and relationships between ESFs and Annexes.

K. Coordination and Approval

1. When all Primary and Support Agencies have reviewed and commented on a plan segment and have made recommendations for changes, the agencies usually meet with Ohio EMA staff for a roundtable discussion to reach agreement on agency roles and responsibilities and the segment’s purpose, mission, scope, and concept of operations. If the changes to a Plan (ESF, Annex, Tab) are small enough, this process is sometimes accomplished via telephone and/or electronic mail.
2. When all involved agencies have provided input to the update process and a final document has been decided on, Agency Directors sign an acceptance document stating they understand the assignments of responsibility for their agency that they will give operational support.

L. Promulgation

1. The Ohio EOP is promulgated by the Governor of the State of Ohio annually. Approximately two months prior to the desired promulgation date, the following actions are initiated by the State EOP Planner:
 - a. The existing version of the Emergency Operations Plan is reviewed to ensure that its elements accurately reflect and respond to recent changes in law, policy, Corrective Action Plans, content and general directional changes.
 - b. The State EOP Planner produces a Promulgation signature document and a Plan transmittal memo that describes the Plan, reviews changes that occurred during the previous calendar year, and reviews changes that are proposed to occur during the next calendar year.
 - c. The Plan is submitted to the Ohio EMA Director for his/her review and approval.
 - d. After review and approval of the Plan by the Ohio EMA Director, is submitted to the Governor of the State of Ohio for his/her review, approval and Promulgation.
 - e. Upon receipt of the Governor’s Promulgation signature, the signed signature page is added to the Ohio EMA website.

M. Distribution

1. Following Promulgation of the Plan by the Governor of the State of Ohio, the Ohio EOP is filed and distributed as follows:
 - a. Notification of the Promulgation of the Emergency Operations Plan is transmitted electronically to state departments and non-governmental organizations that are listed as either a Primary or Support Agency in the Plan, County EMA Directors, FEMA Region V, Region V states, and neighboring states.
 - b. Hard copies of the Plan are produced and delivered to the Governor, the Ohio EMA Director, and the Director of the Ohio Department of Public Safety.
2. The Ohio EOP is available via the internet by downloading the information from Ohio EMA's website at:

http://ema.ohio.gov/EOP_Detail.aspx , or by contacting the State EOP Planner at baschwartz@dps.state.oh.us, or by writing to:

Ohio Emergency Management Agency
State E.O.P Planner
2855 W. Dublin-Granville Road
Columbus, Ohio 43235-2206

V. ROLES AND RESPONSIBILITIES

A. Operational Overview

To ensure a coordinated, effective, and efficient response to disasters and/or emergencies, all agencies and organizations that have assigned EOP roles and responsibilities must be immediately available and committed to fulfilling their assigned roles and responsibilities to assist local governments and meet the needs of Ohio citizens.

1. Direction and Control
 - a. The Executive Director of Ohio EMA or designated representative may activate the SEOC in order to coordinate state emergency response and recovery activities.
 - b. When a local jurisdiction(s) determines that state-level resources are required to effectively respond to a disaster, county officials will contact Ohio EMA and request assistance, which may result in the Governor issuing an emergency proclamation.
 - c. In the event the Executive Director or [Ohio EMA] determines that it will likely need resources from the federal government, Ohio EMA will begin discussions with the Governor's Office and federal partners. If preliminary damage assessments support the need and meet the federal criteria, the Governor can ask that a joint damage

assessment be conducted. Based on that information, the Governor may request a Stafford Act (FEMA) emergency or major disaster declaration.

- d. When the President issues a federal disaster declaration, the Governor will designate a State Coordinating Officer (SCO) to function as the designated liaison between the State of Ohio and the Federal Emergency Management Agency (FEMA). Historically, the Executive Director of the Ohio Emergency Operations Agency has served as the SCO. The SCO acts in coordination with FEMA's Federal Coordinating Officer (FCO) when federal response and recovery operations are activated in Ohio. FEMA and the State of Ohio work together at the site of the incident, in the SEOC and in the Joint Field Office (JFO), which is the site for FEMA operations. FEMA will support public information efforts throughout the emergency either at the SEOC or from the JFO.
- e. The Executive Director of Ohio EMA, the Governor or the Governor's designee and appropriate and necessary members of the SEOC Executive Group and state executives manage state emergency response and recovery resources.
- f. Ohio EMA will notify state agencies and other appropriate organizations when the SEOC is activated.
- g. Each ESF in Ohio's EOP has one-or-more Primary Agencies and several Support Agencies. The Primary Agency provides overall coordination and reporting of the functional activities of their assigned ESF. A Lead Agency is an agency that because of their expertise and ability has the responsibility of carrying-out a specific function within the operations of an ESF team. Any of an ESF's Primary or Support Agencies may serve as a Lead Agency. ESF teams are designed to coordinate with federal ESF counterparts when federal response and recovery teams are activated in Ohio in the SEOC and/or the JFO.
- f. A non-governmental organization (association, board, commission, agency) will be considered for a role as a Support Agency in the Ohio EOP if they meet the following criteria:
 - i. The organization has a unique set of resources, expertise, information, skills or assets that is not available from a state agency.
 - ii. The organization is the known and accepted provider of a set of resources, expertise, information, skills or assets that are needed and/or called upon in the Ohio EOP.
 - iii. The organization can demonstrate/assure that they will be capable of fulfilling the assignments of responsibility that are assigned to them on a statewide basis.
 - iv. The organization has the authority to provide a support function in an Ohio EOP-related role.

- v. The organization has the necessary resources to adequately provide services on a state-wide basis.
- g. In accordance with the NRF, federal assistance for incident response and recovery is provided through the activation of federal ESFs at a Regional Operations Center (ROC), through activation of a federal Emergency Response Team (ERT) and/or through activation of a JFO. Ohio and its local governments will maintain direction and control over their response operations throughout federal activation. Federal resources will be used to augment and support state and local response operations when operational needs exceed the capabilities of state and local jurisdictions and exhausts state and local resources. Ohio EMA and state ESF teams will maintain close coordination and communication with their federal counterparts during emergency response and recovery operations.
- h. The Ohio Constitution and the State's Continuity of Government Plan address the succession of state-level executive authority to ensure that, if needed, a designated successor is available to coordinate emergency response activities. Article 3, Sec. 15 of the Ohio Constitution states that: In the event that the Governor is unable to discharge the duties of office, the line of succession to the office of Governor shall proceed from the Lieutenant Governor to the President of the Senate and then to the Speaker of the House of Representatives.

The line of succession of executive-level authority at the Ohio Emergency Management Agency begins with the Executive Director and then proceeds to the assistant director. If the executive director and assistant director are unavailable or unable to discharge their duties, the succession proceeds to the Senior Operations Director.
- i. The Executive Group in the SEOC maintains on-going communications with local executives in the affected area(s).
- j. Ohio EMA maintains continuous contact with County EMA Directors in affected area(s).
- k. Detailed procedures covering SEOC operations and coordination with state liaisons/responders at sites other than the SEOC are addressed in the Emergency Operations Center Standard Operation Procedures (EOC-SOP) maintained by Ohio EMA.

2. Situational Assessment

- a. In the SEOC, situational assessment is a function of ESF-5, Information and Planning.
- b. During rapidly-escalating events, Ohio EMA staff and staff from other agencies may be designated to conduct various assessment functions at the incident/disaster site.

- c. Personnel who carry out assessment functions at the incident/disaster site maintain on-going communication with the SEOC to ensure that accurate information is relayed to the Information and Planning Section.

B. SEOC Functional Groups

The State of Ohio Emergency Operations Center (SEOC) organization consists of these functional groups: Executive, Joint Information, Recovery and Mitigation, Operations, Information and Planning, Logistics, and Finance/Administration. The responsibilities and positions of each of these groups are addressed in detail in the Emergency Operations Center Standard Operating Procedures maintained by the Ohio EMA.

C. State-Level Primary and Support Organizations

State, federal, private, volunteer and non-governmental organizations having responsibilities listed in the Ohio EOP appear in Table BP-1. These agencies are referred to as CAS (Crisis Action System) Agencies. Depending upon the nature of the incident, CAS Agencies may be asked to send a representative to the SEOC. All possible representative organizations may not be listed in Table BP-1.

D. Responsibilities

Agencies reporting to the SEOC, the site of the incident, or the JFO for response and recovery operations, are responsible for the following:

1. Standard Operating Procedures

Develop and regularly update internal Standard Operating Procedures or guidelines (SOP) that detail how Ohio EOP and related emergency responsibilities will be addressed. SOPs are included in the State of Ohio's EOP by reference only. SOP documents will be maintained and housed by the agencies responsible for carrying out the tasks and duties referenced in the SOP.

2. Resources

Develop and regularly update internal resource listings of equipment, supplies, and services that would be used by the organization during emergencies. Ensure that emergency resources are operational and available.

3. Liaisons

Identify an emergency liaison for each organization that will coordinate with ESFs in the SEOC, planning staff who will work with Ohio EMA staff to maintain the Ohio EOP; and with federal, state, and local organizations throughout response and recovery. Ensure that sufficient liaisons are identified for 24-hour operations at the EOC and at the site of the emergency as needed. Maintain listings of these personnel and phone numbers where they can be reached on a 24-hour basis.

4. Reports

Provide briefings in the SEOC at assigned times of on-going and projected activities. Maintain contact with field personnel. Develop Action Plans and Situation Reports (SITREPS) and submit them to the ESF-5 staff as needed for administrative, debriefing, and after-action activities.

5. Emergency Staff

Provide personnel for emergency temporary assignments as requested by Ohio EMA. Ensure that these personnel have the required logistical and resource support to carry out emergency responsibilities.

6. Executive Group

Depending upon the nature of the emergency, state government executives may serve as members of the Executive Group in the SEOC in order to evaluate state response activities.

7. Lead Agencies

Certain hazards may require the designation of a Lead Agency for response (e.g., Dept. of Rehabilitation and Corrections during prison riots). During such emergencies, the Lead Agency may provide a team of decision makers in the Lead Agency Room in the SEOC. The Lead Agency team works closely with the Executive Group for emergency response and recovery policy and decision making. In general, a lead agency has the expertise and resources to carry out specific missions as part of an ESF team.

8. Training and Exercises

In order to ensure maximum levels of readiness for state emergency response and recovery operations, organizations that have defined EOP roles and responsibilities will cooperate and participate in Ohio EMA-sponsored emergency exercises and training. These agencies will provide emergency resource and planning information and will be prepared to meet the emergency responsibilities listed in the Ohio EOP.

In some instances, a state agency in a local jurisdiction may act as a first responder, and the local assets of state agencies may be used to advise or assist local officials in accordance with agency authorities and procedures. Mutual aid agreements provide mechanisms to mobilize and employ resources from neighboring jurisdictions to also support the incident command.

9. Local Chief Executive Officers

A mayor, city council, county manager/executive or county commissioner(s), as a jurisdiction's chief executive, is responsible for the public safety and welfare of the people of that jurisdiction. The Local Chief Executive Officer:

- a. Is responsible for coordinating local resources to address the full spectrum of actions to prevent, prepare for, respond to, and recover from incidents involving all hazards including terrorism, natural disasters, accidents, and other contingencies
- b. Is dependent upon State and local law and in some circumstances, has authority to temporarily suspend local laws and ordinances, such as the establishment of curfews, direct evacuations, and authorization to make emergency purchases.
- c. Provides leadership and plays a key role in communicating to the public, and in helping people, businesses, and organizations cope with the consequences of any type of domestic incident within the jurisdiction
- d. Negotiates and enter into mutual aid agreements with other jurisdictions to facilitate resource sharing
- e. Through the county emergency management agency, request State and, if necessary, Federal assistance through the Governor when the jurisdiction's capabilities have been exceeded or exhausted

10. Federal Agencies

During an incident response, Federal departments or agencies may play primary and/or support roles based on their authorities and resources and the nature of the incident. In situations where a Federal agency has jurisdictional authority and responsibility for directing or managing a major aspect of the response, that agency is part of the national leadership for the incident.

The individual or agency may participate as a Senior Federal Official (SFO), a Senior Federal Law Enforcement Official (SFLEO, such as the FBI Special Agent-in-Charge (SAC) for a terrorist event) in the Joint Field Office (JFO), in the Coordination Group at the field level, or as part of the Interagency Incident Management Group (IIMG) at the national level. Some Federal agencies with jurisdictional authority and responsibility may also participate in the Unified Command at the Incident Command Post (ICP).

11. Citizens

Strong partnerships with citizen groups and organizations provide support for incident management preparedness, prevention, response, recovery, and mitigation. Citizen Corps brings these groups together and focuses efforts of individuals through education, training, and volunteer service to help make communities safer, stronger, and better prepared to address the threats of terrorism, crime, public health issues, and incidents of all kinds.

Citizen Corps works through a national network of State and local Citizen Corps Councils, which bring together leaders from law enforcement, fire, emergency medical and other emergency management, volunteer organizations, local elected officials, the private sector, and other community stakeholders.

Local Citizen Corps Councils implement Citizen Corps programs, which may include Community Emergency Response Teams (CERTs), Medical Reserve Corps, Neighborhood Watch, Volunteers in Police Service, Fire Corps and other affiliate programs; provide opportunities for special skills and interests; and organize special projects and community events. Citizen Corps Affiliate Programs expand the resources and materials available to States and local communities by partnering with programs and organizations that offer resources for public education, outreach, and training; represent volunteers interested in helping to make their communities safer; or offer volunteer service opportunities to support first responders, disaster relief activities, and community safety efforts.

E. Operations Software

The Ohio EMA utilizes an electronic operations software system, WebEOC, for situation analysis and mission assignment and management in the SEOC. The software provides information sharing and communications capabilities to facilitate critical systems management. In the event the electronic operations software system is unavailable due to technical difficulties or relocation in accordance with COOP, the SEOC maintains a backup paper EOC operations system.

F. Emergency Support Functions and Annexes

ESFs and Annexes group similar emergency functional assistance that local governments are likely to need from the state. Each ESF or Annex acts as a team of state agencies and other non-governmental organizations to functionally address local emergency and disaster needs. A Primary Agency coordinates and facilitates activities of the Support Agencies that assist in carrying-out functional responsibilities.

Unlike Federal ESFs and Annexes, Ohio uses a modified format that allows a State Agency to function and have a role within several ESFs. A state agency might function as a Primary Agency on one-or-more ESFs and function as a Support Agency on one-or-more other ESFs. An agency might also function as a Lead Agency under one-or-more ESFs.

G. Mutual Aid

- a. Ohio EMA maintains mutual aid agreements, Memoranda of Understanding (MOU) and other written agreements (collectively, Agreements) with a number of agencies at various levels of government. Agreements between the Ohio EMA and other agencies include:
- b. An MOU with the National Oceanic and Atmospheric Administration (NOAA)/National Weather Service (NWS), May 2001 identifies NWS's responsibilities regarding the

dissemination of information over NOAA Weather Radio and NOAA Weather Wire Service and the definition of the general scope of messages that NWS will disseminate.

- c. An Agreement with Ohio Task Force -1 (Urban Search and Rescue Task Force), November 4, 2009 covers employing Ohio Task Force-1 to rapidly deploy search and rescue resources in the State of Ohio.
- d. Various Agreements with the Adjutant General's Department, Ohio National Guard (ONG), with various dates have been entered into for: developing, operating, maintaining and testing an efficient communication system for statewide response; providing efficient and coordinated public information to the citizens of Ohio; allowing Ohio EMA to access the Beightler Complex to utilize the radio antenna, tower, radio equipment room and radio frequencies for communications both during emergencies and during normal operating conditions; cooperating in the supply of City of Columbus water to the Emergency Operations center/Joint Dispatch Facility (EOC/JDF); allowing for the storage of approximately 250,000 sandbags which belong to the U.S. Army Corps of Engineers, supplying radiation monitoring instruments; and jointly maintaining the tunnel connecting the Beightler Complex and the EOC/JDF.
- e. An October 6, 2009 Agreement with the American Red Cross provides for the cooperation between the State of Ohio and the American Red Cross through National Headquarters and/or chapters, in carrying out their assigned responsibilities.
- f. An April 2004 Agreement with the Buckeye State Sheriffs' Association establishes the process for receiving, transmitting and responding to notification of Personal Locator Beacon activations within the geographic boundaries of the State of Ohio.
- g. A September 1991 Agreement with the Search and Rescue (SAR) Coordinator for the Inland Region ensures the effective use of all available resources for SAR activities, incorporates SAR agencies of various states into the SAR network, and provides an avenue for further agreements between the Air Force Rescue Coordination Center and the State of Ohio.
- h. Various September 1991 Agreements with Air Force Rescue Coordination Centers; Tyndall Air Force Base, Florida delineate the operational procedures between the State of Ohio and the Executive Agent for Inland Search and Rescue for use within the geographic boundaries of the State of Ohio.
- i. MOUs between Eleven County Sheriffs' Offices and the Ohio Department of Public Safety, Ohio EMA, the Buckeye State Sheriffs' Association placed interoperable communications vehicles regionally around the state. This allows deployment to all parts of the state within one hour of an incident to enable law enforcement and other first responders to better communicate when responding to large-scale events.
- j. A September 2009 MOU between the Federal Alliance for Safe Homes (FLASH), the Ohio Emergency Management Agency, and the Ohio Department of Insurance establishes a partnership to work together to design/develop, assist in response during emergencies

and to work together to strengthen homes and safeguard families from the impacts of disasters.

- k. A June 2008 MOU between the Aidmatrix Foundation and the Ohio Emergency Management Agency establishes the relationship between the parties to utilize donations management solutions via the internet. The Aidmatrix solution is an online tool that is offered by FEMA as part of the National Donations Management Network.
 - l. A January 2008 MOU between the Ohio Emergency Management Agency and the Ohio State Highway Patrol authorizes OEMA to utilize space in the Ohio State Highway Patrol Academy for its primary alternate work location in the event the emergency operations center becomes unusable for any reason.
2. Other Plans and Agreements
- a. Section 5502.41 of the Revised Code is the Ohio Intrastate Mutual Aid Compact (IMAC) which complements existing mutual aid agreements in the event of a disaster that results in a formal declaration of emergency by a participating political subdivision.
 - b. Section 5502.40 of the Revised Code is the Emergency Management Assistance Compact which is the interstate mutual aid agreement to which all states and territories belong that allows states to assist each other in times of disaster. When any member state's Governor declares a disaster or when a disaster is imminent, other member states may agree to provide assistance in response to requests from the impacted state(s).
 - c. The deployment of locally- and regionally-based personnel and other resources under the Ohio Fire Service Emergency Response System is coordinated by the Ohio Fire Chiefs' Association, with resource requests dispatched through a rotating central dispatch facility. The Ohio Emergency Management Agency is notified of deployments made via the Emergency Response System.
 - d. OEMA's Telecommunications and Facilities Branch maintains MOUs and Agreements with all levels of government and with the private sector. These MOUs and Agreements number in the hundreds and allow access to property and the co-location of equipment to facilitate meteorological and other data collection and the communicating of information with other entities. Specifically, these MOUs include FCC licenses and property access permission, equipment maintenance, and equipment access agreements.

Ohio Trauma Registry

Trauma Acute Care Registry (TACR)

Data Dictionary

Approved by the State of Ohio Trauma Registry Advisory Subcommittee on
October 22, 2010

Approved by the State of Ohio Trauma Committee on
November 11, 2010

Approved by the State Board of Emergency Medical Services on
December 15, 2010

Revisions in this edition are not yet effective

REVISED OCTOBER 11, 2011

Acknowledgements

The following individuals from the State of Ohio's Trauma Registry Advisory Subcommittee (TRAS) and other interested stakeholders contributed to this version of Ohio's Trauma Acute Care Registry (TACR) Data Dictionary.

Barry Knotts, MD, Mercy St. Vincent Medical Center, TRAS Chair; Nancie Bechtel, Central Ohio Trauma System (COTS), TRAS Vice-chair; James Begley, MD, MetroHealth Medical Center; Sally Betz, The Ohio State University Medical Center; Joyce Burt, Children's Medical Center of Dayton; Kathy Cookman, KJ Trauma Consulting LLC, Jim Davis, Columbus Division of Fire; Timothy A. Erskine, Ohio Department of Public Safety; Marisa Gard, Central Ohio Trauma System; Roxanna Giambri, Central Ohio Trauma System; Vickie Graymire, Grant Medical Center; Renae Kable, Nationwide Children's Hospital; Taunya Kessler, Cincinnati Children's Hospital Medical Center; Margie Koehn, Cincinnati Children's Hospital Medical Center; Wendi Lowell, Nationwide Children's Hospital; Sue Morris, Ohio Department of Public Safety; Deb Myers, Greene Memorial Hospital; Michael Nowak, Northern Ohio Trauma System; Maria Penrose, Grant Medical Center; Wendy Pomerantz, MD, Cincinnati Children's Hospital Medical Center; Mike Smeltzer, Columbus Public Health; Terrie Stewart, The Ohio State University Medical Center; and Richard Treat, MD, Fairview Hospital...

In addition, other stakeholders and staff, past and present, who contributed to previous versions of the TACR and OTR data sets are recognized as part of this document.

TACR is a component of the Ohio Trauma Registry (OTR) and is maintained by the Ohio Department of Public Safety, 1970 W. Broad St., Columbus, Ohio 43218. For more information about the TACR, OTR and/or the State of Ohio's Trauma System, contact Tim Erskine, Ohio Department of Public Safety, at phone numbers (614)387-1951 or (800)233-0785, or visit TErskine@dps.state.oh.us or <http://ems.ohio.gov>.

REVISED OCTOBER 11, 2011

Table of Contents

Ohio's Trauma Acute Care Registry (TACR)	7
<i>Ohio Trauma Acute Care Registry Inclusion/Exclusion Criteria</i>	8
COMMON NULL VALUES	9
HOSPITAL CODE	10
UNIQUE ADMISSION NUMBER	11
DATE EXPORTED	12
PATIENT'S HOME CITY	13
PATIENT'S HOME STATE	14
PATIENT'S HOME COUNTY	15
PATIENT'S HOME ZIP CODE	16
PATIENT'S HOME COUNTRY	17
ALTERNATE HOME RESIDENCE	18
DATE OF BIRTH	19
AGE	20
AGE UNITS	21
SEX	22
RACE	23
ETHNICITY	24
PRIMARY E-CODE	25
ADDITIONAL E-CODE	26
ACTIVITY CODE	27
EXTERNAL CAUSE STATUS CODE	28
LOCATION E-CODE	29
WORK-RELATED	30
PATIENT'S OCCUPATIONAL INDUSTRY	31
PATIENT'S OCCUPATION	32
INJURY INCIDENT DATE	33
INJURY INCIDENT TIME	34
INCIDENT CITY	35
INCIDENT STATE	36

REVISED OCTOBER 11, 2011

INCIDENT COUNTY	37
INCIDENT LOCATION ZIP CODE	38
INCIDENT COUNTRY	39
PROTECTIVE DEVICES	40
CHILD SPECIFIC RESTRAINT	41
AIRBAG DEPLOYMENT.....	42
TRANSPORT MODE FOR ARRIVAL AT YOUR HOSPITAL.....	43
OTHER TRANSPORT MODES.....	44
SCENE EMS RUN REPORT PRESENT.....	45
INTER-FACILITY TRANSFER EMS RUN REPORT PRESENT	46
EMS DISPATCH DATE TO SCENE OR TRANSFERRING FACILITY	47
EMS DISPATCH TIME TO SCENE OR TRANSFERRING FACILITY	48
EMS UNIT ARRIVAL DATE AT SCENE OR TRANSFERRING FACILITY.....	49
EMS UNIT ARRIVAL TIME FROM SCENE OR TRANSFERRING FACILITY	50
EMS UNIT DEPARTURE DATE FROM SCENE OR TRANSFERRING FACILITY	51
EMS UNIT DEPARTURE TIME FROM SCENE OR TRANSFERRING FACILITY.....	52
SCENE FIRST DOCUMENTED SYSTOLIC BLOOD PRESSURE	53
SCENE FIRST DOCUMENTED PULSE RATE	54
SCENE FIRST DOCUMENTED RESPIRATORY RATE.....	55
SCENE FIRST DOCUMENTED OXYGEN SATURATION	56
SCENE FIRST DOCUMENTED GCS EYE OPENING	57
SCENE FIRST DOCUMENTED GCS VERBAL RESPONSE	58
SCENE FIRST DOCUMENTED GCS MOTOR RESPONSE	59
SCENE FIRST DOCUMENTED GCS TOTAL SCORE	60
SCENE FIRST DOCUMENTED GCS QUALIFIER.....	61
SCENE INTUBATION.....	62
SCENE CPR.....	63
SCENE NEEDLE CHEST DECOMPRESSION OR THORACOSTOMY	64
INTER-FACILITY TRANSFER	65
TRANSFER FROM HOSPITAL.....	66
ED/HOSPITAL ARRIVAL DATE.....	67
ED/HOSPITAL ARRIVAL TIME	68

REVISED OCTOBER 11, 2011

TRAUMA ACTIVATION LEVEL	69
ED/HOSPITAL FIRST DOCUMENTED SYSTOLIC BLOOD PRESSURE	70
ED/HOSPITAL FIRST DOCUMENTED PULSE RATE	71
ED/HOSPITAL FIRST DOCUMENTED RESPIRATORY RATE.....	72
ED/HOSPITAL FIRST DOCUMENTED RESPIRATORY ASSISTANCE.....	73
ED/HOSPITAL FIRST DOCUMENTED OXYGEN SATURATION	74
ED/HOSPITAL SUPPLEMENTAL OXYGEN ADMINISTRATION DURING FIRST DOCUMENTED OXYGEN SATURATION MEASUREMENT	75
ED/HOSPITAL FIRST DOCUMENTED TEMPERATURE	76
ED/HOSPITAL FIRST DOCUMENTED GCS EYE OPENING	77
ED/HOSPITAL FIRST DOCUMENTED GCS VERBAL RESPONSE	78
ED/HOSPITAL FIRST DOCUMENTED GCS MOTOR RESPONSE	79
ED/HOSPITAL FIRST DOCUMENTED GCS TOTAL SCORE	80
ED/HOSPITAL FIRST DOCUMENTED GCS QUALIFIERS	81
HEIGHT	82
WEIGHT	83
ED DISCHARGE DATE	84
ED DISCHARGE TIME.....	85
ED DISCHARGE DISPOSITION	86
SIGNS OF LIFE.....	87
ED TRANSFER TO HOSPITAL	88
ALCOHOL USE INDICATOR.....	89
ALCOHOL LEVEL RANGE	90
DRUG USE INDICATOR.....	91
ADMITTING SPECIALTY.....	92
HOSPITAL PROCEDURES	93
PROCEDURE EPISODE	95
HOSPITAL PROCEDURE START DATE.....	96
HOSPITAL PROCEDURE START TIME	97
Procedure Location	98
CO-MORBID CONDITIONS	99
INJURY DIAGNOSES	101

REVISED OCTOBER 11, 2011

ISS BODY REGION	102
AIS PRE-DOT CODE	103
AIS SEVERITY	104
AIS VERSION	105
INJURY SEVERITY SCORE	106
TOTAL ICU LENGTH OF STAY	107
TOTAL VENTILATOR DAYS	108
HOSPITAL DISCHARGE DATE	109
HOSPITAL DISCHARGE TIME.....	110
HOSPITAL DISCHARGE DISPOSITION.....	111
INPATIENT TRANSFER TO HOSPITAL.....	112
DISCHARGE STATUS.....	113
TIME OF DEATH	114
PRIMARY METHOD OF PAYMENT	115
BILLED HOSPITAL CHARGES.....	116
ORGANS/TISSUE REQUESTED	117
AUTOPSY PERFORMED	118
GLOSSARY OF TERMS	120
GLOSSARY OF ABBREVIATIONS.....	128

REVISED OCTOBER 11, 2011

Ohio's Trauma Acute Care Registry (TACR)

TRAUMA PATIENT DEFINITION

In order to ensure consistent data collection across the State of Ohio and following the National Trauma Data Standard, a trauma patient is defined as a patient sustaining a traumatic injury and meeting the patient inclusion criteria described below.

PATIENT INCLUSION CRITERIA

To be included in the Trauma Acute Care Registry (TACR),

1. The patient must incur at least one of the injury diagnostic codes defined in the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) in the range of 800 – 959.9, 987.9, 991.0-991.6, 994.0, 994.1, 994.7, 994.8, 995.50-995.59.
2. The patient **MUST ALSO**:
 - Be admitted for the first time to a hospital or hospital observation unit as defined by a physician order regardless of the length of stay, with the injury having occurred no more than two (2) weeks prior to arrival; **AND/OR**
 - Be transferred via EMS transport (including air ambulance) from one hospital to another hospital regardless of the patient's hospital length of stay; **AND/OR**
 - Have an outcome of death resulting from the traumatic injury (independent of hospital admission or hospital transfer status).

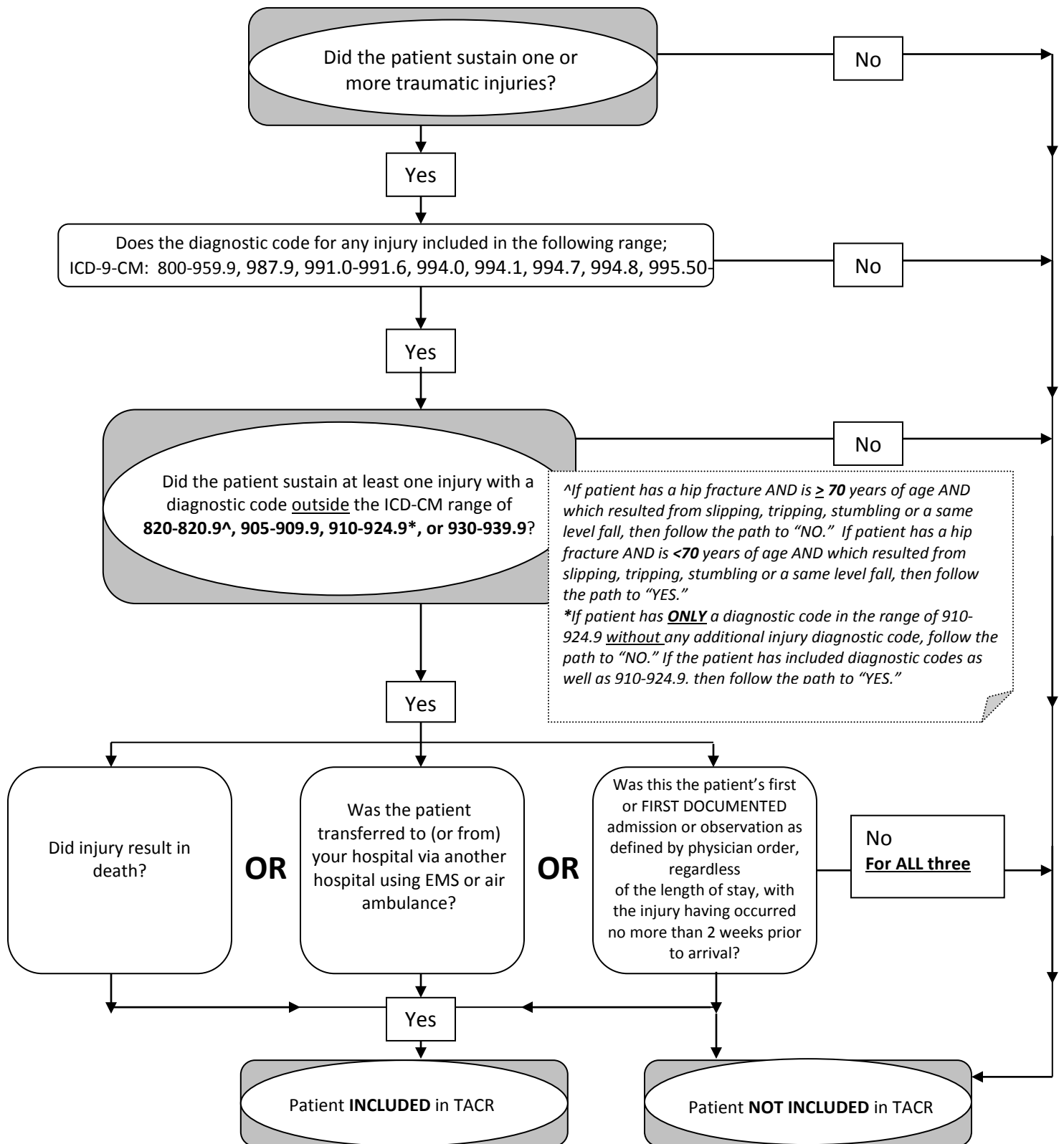
PATIENT EXCLUSION CRITERIA

Patients with the following isolated ICD-9-CM codes are **EXCLUDED** from the TACR:

- **820.0-820.9**, isolated hip fracture in patients **≥ 70 years of age AND** which result from slipping, tripping, stumbling or a same level fall;
- **905-909.9**, late effects of injury;
- **910-924.9**, superficial injuries, including blisters, contusions, abrasions and insect bites (but exclude 910-924.9 if that is the **ONLY** injury identified. Patients who have an injury within the Inclusion ICD-9-CM range as well as a 910-924.9 injury, **WOULD** be included in the registry.); **AND/OR**
- **930-939.9**, foreign bodies.

REVISED OCTOBER 11, 2011

Ohio Trauma Acute Care Registry Inclusion/Exclusion Criteria



REVISED OCTOBER 11, 2011

COMMON NULL VALUES

Data Format is single-choice.

Definition

Common Null Values are terms to be used with TACR Data Elements as described in this document for specifically-defined data fields when an answer cannot be provided.

Field Values

- 25 Not Applicable
- 10 Not Known/Not Recorded/Not Documented

Additional Information

- Although not written out on the following pages, these Common Null Values are included in the TACR dataset for every allowable data field. To ascertain their allowability by data field, see the “Accepts Null Value” notation on every data field descriptor page.
- The Common Null Values selected here---“negative 25” and “negative 10”---were selected to avoid confusion when a true answer is “zero,” and to match common null values reported in the State of Ohio’s Emergency Medical Services Incident Reporting System (EMSIRS) database. At such a time that the EMSIRS and TACR become operationally linked, these values will now match between the two datasets.
- Not Applicable (Field Value -25):* This null value code applies if, at any time of patient care documentation, the information requested was “Not Applicable” (NA) to the patient, the hospitalization or the patient care event. For example, variables documenting EMS care would be NA if a patient self-transport to the hospital.
- Not Known/Not Recorded/Not Documented (Field Value -10):* This null value applies if, at the time of patient care documentation, information was “Not Known” (to the patient, family, healthcare provider) or no value for the element was recorded for the patient. This documents that there was an attempt to obtain information, but it was unknown by all parties or the information was missing at the time of documentation. For example, injury date and time may be documented in the hospital patient care report as “Unknown”. Another example, Not Known/Not Recorded/Not Documented should also be coded when documentation was expected, but none was provided (i.e., no EMS run sheet in the hospital record for patient transported by EMS).
- For any collection of data to be of value and reliably represent what was intended, a strong commitment must be made to ensure the correct documentation of incomplete data. When data elements associated with the TACR are electronically stored in a database or moved from one database to another, the indicated null values should be applied.

References to Other Databases

- Compare with NHTSA V.2.10 – E00
- Compare with NTDS V.1.2.5

REVISED OCTOBER 11, 2011

HOSPITAL CODE

Data Format is numeric.

Definition

Hospital Code is a four-digit (4) hospital code assigned by Ohio Department of Public Safety.

XSD Data Type	<i>xs-facility</i>	XSD Element/Domain (Simple Type)	<i>Facility</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>No</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Stored as a four digit code (xxxx)

Data Source Hierarchy

- State of Ohio Hospital

REVISED OCTOBER 11, 2011

UNIQUE ADMISSION NUMBER

Data Format is numeric.

Definition

Unique Admission Number is a number assigned by each hospital to the patient at the time of admission; this number should be unique for each patient AND each visit.

XSD Data Type	<i>xs-idno</i>	XSD Element/Domain (Simple Type)	<i>IDNo</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>No</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Unique identifier for the patient's visit within a trauma registry, typically a tracking number

Data Source Hierarchy

- 1 Hospital's trauma registry tracking number or
- 2 Medical records

REVISED OCTOBER 11, 2011

DATE EXPORTED

Data Format is a date.

Definition

Date Exported is the date the record was submitted to the TACR.

XSD Data Type	<i>xs-exportdate</i>	XSD Element/Domain (Simple Type)	<i>ExportDate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>No</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY

REVISED OCTOBER 11, 2011

PATIENT'S HOME CITY

Data Format is single-choice.

Definition

Patient's Home City is the patient's city, township, or village of residence.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>HomeCity</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element (five digit FIPS code)

Additional Information

- Used to calculate FIPS code

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 Emergency Department (ED) Documentation

References to Other Databases

- NHTSA V.2.2 – E06_05
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PATIENT'S HOME STATE

Data Format is single-choice.

Definition

Patient's Home State is the state, territory, or province (or the District of Columbia) of the patient's residence.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>HomeState</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element (two digit FIPS code)

Additional Information

- Used to calculate FIPS code

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_07
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PATIENT'S HOME COUNTY

Data Format is single-choice.

Definition

Patient's Home County is the patient's county (or parish) of residence.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>HomeCounty</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element (three digit FIPS code)

Additional Information

- Used to calculate FIPS code

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_06
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PATIENT'S HOME ZIP CODE

Data Format is numeric text.

Definition

Patient's Home Zip Code is the zip code of the patient's primary residence.

XSD Data Type	<i>xs-zip</i>	XSD Element/Domain (Simple Type)	<i>HomeZip</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Stored as a 5 digit code (XXXXX).
- May require adherence to HIPAA regulations.

Data Source Hierarchy

- 1 Billing Sheet/Medical Records Coding Summary Sheet
- 2 ED Admission Form
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_08
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PATIENT'S HOME COUNTRY

Data Format is single-choice.

Definition

Patient's Home Country is the country where the patient resides.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>HomeCountry</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element (two digit alpha country code)

Additional Information

- Values are two character fields representing a country (e.g. U.S.)

Data Source Hierarchy

- 1 Billing Sheet/Medical Records Coding Summary Sheet
- 2 ED Admission Form
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_09
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ALTERNATE HOME RESIDENCE

Data Format is single-choice.

Definition

Alternate Home Residence is documentation of the residential status of a patient who has no home zip code.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>HomeResidence</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Homeless
- 2 Undocumented Resident
- 3 Migrant Worker
- 4 Foreign Visitor

Additional Information

- *Homeless* is defined as a person who lacks housing. The definition also includes a person living in transitional housing or a supervised public or private facility providing temporary living quarters
- *Undocumented Resident* is defined as a national of another country who has entered or stayed in another country without permission
- *Migrant Worker* is defined as a person who temporarily leaves his/her principal place of residence within a country in order to accept seasonal employment in the same or different country
- *Foreign Visitor* is defined as any person visiting a country other than his/her usual place of residence for any reason without intending to receive earnings in the visited country

Data Source Hierarchy

- 1 Billing Sheet/Medical Records Coding Summary Sheet
- 2 ED Admission Form
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

DATE OF BIRTH

Data Format is a date.

Definition

Date of Birth is simply the patient's date of birth.

XSD Data Type	<i>xs-date</i>	XSD Element/Domain (Simple Type)	<i>DateofBirth</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	<i>Minimum Constraint: 1,890 / Maximum Constraint 2,030</i>	

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY
- If age is known, but the date of birth is not, enter 01/01/YYYY (YYYY appropriate to patient's known age)

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_16
- NTDS 1.25

REVISED OCTOBER 11, 2011

AGE

Data Format is numeric.

Definition

Age is simply the patient's age (or best approximation) at the time of injury.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Age</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	<i>Minimum Constraint: 0 / Maximum Constraint 120</i>	

Field Values

- Relevant value for data element

Additional Information

- Used to calculate patient age in hours, days, months or years
- Must also complete variable *Age Units* (see next page)

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_14
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

AGE UNITS

Data Format is single-choice.

Definition

Age Units are the units used to document the patient's age (years, months, days, hours).

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>AgeUnits</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Hours
- 2 Days
- 3 Months
- 4 Years

Additional Information

- Used to calculate patient age in hours, days, months or years
- Must also complete variable *Age*

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 Triage Form/Trauma Flow Sheet
- 4 EMS Run Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_15
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SEX

Data Format is single-choice.

Definition

Sex is the patient's current gender.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Sex</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>No</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Male
- 2 Female

Additional Information

- Patients who have undergone a surgical and/or hormonal sex change should be coded according to what gender they state they are. If they are unable to state their gender, they should be coded according to what sex they appear to be.

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_11
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

RACE

Data Format is multiple-choice.

Definition

Race is simply the patient's race.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Race</i>
Multiple Entry Configuration	<i>Yes, 2</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Asian
- 2 Native Hawaiian or Other Pacific Islander
- 3 Other Race
- 4 American Indian
- 5 Black or African American
- 6 White

Additional Information

- Patient race should be based upon self-report or identified by a family member
- The maximum number of races that may be reported for an individual patient is 2

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 EMS Run Sheet
- 4 Triage Form/Trauma Flow Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_12
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ETHNICITY

Data Format is single-choice.

Definition

Ethnicity is the patient's ethnicity in terms of Hispanic heritage.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Ethnicity</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Hispanic or Latino
- 2 Not Hispanic or Latino

Additional Information

- Patient ethnicity should be based upon self-report or identified by a family member
- The maximum number of ethnicities that may be reported for an individual patient is 1

Data Source Hierarchy

- 1 ED Admission Form
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 Triage Form/Trauma Flow Sheet
- 4 EMS Run Sheet
- 5 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E06_13
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PRIMARY E-CODE

Data Format is numeric.

Definition

Primary E-Code is a designation used to describe the mechanism (or external factor) that caused the injury event.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>PrimaryEcode</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant ICD-9-CM code value for injury event

Additional Information

- The Primary E-Code should describe the main reason a patient is admitted to the hospital
- E-codes can be used to auto-generate the trauma type (blunt, penetrating, burn) and intentionality based upon the CDC matrix
- ICD-9-CM Codes were retained over ICD-10 due to CMS's continued use of ICD-9
- The E-code series beginning with 849 are NOT entered in this field
- External cause status (E000) and Activity (E001-E030) E-codes should not be reported in this field

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 Billing Sheet/Medical Records Coding Summary Sheet
- 4 ED Documentation

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ADDITIONAL E-CODE

Data Format is numeric.

Definition

Additional E-code is a designation used to describe, for example, a mass casualty event or other external cause of injury.

XSD Data Type	<i>xs- string</i>	XSD Element/Domain (Simple Type)	<i>AdditionalEcode</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant ICD-9-CM code value for injury event

Additional Information

- E-codes can be used to calculate trauma type (blunt, penetrating, burn) and intentionality based upon the CDC matrix
- ICD-9-CM codes were retained over ICD-10 due to CMS's continued use of ICD-9
- The E-code series beginning with 849 are NOT entered in this field
- External cause status (E000) and Activity (E001-E030) E-codes should not be reported in this field

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 Billing Sheet/Medical Records Coding Summary Sheet
- 4 ED Documentation

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ACTIVITY CODE

Data Format is numeric.

Definition

Activity Code describes the activity that the patient was doing at the time of the injury, for example, E001.0 refers to *Walking, Marching, Hiking*.

XSD Data Type	<i>xs- string</i>	XSD Element/Domain (Simple Type)	<i>ActivityCode</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant ICD-9-CM code value for injury event

Additional Information

- An activity E-code from category E001 through E030

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 Billing Sheet/Medical Records Coding Summary Sheet
- 4 ED Documentation

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

EXTERNAL CAUSE STATUS CODE

Data Format is numeric.

Definition

External Cause Status Code indicates a status of the patient at the time that the injury event occurred.

XSD Data Type	<i>xs- string</i>	XSD Element/Domain (Simple Type)	<i>ExternalStatus</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 000.0 Civilian activity done for income or pay
- 2 000.1 Military activity
- 3 000.8 Other external cause status
- 4 000.9 Unspecified external cause status

Additional Information

- External cause while on civilian or military duty
- An External Cause Status E-code from category E000

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 Billing Sheet/Medical Records Coding Summary Sheet
- 4 ED Documentation

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

LOCATION E-CODE

Data Format is numeric.

Definition

Location E-code is an E-code used to describe the place, site or location of the injury event (E849.x).

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>LocationEcode</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant ICD-9-CM code value for injury event

Additional Information

- ICD-9-CM Codes were retained over ICD-10 due to CMS's continued use of ICD-9.

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 Billing Sheet/Medical Records Coding Summary Sheet
- 4 ED Documentation

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

WORK-RELATED

Data Format is single-choice.

Definition

Work-related is whether the injury occurred during paid employment.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>WorkRelated</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Yes
- 2 No

Additional Information

- If work-related, two additional data fields must be completed, *Patient's Occupational Industry* and *Patient's Occupation*

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E07_15
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PATIENT'S OCCUPATIONAL INDUSTRY

Data Format is single-choice.

Definition

Patient's Occupational Industry is the occupational industry associated with the patient's work environment.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>PatientsOccupationalIndustry</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- | | |
|------------------------------------|------------------------------|
| 1 Finance, Insurance, Real Estate | 8 Construction |
| 2 Manufacturing | 9 Government |
| 3 Retail Trade | 10 Natural Resources, Mining |
| 4 Transportation, Public Utilities | 11 Information Services |
| 5 Agriculture, Forestry, Fishing | 12 Wholesale Trade |
| 6 Professional, Business Services | 13 Leisure, Hospitality |
| 7 Education, Health Services | 14 Other Services |

Additional Information

- Code as *NA* if injury is not work-related
- If work related, also complete *Patient's Occupation*
- Based upon US Bureau of Labor Statistics Industry Classification

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 EMS Run Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E07_16
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PATIENT'S OCCUPATION

Data Format is single-choice.

Definition

Patient's Occupation is simply the patient's occupation.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>PatientsOccupation</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- | | |
|---|---|
| 1 Business, Financial Operations Occupations | 13 Computer, Mathematical Occupations |
| 2 Architecture, Engineering Occupations | 14 Life, Physical, Social Science Occupations |
| 3 Community, Social Services Occupations | 15 Legal Occupations |
| 4 Education, Training, Library Occupations | 16 Arts, Design, Entertainment, Sports, Media |
| 5 Healthcare Practitioners, Technical Occupations | 17 Healthcare Support Occupations |
| 6 Protective Service Occupations | 18 Food Preparation, Serving Related |
| 7 Building, Grounds Cleaning & Maintenance | 19 Personal Care, Service Occupations |
| 8 Sales & Related Occupations | 20 Office, Administrative Support Occupations |
| 9 Farming, Fishing, Forestry Occupations | 21 Construction, Extraction Occupations |
| 10 Installation, Maintenance, Repair Occupations | 22 Production Occupations |
| 11 Transportation, Material Moving Occupations | 23 Military Specific Occupations |
| 12 Management Occupations | |

Additional Information

- Only completed if injury is work-related
- If work related, also complete *Patient's Occupational Industry*
- Based upon 1999 US Bureau of Labor Statistics Standard Occupational Classification (SOC)

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 EMS Run Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E07_17
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INJURY INCIDENT DATE

Data Format is a date.

Definition

Injury Incident Date is the date that the injury occurred.

XSD Data Type	<i>xs- date</i>	XSD Element/Domain (Simple Type)	<i>IncidentDate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1,990 / Maximum Constraint 2,030	

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY
- Estimates of the of date of injury should be based upon report by patient, witness, family or health care provider. Other proxy measures (e.g. 911 call-time) should NOT be used

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E05_01
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INJURY INCIDENT TIME

Data Format is numeric.

Definition

Injury Incident Time is the time of day that the injury occurred.

XSD Data Type	<i>xs-time</i>	XSD Element/Domain (Simple Type)	<i>IncidentTime</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Document as military time
- Estimates of time of injury should be based upon report by patient, witness, family, or health care provider. Other proxy measures (e.g. 911 call-time) should NOT be used

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E05_01
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INCIDENT CITY

Data Format is single-choice.

Definition

Incident City is the city or nearest township in which the injury occurred or to which the EMS unit responded for the patient.

XSD Data Type	<i>xs- string</i>	XSD Element/Domain (Simple Type)	<i>IncidentCity</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element (five digit FIPS code)

Additional Information

- Used to calculate FIPS code
- If incident location resides outside of formal city boundaries, report nearest city/town

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E08_12
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INCIDENT STATE

Data Format is single-choice.

Definition

Incident State is the state, territory or province (or best approximation) in which the patient was injured or to which the EMS unit responded for the patient.

XSD Data Type	<i>xs- string</i>	XSD Element/Domain (Simple Type)	<i>IncidentState</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element (two digit numeric FIPS code)

Additional Information

- Used to calculate FIPS code

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E08_14
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INCIDENT COUNTY

Data Format is single-choice.

Definition

Incident County is the county or parish (or best approximation) where the patient was found or to which the EMS unit responded to the patient.

XSD Data Type	<i>xs- string</i>	XSD Element/Domain (Simple Type)	<i>IncidentCount</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element (three digit FIPS code)

Additional Information

- Used to calculate FIPS code

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E08_13
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INCIDENT LOCATION ZIP CODE

Data Format is numeric.

Definition

Incident Location Zip Code is the zip code of the location where the patient was injured.

XSD Data Type	<i>xs- zip</i>	XSD Element/Domain (Simple Type)	<i>IncidentZip</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Stored as a five digit code (XXXXX)
- May require adherence to HIPAA regulations

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation

References to Other Databases

- NHTSA V.2.2 – E08_15
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INCIDENT COUNTRY

Data Format is single-choice.

Definition

Incident Country is the country (or best approximation) in which the patient was injured or to which the EMS unit responded to the patient.

XSD Data Type	<i>xs- string</i>	XSD Element/Domain (Simple Type)	<i>IncidentCountry</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element (two digit alpha country code)

Additional Information

- Values are two character fields representing a country (e.g. US)

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation
- 4 Medical Records

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PROTECTIVE DEVICES

Data Format is multiple-choice.

Definition

Protective Devices is the safety equipment in use or worn by the patient at the time of the injury.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>ProtectiveDevice</i>
Multiple Entry Configuration	<i>Yes, max 10</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- | | |
|--|---|
| 1 None Used | 7 Helmet (e.g., bicycle, skiing, motorcycle) |
| 2 Lap Belt | 8 Airbag Present |
| 3 Personal Floatation Device | 9 Protective Clothing (e.g. padded leather pants) |
| 4 Protective Non-Clothing Gear (e.g. shin guard) | 10 Shoulder Belt |
| 5 Eye Protection | 11 Other |
| 6 Child Restraint (booster seat, child car seat) | |

Additional Information

- Check all that apply
- If “Child Restraint” is present, complete variable *Child Specific Restraint*
- If “Airbag” is present, complete variable *Airbag Deployment*
- Evidence of the use of safety equipment may be reported or observed
- “Lap belt” should be used to include those patients that are restrained, but not further specified
- If chart indicates *three- point restraint*, choose field values #2 and 10

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation
- 4 Medical Records

References to Other Databases

- NHTSA V.2.2 – E10_08
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

CHILD SPECIFIC RESTRAINT

Data Format is single-choice.

Definition

Child Specific Restraint indicates protective child restraint devices used by the pediatric patient at the time of injury.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>ChildSpecificRestraint</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Child Car Seat
- 2 Infant Car Seat
- 3 Child Booster Seat

Additional Information

- Evidence of the use of child restraint may be reported or observed
- Only completed when *Protective Devices* include "Child Restraint"

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation
- 4 Medical Records

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

AIRBAG DEPLOYMENT

Data Format is multiple-choice.

Definition

Airbag Deployment indicates whether an airbag deployed during a motor vehicle crash.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Airbag Deployment</i>
Multiple Entry Configuration	<i>Yes, max 4</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Airbag Not Deployed
- 2 Airbag Deployed Front
- 3 Airbag Deployed Side
- 4 Airbag Deployed Other (knee, airbelt, curtain, etc)

Additional Information

- ***Airbag Deployed Front* should be used for patients with airbag deployment documented in the medical record when the site of the airbag is not further specified.**
- Check all that apply
- Evidence of the use of airbag deployment may be reported or observed
- Only completed when *Protective Devices* include "Airbag"

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 Triage Form/Trauma Flow Sheet
- 3 ED Documentation
- 4 Medical Records

References to Other Databases

- NHTSA V.2.2 – E10_09
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

TRANSPORT MODE FOR ARRIVAL AT YOUR HOSPITAL

Data Format is single-choice.

Definition

Transport Mode for Arrival at Your Hospital is the manner of transport delivering the patient to your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>TransportMode</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Ground Ambulance
- 2 Helicopter Ambulance
- 3 Fixed-wing Ambulance
- 4 Private or Public Vehicle or Walk-in
- 5 Police Transport
- 6 Other Transport Mode

Data Source Hierarchy

- EMS Run Sheet
- ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

OTHER TRANSPORT MODES

Data Format is multiple-choice.

Definition

Other Transport Modes documents all other types of transport used during patient care prior to the patient arriving at your hospital, except the transport mode delivering the patient to your hospital. An example is an ambulance transporting the patient to the helicopter landing zone.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>OtherTransportMode</i>
Multiple Entry Configuration	<i>Yes, 5</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Ground Ambulance
- 2 Helicopter Ambulance
- 3 Fixed-wing Ambulance
- 4 Private or Public Vehicle or Walk-in
- 5 Police Transport
- 6 Other Transport Mode

Additional Information

- For patients with an unspecified mode of transport, select 6, *Other*
- “Non-applicable” (NA) is used to indicate that a patient had a single mode of transport and therefore this field does not apply to the patient

Data Source Hierarchy

- 1 EMS Run Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE EMS RUN REPORT PRESENT

Data Format is single-choice.

Definition

Scene EMS Run Report Present documents whether the run report generated by EMS at the injury scene is found in the patient's medical record.

- For patients transported from the scene of injury to your hospital, this is the run report transporting the patient to your facility from the scene.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>SceneForm</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Yes
- No

Additional Information

- If the patient arrives by any means other than ground or air EMS (i.e. private vehicle, walk-in, law enforcement, etc.) then enter the appropriate code for NA

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- Not an NTDS Field

REVISED OCTOBER 11, 2011

INTER-FACILITY TRANSFER EMS RUN REPORT PRESENT

Data Format is single-choice.

Definition

Inter-facility Transfer EMS Run Report Present documents whether a run report generated during transfer from a previous hospital to your hospital is found in the patient's medical record.

XSD Data Type	<i>xs- tripform</i>	XSD Element/Domain (Simple Type)	<i>TripForm</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Yes
- 2 No

Additional Information

- If the patient has multiple hospital destinations, document only whether the run report is present from the run in which the transferring agency brings the patient directly to your hospital.

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- Not an NTDS Field

REVISED OCTOBER 11, 2011

EMS DISPATCH DATE TO SCENE OR TRANSFERRING FACILITY

Data Format is a date.

Definition

EMS Dispatch Date to Scene or Transferring Facility is the date that the EMS unit transporting to your hospital was notified by EMS dispatch.

- For inter facility transfer patients, this is the run report for the unit transporting the patient to your facility from the transferring facility.
- For patients transported from the scene of injury to your hospital, this is the run report transporting the patient to your facility from the scene.

XSD Data Type	<i>xs- date</i>	XSD Element/Domain (Simple Type)	<i>EMSNotifyDate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1990 / Maximum Constraint 2030	

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY
- Used to auto-generate an additional calculated field, *Total EMS Time* (which is the elapsed time from EMS dispatch to hospital arrival)

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E05_04
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

EMS DISPATCH TIME TO SCENE OR TRANSFERRING FACILITY

Data Format is numeric.

Definition

EMS Dispatch Time to Scene or Transferring Facility is the time that the EMS unit transporting the patient to your hospital was notified by EMS dispatch.

- For inter-facility transfer patients, this is the run report for the unit transporting the patient to your facility from the transferring facility.
- For patients transported from the scene of injury to your hospital, this is the run report transporting the patient to your facility from the scene.

XSD Data Type	<i>xs-time</i>	XSD Element/Domain (Simple Type)	<i>EMSNotifyTime</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Document as military time
- Used to auto-generate an additional calculated field, *Total EMS Time* (which is the elapsed time from EMS dispatch to hospital arrival)

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E05_04
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

EMS UNIT ARRIVAL DATE AT SCENE OR TRANSFERRING FACILITY

Data Format is date.

Definition

EMS Unit Arrival Date at Scene of Transferring Facility is the date that the EMS unit transporting the patient to your hospital arrived on the scene or at the transferring facility (the time the vehicle stopped moving).

- For inter facility transfer patients, this is the run report for the unit transporting the patient to your facility from the transferring facility.
- For patients transported from the scene of injury to your hospital, this is the run report transporting the patient to your facility from the scene.

XSD Data Type	<i>xs- date</i>	XSD Element/Domain (Simple Type)	<i>EMSArrivalDate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1990 / Maximum Constraint 2030	

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY
- Used to auto-generate an additional calculated fields, *Total EMS Response Time* (which is the elapsed time from EMS dispatch to scene arrival) & *Total EMS Scene Time* (which is the elapsed time from EMS scene arrival to scene departure)

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E05_06
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

EMS UNIT ARRIVAL TIME FROM SCENE OR TRANSFERRING FACILITY

Data Format is numeric.

Definition

EMS Unit Arrival Time from Scene or Transferring Facility is the time that the EMS unit transporting the patient to your hospital arrived on the scene or at the transferring facility (the time the vehicle stopped moving).

- For inter facility transfer patients, this is the run report for the unit transporting the patient to your facility from the transferring facility.
- For patients transported from the scene of injury to your hospital, this is the run report transporting the patient to your facility from the scene.

XSD Data Type	<i>xs-time</i>	XSD Element/Domain (Simple Type)	<i>EMSArrivalTime</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Document as military time
- Used to auto-generate an additional calculated fields, *Total EMS Response Time* (which is the elapsed time from EMS dispatch to scene arrival) & *Total EMS Scene Time* (which is the elapsed time from EMS scene arrival to scene departure)

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E05_06
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

EMS UNIT DEPARTURE DATE FROM SCENE OR TRANSFERRING FACILITY

Data Format is a date.

Definition

EMS Unit Departure Date from Scene or Transferring Facility is the date that the EMS unit transporting the patient to your hospital left the scene (the time the vehicle started moving).

- For inter facility transfer patients, this is the run report for the unit transporting the patient to your facility from the transferring facility.
- For patients transported from the scene of injury to your hospital, this is the run report transporting the patient to your facility from the scene.

XSD Data Type	<i>xs- date</i>	XSD Element/Domain (Simple Type)	<i>EMSLeftDate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1990 / Maximum Constraint 2030	

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY
- Used to auto-generate an additional calculated field, *Total EMS Scene Time* (which is the elapsed time from EMS scene arrival to scene departure)

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E05_09
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

EMS UNIT DEPARTURE TIME FROM SCENE OR TRANSFERRING FACILITY

Data Format is numeric.

Definition

EMS Unit Departure Time from Scene or Transferring Facility is the time that the EMS unit transporting to your hospital left the scene (the time the vehicle started moving).

- For inter facility transfer patients, this is the run report for the unit transporting the patient to your facility from the transferring facility.
- For patients transported from the scene of injury to your hospital, this is the run report transporting the patient to your facility from the scene.

XSD Data Type	<i>xs- time</i>	XSD Element/Domain (Simple Type)	<i>EMSLeftTime</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Document as military time
- Used to auto-generate an additional calculated field *Total EMS Scene Time* (which is the elapsed time from EMS scene arrival to scene departure)

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E05_09
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED SYSTOLIC BLOOD PRESSURE

Data Format is numeric.

Definition

Scene First Documented Systolic Blood Pressure is the first recorded systolic blood pressure measured at the scene of injury.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSSbp</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 / Maximum Constraint	300

Field Values

- Relevant value for data element

Additional Information

- Used to auto-generate an additional calculated field, *Revised Trauma Score---EMS* (adult & pediatric)
- If patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded/Not Documented*

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E14_04
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED PULSE RATE

Data Format is numeric.

Definition

Scene First Documented Pulse Rate is the first recorded pulse measured at the scene of injury (palpated or auscultated), expressed as a number per minute.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSPulseRate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 / Maximum Constraint	299

Field Values

- Relevant value for data element

Additional Information

- If patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded/Not Documented*

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E14_07
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED RESPIRATORY RATE

Data Format is numeric.

Definition

Scene First Documented Respiratory Rate is the first recorded respiratory rate measured at the scene of injury (expressed as a number per minute).

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSRespRate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 / Maximum Constraint	120

Field Values

- Relevant value for data element

Additional Information

- Used to auto-generate an additional calculated field, *Revised Trauma Score---EMS* (adult & pediatric)
- If patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded/Not Documented*

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E14_11
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED OXYGEN SATURATION

Data Format is numeric.

Definition

Scene First Documented Oxygen Saturation is the first recorded oxygen saturation measured at the scene of injury (expressed as a percentage).

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSPulseOx</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 / Maximum Constraint 100	

Field Values

- Relevant value for data element

Additional Information

- If patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded/Not Documented*

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E14_09
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED GCS EYE OPENING

Data Format is numeric.

Definition

Scene First Documented GCS Eye Opening is the first recorded Glasgow Coma Score eye assessment done at the scene of injury.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSGcsEye</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1 / Maximum Constraint 4	

Field Values

- 1 No eye movement when assessed
- 2 Opens eyes in response to painful stimulation
- 3 Opens eyes in response to verbal stimulation
- 4 Opens eyes spontaneously

Additional Information

- Used to calculate *Overall GCS – EMS Score*
- If patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded/Not Documented*

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E14_15
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED GCS VERBAL RESPONSE

Data Format is numeric.

Definition

Scene First Documented GCS Verbal Response is the first recorded Glasgow Coma Score verbal assessment done at the scene of injury.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSGcsVerbal</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1 / Maximum Constraint 5	

Field Values

- Pediatric(≤ 2 years of age)
 - 1 No vocal response
 - 2 Inconsolable, agitated
 - 3 Inconsistently consolable, moaning
 - 4 Cries but is consolable, inappropriate interactions
 - 5 Smiles, oriented to sounds, follows objects, interacts
- Adult
 - 1 No verbal response
 - 2 Incomprehensible sounds
 - 3 Inappropriate words
 - 4 Confused
 - 5 Oriented

Additional Information

- Used to calculate *Overall GCS – EMS Score*
- If patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded/Not Documented*

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E14_16
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED GCS MOTOR RESPONSE

Data Format is numeric.

Definition

Scene First Documented GCS Motor Response is the first recorded Glasgow Coma Score motor assessment done at the scene of injury.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSGcsMotor</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1 / Maximum Constraint 6	

Field Values

- Pediatric (<= 2 years of age)
 - 1 No motor response
 - 2 Extension to pain
 - 3 Flexion to pain
 - 4 Withdrawal from pain
 - 5 Localizing pain
 - 6 Appropriate response to stimulation
- Adult
 - 1 No motor response
 - 2 Extension to pain
 - 3 Flexion to pain
 - 4 Withdrawal from pain
 - 5 Localizing pain
 - 6 Obeys commands

Additional Information

- Used to calculate Overall GCS – EMS Score
- If patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded/Not Documented*

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E14_17
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED GCS TOTAL SCORE

Data Format is numeric.

Definition

Scene First Documented Scene GCS Total Score is the first recorded total Glasgow Coma Score done at the scene of injury.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSGcsTotal</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 3 / Maximum Constraint 15	

Field Values

- Relevant value for data element

Additional Information

- Used to auto-generate an additional calculated field, *Revised Trauma Score---EMS* (adult & pediatric)
- If the patient is transferred to your facility with no EMS run sheet from the scene of injury, record as *Not Known/Not Recorded/Not Documented*
- If a patient does not have a numeric GCS recorded, but with documentation related to their level of consciousness such as “AAOx3”, “awake, alert and oriented” or “patient with normal mental status”, interpret this as GCS of 15 provided that there is NO other contraindicating documentation.

Data Source Hierarchy

- EMS Run Sheet

References to Other Databases

- NHTSA V.2.2 – E14_19
- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE FIRST DOCUMENTED GCS QUALIFIER

Data Format is multiple-choice.

Definition

Scene First Documented GCS Qualifier documents circumstances related to the patient when or near the time that the *Scene First Documented Scene GCS Total Score* was obtained.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EMSGcsQualifier</i>
Multiple Entry Configuration	<i>Yes, 3</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Patient is chemically sedated
- 2 Obstruction to the patient's eye(s) prevents accurate eye assessment
- 3 Patient is intubated
- 4 GCS is valid meaning that the patient is not sedated, not intubated and without eye obstruction

Additional Information

- Identifies treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may administer (i.e., ETOH, prescriptions, etc.)
- Select *NA* if the patient was not transported to your hospital by EMS

Data Source Hierarchy

- EMS Run Sheet

REVISED OCTOBER 11, 2011

SCENE INTUBATION

Data Format is single-choice.

Definition

Scene Intubation indicates whether an artificial airway was placed at the scene or en route to your hospital, and if so, the type of artificial airway used.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>SceneIntubation</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Nasal Endotracheal Tube
- 2 Oral Endotracheal Tube
- 3 Surgical Airway (i.e. surgical, needle or percutaneous cricothyrotomy, tracheostomy)
- 4 Other Airway (Supraglottic Airway (e.g., Laryngeal Mask Airway [LMA], Combitube, esophageal obturator airway [EOA], King, Combitube))
- 5 No definitive airway placed (No tube is placed into the trachea)

Additional Information

- A normal response is 5, *No definitive airway placed*
- Select *NA* If the patient did not arrive by EMS to your hospital

Data Source Hierarchy

- 1 EMS Run Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE CPR

Data Format is single-choice.

Definition

Scene CPR indicates whether cardiopulmonary resuscitation was performed at the scene or en route to your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>CPRScene</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Yes
- 2 No

Additional Information

- Select *NA* if the patient did not arrive at your hospital by EMS

Data Source Hierarchy

- 1 EMS Run Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SCENE NEEDLE CHEST DECOMPRESSION OR THORACOSTOMY

Data Format is single-choice.

Definition

Scene Needle Chest Decompression or Thoracostomy indicates whether chest decompression was performed on the patient at the scene or en route to your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>NeedleThor</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Yes
- 2 No

Additional Information

- Select *NA* if the patient did not arrive at your hospital by EMS

Data Source Hierarchy

- 1 EMS Run Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INTER-FACILITY TRANSFER

Data Format is single-choice.

Definition

Inter-facility Transfer is whether the patient was transferred to your facility from another hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>InterFacilityTransfer</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Yes
- 2 No

Additional Information

- A patient transferred from a private doctor's office, stand-alone ambulatory surgery center, urgent care clinic or delivered to your hospital by a non-EMS transport is NOT considered an inter-facility transfer.
- Outlying facilities (i.e. hospitals and free-standing emergency departments) that provide extensive emergency care services to assess and/or stabilize a patient are considered to be acute care facilities.

Data Source Hierarchy

- 1 EMS Run Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

TRANSFER FROM HOSPITAL

Data Format is single-choice.

Definition

Transfer from Hospital documents the Ohio Department of Public Safety (ODPS) assigned-number for the acute care facility which transferred a trauma patient to your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>TransferFrom</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

Refer to *Appendix 1-A* for the ODPS list of hospital codes.

Data Source Hierarchy

- 1 ED Record
- 2 History & Physical Documentation

REVISED OCTOBER 11, 2011

ED/HOSPITAL ARRIVAL DATE

Data Format is a date.

Definition

ED/Hospital Arrival Date is the date that the patient arrived at your ED/hospital.

XSD Data Type	<i>xs- date</i>	XSD Element/Domain (Simple Type)	<i>HospitalArrivalDate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1990 / Maximum Constraint 2030	

Field Values

- Relevant value for data entry

Additional Information

- If the patient was brought to the ED, enter the date patient arrived at ED
- If the patient was directly admitted to the hospital, enter date patient was admitted to the hospital
- Collected as MMDDYYYY

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record
- 3 Billing Sheet/Medical Records Coding Summary Sheet
- 4 Hospital Discharge Summary

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL ARRIVAL TIME

Data Format is numeric.

Definition

ED/Hospital Arrival Time is the time of day that the patient arrived to your ED/hospital.

XSD Data Type	<i>xs- time</i>	XSD Element/Domain (Simple Type)	<i>HospitalArrivalTime</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data entry

Additional Information

- If the patient was brought to your hospital ED, enter the time patient arrived at the ED.
- If the patient was a directly admit to your hospital and bypassed the ED, enter that time that the patient was admitted to your hospital.
- Document as military time

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record
- 3 Billing Sheet/Medical Records Coding Summary Sheet
- 4 Hospital Discharge Summary

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

TRAUMA ACTIVATION LEVEL

Data Format is single-choice.

Definition

Trauma Activation Level is the highest level of trauma activation called for the patient when at your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Alert</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Highest Level of Activation
- 2 Other Level of Activation
- 3 No Trauma Alert Activation

Additional Information

- Select *NA* if your facility does not have a trauma team

Data Source Hierarchy

- 1 Trauma Flow Sheet
- 2 ED Record

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED SYSTOLIC BLOOD PRESSURE

Data Format is numeric.

Definition

ED/Hospital First Documented Systolic Blood Pressure is the patient's first recorded systolic blood pressure in your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Sbp</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 / Maximum Constraint 300	

Field Values

- Relevant value for data element

Additional Information

- Use to auto-generated an additional calculated field, *Revised Trauma Score---ED* (adult & pediatric)

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED PULSE RATE

Data Format is numeric.

Definition

ED/Hospital First Documented Pulse Rate is the patient's first recorded pulse rate in your ED/hospital (palpated or auscultated), expressed as a number per minute.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>PulseRate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 / Maximum Constraint 299	

Field Values

- Relevant value for data element

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED RESPIRATORY RATE

Data Format is numeric.

Definition

ED/Hospital First Documented Respiratory Rate is the patient's first recorded respiratory rate in your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>RespiratoryRate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 / Maximum Constraint 120	

Field Values

- Relevant value for data element

Additional Information

- If available, complete addition field *First Documented ED/Hospital Respiratory Assistance*
- Used to auto-generate an additional calculated field *Revised Trauma Score---ED* (adult & pediatric)

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED RESPIRATORY ASSISTANCE

Data Format is single-choice.

Definition

ED/Hospital First Documented Respiratory Assistance documents whether the patient was receiving respiratory assistance upon arrival at your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>RespiratoryAssist</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Unassisted Respiratory Rate
- 2 Assisted Respiratory Rate

Additional Information

- Only completed if a value is provided for *ED/Hospital First Documented Respiratory Rate*
- Respiratory Assistance is defined as mechanical and/or external support of respiration

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED OXYGEN SATURATION

Data Format is numeric.

Definition

ED/Hospital First Documented Oxygen Saturation is the patient's first recorded oxygen saturation in your ED/Hospital, expressed as a percentage.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>PulseOx</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 / Maximum Constraint	100

Field Values

- Relevant value for data element

Additional Information

- If available, complete additional field *ED/Hospital First Documented Supplemental Oxygen*

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL SUPPLEMENTAL OXYGEN ADMINISTRATION DURING FIRST DOCUMENTED OXYGEN SATURATION MEASUREMENT

Data Format is single-choice.

Definition

ED/Hospital Supplemental Oxygen Administration during First Documented Oxygen Saturation Measurement is whether supplemental oxygen was provided to the patient during the assessment of *ED/Hospital First Documented Oxygen Saturation Level* at your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>SupplementalOxygen</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 No Supplemental Oxygen
- 2 Supplemental Oxygen

Additional Information

- Only completed if a value is provided for *ED/Hospital First Documented Oxygen Saturation*

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED TEMPERATURE

Data Format is numeric.

Definition

ED/Hospital First Documented Temperature is the patient's first recorded temperature in your ED/Hospital, documented in degrees Fahrenheit.

XSD Data Type	<i>xs-decimal</i>	XSD Element/Domain (Simple Type)	<i>Temperature</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 /Maximum Constraint	300

Field Values

- Relevant value for data element

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED GCS EYE OPENING

Data Format is numeric.

Definition

ED/Hospital First Documented GCS Eye Opening is the patient's first recorded Glasgow Coma Score (GCS) eye assessment documented in your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>GcsEye</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1 /Maximum Constraint 4	

Field Values

- 1 No eye movement when assessed
- 2 Opens eyes in response to painful stimulation
- 3 Opens eyes in response to verbal stimulation
- 4 Opens eyes spontaneously

Additional Information

- Necessary to calculate *Overall GCS ED Score*

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED GCS VERBAL RESPONSE

Data Format is numeric.

Definition

ED/Hospital First Documented GCS Verbal Response is the patient's first recorded Glasgow Coma Score verbal assessment documented in your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>GcsVerbal</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1 /Maximum Constraint 5	

Field Values

- Pediatric(<= 2 years of age)
 - 1 No vocal response
 - 2 Inconsolable, agitated
 - 3 Inconsistently consolable, moaning
 - 4 Cries but is consolable, inappropriate interactions
 - 5 Smiles, oriented to sounds, follows objects, interacts
- Adult
 - 1 No verbal response
 - 2 Incomprehensible sounds
 - 3 Inappropriate words
 - 4 Confused
 - 5 Oriented

Additional Information

- Necessary to calculate *Overall GCS ED Score*

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED GCS MOTOR RESPONSE

Data Format is numeric.

Definition

ED/Hospital First Documented GCS Motor Response is the patient's first recorded Glasgow Coma Score motor assessment documented in your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>GcsMotor</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1 /Maximum Constraint 6	

Field Values

- Pediatric(<= 2 years of age)
 - 1 No motor response
 - 2 Extension to pain
 - 3 Flexion to pain
 - 4 Withdrawal from pain
 - 5 Localizing pain
 - 6 Appropriate response to stimulation
- Adult
 - 1 No motor response
 - 2 Extension to pain
 - 3 Flexion to pain
 - 4 Withdrawal from pain
 - 5 Localizing pain
 - 6 Obeys commands

Additional Information

- Necessary to calculate *Overall GCS ED Score*

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED GCS TOTAL SCORE

Data Format is numeric.

Definition

ED/Hospital First Documented GCS Total Score is the patient's first recorded Glasgow Coma Score documented in your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>GcsTotal</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 3 /Maximum Constraint 15	

Field Values

- Relevant value for data element

Additional Information

- Utilize **only** if total score is available without individual component scores
- Used to auto-generate an additional calculated field, *Revised Trauma Score---ED (adult & pediatric)*

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED/HOSPITAL FIRST DOCUMENTED GCS QUALIFIERS

Data Format is multiple-choice.

Definition

ED/Hospital First Documented GCS Qualifiers are factors that potentially affected the patient's first Glasgow Coma Score assessment done after arrival in your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>GcsQualifier</i>
Multiple Entry Configuration	<i>Yes, 3</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Patient Chemically Sedated
- 2 Obstruction to the Patient's Eye
- 3 Patient Intubated
- 4 Valid GCS: Patient not sedated, not intubated and without eye obstruction

Additional Information

- Identifies treatments given to the patient that may affect the first assessment of GCS. This field does not apply to self-medications the patient may administer (i.e., ETOH, prescriptions, etc.)

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record
- 3 EMS Run Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

HEIGHT

Data Format is numeric.

Definition

Height is simply the patient's height in centimeters and is required only if the patient is less than or equal to 15 years of age.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Height</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Height in centimeters

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record
- 3 Nursing Admission Record

REVISED OCTOBER 11, 2011

WEIGHT

Data Format is numeric.

Definition

Weight is simply the patient's weight in kilograms and is required only if the patient is less than or equal to 15 years of age.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Weight</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Weight in kilograms

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 ED Record
- 3 Nursing Admission Record

REVISED OCTOBER 11, 2011

ED DISCHARGE DATE

Data Format is a date.

Definition

ED Discharge Date is the date that the patient was discharged from your ED.

XSD Data Type	<i>xs-date</i>	XSD Element/Domain (Simple Type)	<i>EdDischargeDate</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1990 /Maximum Constraint 2030	

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY
- Used to auto-generate additional calculated field, *Total ED Time* (elapsed time from ED admit to ED discharge)
- If the patient is directly admitted to the hospital, code as *NA*

Data Source Hierarchy

- 1 Hospital Discharge Summary
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 Physicians' Progress Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED DISCHARGE TIME

Data Format is numeric.

Definition

ED Discharge Time is the time that the patient was discharged from your ED.

XSD Data Type	<i>xs- time</i>	XSD Element/Domain (Simple Type)	<i>EdDischargeTime</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Document as military time
- Used to auto-generate additional calculated field, *Total ED Time* (which is the elapsed time from ED arrival to ED discharge)
- If the patient is directly admitted to the hospital, code as *NA*

Data Source Hierarchy

- 1 Hospital Record
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 Physicians' Progress Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED DISCHARGE DISPOSITION

Data Format is single-choice.

Definition

ED Discharge Disposition is a general location of where the patient goes at the time of discharge from your ED.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EdDischargeDispo</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- | | |
|---|------------------------------------|
| 1 Floor bed (general admission, non-specialty unit bed) | 7 Operating Room |
| 2 Observation unit | 8 Intensive Care Unit (ICU) |
| 3 Telemetry/step-down unit (less acuity than ICU) | 9 Home without services |
| 4 Home with services | 10 Left against medical advice |
| 5 Died | 11 Transferred to another hospital |
| 6 Other (jail, institutional care, mental health, etc.) | |

Additional Information

- Based upon UB-04 disposition coding
- If reported as “Died” complete variable *Signs of Life*
- If the patient is directly admitted to the hospital, code as *NA*
- If *ED Discharge Disposition* is Field Value #4, 5, 6, 9, 10, or 11, then *Hospital Discharge Date, Time, and Disposition* should be *NA*

Data Source Hierarchy

- Hospital Discharge Summary
- Nursing Progress Notes
- Social Worker Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

SIGNS OF LIFE

Data Format is single-choice.

Definition

Signs of Life is whether the patient arrived for treatment in the ED with signs of life.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>SignsOfLife</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Arrived with no signs of life and was not successfully resuscitated
- 2 Arrived with signs of life but died after arrival

Additional Information

- Only completed when *ED Discharge Disposition* is completed as *Died*
- A patient with no signs of life is defined as having none of the following: organized EKG activity, pupillary responses, spontaneous respiratory attempts or movement, unassisted blood pressure, or pulse.

Data Source Hierarchy

- 1 Triage Form/Trauma Flow Sheet
- 2 Physician's Progress Notes
- 3 ED Documentation

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ED TRANSFER TO HOSPITAL

Data Format is single-choice.

Definition

ED Transfer to Hospital is a subsequent hospital destination of the patient upon discharge from your ED.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>EdDcDestination</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element. Refer to *Appendix 1-A* for the list of hospital codes.

Data Source Hierarchy

1. ED Record
2. History & Physical Documentation

REVISED OCTOBER 11, 2011

ALCOHOL USE INDICATOR

Data Format is single-choice.

Definition

Alcohol Use Indicator is whether the patient was tested for a blood alcohol level in your or a prior hospital for this injury event, and if so, whether alcohol was found in the patient's bloodstream.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>AlcoholUse</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Not tested
- 2 Negative confirmed by test
- 3 Positive within legal limit
- 4 Positive beyond legal limit

Additional Information

- Blood alcohol concentration (BAC) may be documented at any facility (or setting) treating this patient event
- "Beyond legal limit" is defined as a blood alcohol concentration above the legal limit for the State of Ohio
 - ❖ Adult Legal Limit is < 0.08 mcg/dl
 - ❖ Pediatric (\leq 21 years of age) Legal Limit is zero

Data Source Hierarchy

- 1 Lab Results
- 2 ED Physician Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ALCOHOL LEVEL RANGE

Data Format is single-choice.

Definition

Alcohol Level Range is the level of the patient's first documented blood alcohol level (BAL) drawn at your hospital when the BAL is positive AND beyond the legal limit.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>AlcoholLevel</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 0.08 to 0.109
- 2 0.11 to 0.199
- 3 0.20 and above

Additional Information

- This field is answered only if *Positive Beyond Legal Limit* is selected for the data field *Alcohol Use Indicator* (see previous page)

Data Source Hierarchy

- 1 Lab Results
- 2 ED Physician Notes

REVISED OCTOBER 11, 2011

DRUG USE INDICATOR

Data Format is single-choice.

Definition

Drug Use Indicator is whether the patient has a chemical substance in their system either at your or a previous hospital for this injury event.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>DrugUse</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Not Tested
- 2 Negative, confirmed by test
- 3 Positive, confirmed by test, prescription drug(s)
- 4 Positive, confirmed by test, illicit drug(s)

Additional Information

- Drug use may be documented at any facility treating this patient event
- Illicit drugs include both drugs that are illegal by law and prescribed drugs that are abused/misused
- If tests confirm both prescription drugs and illicit drugs, select "4," *Positive, confirmed by test, illicit drug(s)*

Data Source Hierarchy

- 1 Lab Results
- 2 ED Physician Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ADMITTING SPECIALTY

Data Format is single-choice.

Definition

Admitting Specialty is the medical specialty of the attending physician who admits the patient to your hospital.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>AdmSvc</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 0 Not Admitted (Died in your ED, transferred to another facility or discharged home)
- 1 General Surgery (Includes adult general and adult trauma surgery)
- 2 Neurosurgery
- 3 Orthopedic Surgery
- 4 Pediatric Surgery (Includes pediatric general surgery)
- 5 Burn Service
- 6 Thoracic Surgery
- 7 Plastic Surgery
- 8 All Other Surgical Services
- 9 Non-Surgical Service(s)

Additional Information

- This is not necessarily the service to which the patient is designated upon admission to the hospital, but the medical specialty of the patient's attending physician

Data Source Hierarchy

- 1 ED Record
- 2 Trauma Flow Sheet
- 3 Billing/Registration Sheet
- 4 History & Physical

REVISED OCTOBER 11, 2011

HOSPITAL PROCEDURES

Data Format is multiple-choice.

Definition

Hospital Procedures are all operative or essential procedures conducted on the patient during his/her stay at your hospital.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>HospitalProcedure</i>
Multiple Entry Configuration	<i>Yes, 200</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Major and minor procedure (ICD-9-CM) inpatient codes
- The maximum number of procedures that may be reported for a patient is 200

Additional Information

- Operative and/or essential procedures are defined as procedures performed in the Operating Room, Emergency Department, and/or Intensive Care Unit that were essential to the diagnoses, stabilization, or treatment of the patient's specific injuries or their complications at your hospital.
- Include only procedures performed at your hospital.
- At a minimum, the procedures listed on the following page should be captured for TACR. The hospital may choose to capture additional procedures for internal use. Procedures included on in the Procedures List that are designated with an asterisk have the potential to be performed multiple times during one episode of hospitalization. In this case, capture only the first event. If there is no asterisk, capture each event even if there is more than one.

Data Source Hierarchy

- 1 Operative Reports
- 2 ED and ICU Records
- 3 Trauma Flow Sheet
- 4 Anesthesia Record
- 5 Billing Sheet/Medical Records Coding Summary Sheet
- 6 Hospital Discharge Summary

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PROCEDURE LIST FOR *HOSPITAL PROCEDURES* DATA FIELD

DIAGNOSTIC & THERAPEUTIC IMAGING

Computed tomographic studies*
Diagnostic ultrasound (includes FAST)
Doppler ultrasound of extremities*
Angiography
Angioembolization
Echocardiography
Cystogram
Inferior vena cava (IVC) filter
Urethrogram

CARDIOVASCULAR

Central venous catheterization*
Pulmonary artery catheterization*
Cardiac output monitoring*
Open cardiac massage
Cardiopulmonary Resuscitation (CPR)

CENTRAL NERVOUS SYSTEM

Insertion of ICP monitor
Ventriculostomy
Cerebral oxygen monitoring

GASTROINTESTINAL

Endoscopy (includes gastroscopy, sigmoidoscopy, colonoscopy)
Gastrostomy/jejunostomy/gastrojejunostomy (percutaneous/or endoscopic)

GENITOURINARY

Ureteric catheterization (i.e. ureteric stent)
Suprapubic cystostomy

MUSCULOSKELETAL

Soft tissue/bony debridements*
Closed reduction fractures
Skeletal (and halo) traction*
Fasciotomy

RESPIRATORY

Insertion of endotracheal tube*
Continuous invasive mechanical ventilation
Chest tube*
Bronchoscopy
Tracheostomy

TRANSFUSION

The following blood products should be captured over first 24 hours after hospital arrival:

Transfusion of red cells *
Transfusion of platelets *
Transfusion of plasma *

In addition to coding the individual blood products listed above assign the 99.01 ICD-9 procedure code on patients that receive > 10 units of blood products over first 24 hours following hospital arrival *

OTHER

Hyperbaric oxygen
Decompression chamber
Total Parenteral Nutrition (TPN)

*May be performed multiple times during hospitalization

REVISED OCTOBER 11, 2011

PROCEDURE EPISODE

Data Format is multiple-choice.

Definition

Procedure Episode documents the order of the surgical procedures performed while the patient was in your hospital.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>ProcedureEpisode</i>
Multiple Entry Configuration	<i>Yes, 200</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 First Operative Episode
- 2 Second Operative Episode
- 3 Third Operative Episode
- 4 Fourth Operative Episode
- 5 Fifth Operative Episode
- 6 Sixth Operative Episode
- 7 Seventh Operative Episode
- 8 Eighth Operative Episode
- 9 Ninth Operative Episode
- 10 Tenth or More Operative Episode

Additional Information

- Include only those operative procedures performed at your hospital
- This field is linked to the *Hospital Procedures* Field

Data Source Hierarchy

- 1 Operative Reports

REVISED OCTOBER 11, 2011

HOSPITAL PROCEDURE START DATE

Data Format is a date.

Definition

Hospital Procedure Start Date documents the date that an operative procedure was performed in your hospital.

XSD Data Type	<i>xs- date</i>	XSD Element/Domain (Simple Type)	<i>HospProcedureDate</i>
Multiple Entry Configuration	<i>Yes, 200</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY
- This field is linked to the *Hospital Procedures* Field

Data Source Hierarchy

- 1 Operative Reports
- 2 Anesthesia Record
- 3 OR Nurses' Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

HOSPITAL PROCEDURE START TIME

Data Format is numeric.

Definition

Hospital Procedure Start Time documents the time that an operative procedure was started in your hospital.

XSD Data Type	<i>xs- time</i>	XSD Element/Domain (Simple Type)	<i>HospProcedureTime</i>
Multiple Entry Configuration	<i>Yes, 200</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Document as military time
- Procedure start time is defined as the time that the incision was made or that the essential procedure started
- This field is linked to the *Hospital Procedures* Field

Data Source Hierarchy

- 1 Operative Reports
- 2 Anesthesia Record
- 3 OR Nurses' Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

Procedure Location

Data Format is multiple-choice.

Definition

Procedure Location documents the location of the procedures performed while the patient was in your hospital.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>ProcedureLocation</i>
Multiple Entry Configuration	<i>Yes, 200</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Emergency Department
- 2 Operating Room
- 3 ICU
- 4 Floor
- 5 Radiology

Additional Information

- Include only those operative procedures performed at your hospital
- This field is linked to the *Hospital Procedures* Field

Data Source Hierarchy

- 1 Operative Reports

REVISED OCTOBER 11, 2011

CO-MORBID CONDITIONS

Data Format is multiple-choice.

Definition

Co-morbid Conditions are pre-existing health factors present in the patient prior to arrival at your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Comorbid</i>
Multiple Entry Configuration	<i>Yes, 23</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- | | |
|--|---|
| 0 No Known Co-morbid Conditions | 14 Esophageal Varices |
| 1 Other Co-morbid Conditions Not Otherwise Listed Here | 15 Functionally Dependent Health Status |
| 2 Alcoholism | 16 History of Angina within past 1 month |
| 3 Ascites within 30 days | 17 History of Myocardial Infarction within 6 months |
| 4 Bleeding Disorder/Current Anticoagulant Therapy | 18 History of PVD Revascularization/Amputation |
| 5 Chemotherapy for cancer within 30 days | 19 Hypertension requiring medication |
| 6 Congenital Anomalies | 20 Impaired Sensorium |
| 7 Congestive Heart Failure | 21 Prematurity |
| 8 Current Smoker | 22 Obesity |
| 9 Currently requiring dialysis | 23 Respiratory Disease |
| 10 CVA/Residual Neurological Deficit | 24 Steroid Use |
| 11 Diabetes Mellitus | 25 Cirrhosis |
| 12 Disseminated Cancer | |
| 13 Do Not Resuscitate (DNR) Status | 50 Osteoporosis |

Additional Information

- Field Value #0, *No Known Co-morbid Conditions* is used for patients with no known co-morbid conditions as coded by the hospitals or defined within the NTDS Data Dictionary.
- Field value #1, *Other Co-morbid Conditions Not Otherwise Listed Here*, is used if that patient has a pre-existing condition that is not included in this list.
- Field value #13, *Do Not Resuscitate (DNR) Status*, is selected here ONLY if such a status was medically ordered PRIOR TO the patient's arrival in your ED/hospital. To document patient DNR orders issued AFTER arrival to your ED/hospital, see next page.

Data Source Hierarchy

- History and Physical
- Discharge Sheet
- Billing Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

DNR STATUS

Data Format is single-choice.

Definition

DNR Status documents the presence of a physician's order to withhold select resuscitative efforts from the patient, and whether the order was issued prior to or during the patient's stay at your ED/hospital.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>DNR</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 0 Not a DNR patient (patient is to receive all resuscitative efforts if needed)
- 1 DNR status ordered prior to patient's arrival at your hospital
- 2 DNR status ordered after patient's arrival to your hospital

Additional Information

- This field is completed for each patient
- DNR status is typically ordered for a patient who does not wish to be resuscitated in the event of a cardiac arrest (no palpable pulse) or respiratory arrest (no spontaneous respirations or the presence of labored breathing) near the end of life.
- A DNR status includes both *DNR-CC* (comfort care) and *DNR-CCA* (comfort care arrest) orders.
- DNR may also be referred to as Allow Natural Death (AND)

Data Source Hierarchy

- 1 Do Not Resuscitate Document
- 2 History and Physical
- 3 Discharge Sheet
- 4 Billing Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INJURY DIAGNOSES

Data Format is multiple-choice.

Definition

Injury Diagnoses are the patient's diagnoses for all injuries identified at your ED/hospital for this injury event.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>InjuryDiagnoses</i>
Multiple Entry Configuration	<i>Yes, 50</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Injury diagnoses are defined by ICD-9-CM codes; refer to inclusion criteria

Additional Information

- Can be utilized to generate Abbreviated Injury Score and Injury Severity Score
- The maximum number of diagnoses that may be reported for an individual patient is 50

Data Source Hierarchy

- 1 Autopsy Report
- 2 Operative Report
- 3 Discharge Summary
- 4 Trauma Flow Sheet
- 5 Radiology Results
- 6 Billing Sheet/Medical Records Coding Summary Sheet
- 7 ED and ICU Records

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

ISS BODY REGION

Data Format is multiple-choice.

Definition

ISS Body Region is the Injury Severity Score assigned by body region codes that reflects the patient's injury(ies) diagnosed at your ED/hospital for this injury event.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>IssRegion</i>
Multiple Entry Configuration	<i>Yes, 50</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1/Maximum Constraint 6	

Field Values

- 1 Head or Neck
- 2 Face
- 3 Chest
- 4 Abdominal or Pelvic Contents
- 5 Extremities or Pelvic Girdle
- 6 External

Additional Information

- Field value #1, *Head or Neck*, includes injury to the brain, skull, cervical spine and/or cervical spine fractures
- Field value #2, *Face*, includes those areas involving the mouth, ears, nose and/or facial bones
- Field value #3, *Chest*, includes all lesions to internal organs within the chest, diaphragm, rib cage and/or thoracic spine
- Field value #4, *Abdominal or Pelvic Contents*, includes all lesions to internal organs within the abdomen and lumbar spine
- Field value #5, *Extremities or Pelvic Girdle*, includes sprains, dislocations, fractures and amputations **except for the spinal column, skull and rib cage**
- Field value #6, *External*, includes injuries such as lacerations, contusions, abrasions and burns independent of their location on the body surface

Data Source Hierarchy

- 1 Autopsy Report
- 2 Operative Report
- 3 Discharge Summary
- 4 Trauma Flow Sheet
- 5 Radiology Results
- 6 Billing Sheet/Medical Records Coding Summary Sheet
- 7 ED and ICU Records

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

AIS PRE-DOT CODE

Data Format is multiple-choice.

Definition

AIS Pre-dot Code is a component of the Abbreviated Injury Scale (AIS) code that reflects the patient's injuries diagnosed at your ED/hospital.

XSD Data Type	<i>xs-string</i>	XSD Element/Domain (Simple Type)	<i>AisPre-dot</i>
Multiple Entry Configuration	<i>Yes, 50</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- The pre-dot code is the 6 digits preceding the decimal point in an associated AIS code

Additional Information

- Can be utilized to generate Abbreviated Injury Score and Injury Severity Score

Data Source Hierarchy

- AIS Dictionary using ICD-9-CM injury codes found

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

AIS SEVERITY

Data Format is multiple-choice.

Definition

AIS Severity is the Abbreviated Injury Scale (AIS) severity codes that reflect the patient's injuries diagnosed at your ED/hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>AisSeverity</i>
Multiple Entry Configuration	<i>Yes, 50</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1 /Maximum Constraint 9	

Field Values

- 1 Minor Injury
- 2 Moderate Injury
- 3 Serious Injury
- 4 Severe Injury
- 5 Critical Injury
- 6 Maximum Injury, Virtually Non-survivable
- 7 Not Possible to Assign an AIS

Additional Information

- Field value #7, *Not Possible to Assign an AIS*, is chosen if the severity of an injury is not known

Data Source Hierarchy

- AIS Dictionary using ICD-9-CM injury codes found

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

AIS VERSION

Data Format is single-choice.

Definition

AIS version is the software version used to calculate Abbreviated Injury Scale (AIS) severity codes for the patient's current injury event.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>AisVersion</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 AIS 80
- 2 AIS 85
- 3 AIS 90
- 4 AIS 95
- 5 AIS 98
- 6 AIS 05

Data Source Hierarchy

- AIS Dictionary using ICD-9-CM injury codes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INJURY SEVERITY SCORE

Data Format is single-choice.

Definition

Injury Severity Score (ISS) is a nationally-accepted scoring system that reflects the patient's injuries for this injury event.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Iss</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1 / Maximum Constraint 75	

Field Values

- Relevant ISS value for the constellation of injuries

Data Source Hierarchy

- AIS Dictionary using ICD-9-CM injury codes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

TOTAL ICU LENGTH OF STAY

Data Format is numeric.

Definition

Total ICU Length of Stay documents the total number of days that the patient spent in any intensive care unit (ICU) (including all episodes) while in your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>TotalIcuLos</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 /Maximum Constraint 400	

Field Values

- Relevant numeric value

Additional Information

- Recorded in full day increments with any partial day listed as a full day
- Field allows for multiple ICU admission and discharge dates
- If patient is admitted and discharged on the same date from the ICU, the *Length of Stay* (LOS) is one day

Data Source Hierarchy

- 1 ICU Nursing Flow Sheet
- 2 Calculate Based on Admission Form and Discharge Sheet
- 3 Nursing Progress Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

TOTAL VENTILATOR DAYS

Data Format is numeric.

Definition

Total Ventilator Days documents the total number of days that the patient spent on mechanical ventilation (excluding time in the OR) while in your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>TotalVentDays</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 0 /Maximum Constraint 400	

Field Values

- Relevant value for data element

Additional Information

- Recorded in full day increments with any partial day listed as a full day
- Field allows for multiple start and stop dates and calculates total days spent on a mechanical ventilator. If a patient begins and ends mechanical ventilation on the same date, the total ventilator days is one day.
- Excludes mechanical ventilation time associated with OR procedures

Data Source Hierarchy

- 1 ICU Respiratory Therapy Flowsheet
- 2 ICU Nursing Flow Sheet
- 3 Physician's Daily Progress Notes
- 4 Calculate Based on Admission Form and Discharge Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

HOSPITAL DISCHARGE DATE

Data Format is a date.

Definition

Hospital Discharge Date is simply the date that the patient was discharged from your hospital.

XSD Data Type	<i>xs-date</i>	XSD Element/Domain (Simple Type)	HospitalDcDate
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>	Minimum Constraint 1990 /Maximum Constraint 2030	

Field Values

- Relevant value for data element

Additional Information

- Collected as MMDDYYYY
- Used to calculate *Total Length of Hospital Stay* (which is the elapsed time from ED/Hospital arrival to Hospital Discharge)

Data Source Hierarchy

- 1 Hospital Record
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 Physician Discharge Summary

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

HOSPITAL DISCHARGE TIME

Data Format is numeric.

Definition

Hospital Discharge Time is simply the time of day that the patient was discharged from your hospital.

XSD Data Type	<i>xs-time</i>	XSD Element/Domain (Simple Type)	<i>HospitalDCTime</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Document as military time
- Used to calculate field *Total Length of Hospital Stay* (which is the elapsed time from ED/Hospital Arrival to Hospital Discharge)

Data Source Hierarchy

- 1 Hospital Record
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 Physician Discharge Summary

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

HOSPITAL DISCHARGE DISPOSITION

Data Format is single-choice.

Definition

Hospital Discharge Disposition documents in general terms where the patient went after discharge from your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>HospitalDcDispo</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Discharged/Transferred to another hospital for ongoing acute inpatient care
- 2 Discharged to an intermediate care facility (ICF)/long term care facility (LTCF)
- 3 Discharged/Transferred to home under the care of an organized home health service
- 4 Left against medical advice (AMA) or discontinued care
- 5 Died
- 6 Discharged home with no home services
- 7 Discharged to a skilled nursing facility (SNF)
- 8 Discharged to hospice care
- 9 Discharged to another type of inpatient rehabilitation facility (IRF)
- 10 Discharged to a long term acute care hospital (LTACH)

Additional Information

- In field values #3 and #6, "Home" refers to the patient's current place of residence (e.g., home, prison, etc.)
- Field values based upon UB-04 disposition coding
- Disposition to any other non-medical facility should be coded as 6
- Disposition to any other medical facility should be coded as 9
- Refer to the [glossary](#) for definitions of facility types

Data Source Hierarchy

- 1 Hospital Discharge Summary Sheet
- 2 Nurses Notes
- 3 Case Manager/Social Services Notes

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

INPATIENT TRANSFER TO HOSPITAL

Data Format is single-choice.

Definition

Inpatient Transfer to Hospital documents a subsequent hospital destination for the patient after inpatient admission at your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>DcDestination</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Refer to *Appendix 1-A* for the list of hospital codes

Data Source Hierarchy

- 1 Discharge Summary
- 2 Progress Notes
- 3 Billing/Registration Sheet

REVISED OCTOBER 11, 2011

DISCHARGE STATUS

Data Format is single-choice.

Definition

Discharge Status is whether the patient left your hospital alive or dead.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Outcome</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>No</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Alive
- 2 Dead

Data Source Hierarchy

- 1 Discharge Summary
- 2 Progress Notes
- 3 Billing Sheet

REVISED OCTOBER 11, 2011

TIME OF DEATH

Data Format is numeric.

Definition

Time of Death is simply the time of day that the patient was pronounced dead.

XSD Data Type	<i>xs-time</i>	XSD Element/Domain (Simple Type)	<i>TimeOfDeath</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Relevant value for data element

Additional Information

- Document as military time
- Only complete field when *Discharge Status* is completed as *Dead*
- This may differ from the time of discharge
- *Time of Death* must be \leq *Hospital Discharge Time*

Data Source Hierarchy

- 1 Hospital Record
- 2 Billing Sheet/Medical Records Coding Summary Sheet
- 3 Physician Discharge Summary

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

PRIMARY METHOD OF PAYMENT

Data Format is single-choice.

Definition

Primary Method of Payment is the patient's foremost source of payment for care while in your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>PrimaryPayer</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Medicaid
- 2 Not Billed (for any reason)
- 3 Self Pay
- 4 Private/Commercial Insurance
- 5 No Fault Automobile Insurance
- 6 Medicare
- 7 Other Government Payer Source
- 8 Workers Compensation
- 9 Blue Cross/Blue Shield
- 10 Other

Data Source Hierarchy

- 1 Billing Sheet/Medical Records Coding Summary Sheet
- 2 Hospital Admission Form

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

BILLED HOSPITAL CHARGES

Data Format is single-choice.

Definition

Billed Hospital Charges is the final dollar amount billed to the patient for this injury admission at your hospital (excludes professional fees).

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Charges</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- Whole dollar amount of total hospital charges rounded off to the nearest dollar

Data Source Hierarchy

- Billing Sheet

REVISED OCTOBER 11, 2011

ORGANS/TISSUE REQUESTED

Data Format is multiple-choice.

Definition

Organs/Tissue Requested is whether the local organ procurement organization (OPO) was contacted by your hospital in regards to possible donation of the patient's organs and/or tissues.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>OrganReq</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Yes
- 2 No

Additional Information

- Select *NA* if the patient is alive

Data Source Hierarchy

- 1 Discharge Summary
- 2 History and Physical
- 3 Billing Sheet

REVISED OCTOBER 11, 2011

AUTOPSY PERFORMED

Data Format is single-choice.

Definition

Autopsy Performed documents whether an internal organ exam was performed on the patient by a trained pathologist.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Autopsy</i>
Multiple Entry Configuration	<i>No</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- 1 Yes, an autopsy was performed
- 2 No, an autopsy was not performed

Additional Information

- Select *NA* if the patient is alive

Additional Information

- If only an external or visual-type exam was done and no internal organs were surgically explored, field value #2, *No, an autopsy was not performed*, should be selected.

Data Source Hierarchy

- 1 Autopsy Report
- 2 Discharge Summary

REVISED OCTOBER 11, 2011

HOSPITAL COMPLICATIONS

Data Format is multiple-choice.

Definition

Hospital Complications document any medical complication that occurred during the patient's stay at your hospital.

XSD Data Type	<i>xs-integer</i>	XSD Element/Domain (Simple Type)	<i>Complications</i>
Multiple Entry Configuration	<i>Yes, 25</i>	Accepts Null Value	<i>Yes, common null values</i>
Required in XSD	<i>Yes</i>		

Field Values

- | | |
|--|--|
| 0 No Complications | 19 Organ/space surgical site infection |
| 1 Complications occurred that are otherwise not on this list | 20 Pneumonia |
| 2 Abdominal compartment syndrome | 21 Pulmonary embolism |
| 4 Acute renal failure | 22 Stroke/CVA |
| 5 Acute respiratory distress syndrome (ARDS) | 23 Superficial surgical site infection |
| 8 Cardiac arrest with CPR | 25 Unplanned intubation |
| 9 Coagulopathy | 27 Urinary tract infection |
| 11 Decubitus ulcer | 28 Catheter related blood stream infection |
| 12 Deep surgical site infection | 29 Osteomyelitis |
| 13 Drug or alcohol withdrawal syndrome | 30 Unplanned return to OR |
| 14 Deep vein thrombosis (DVT)/thrombophlebitis | 31 Unplanned return to ICU |
| 15 Extremity compartment syndrome | 32 Severe sepsis |
| 16 Graft/prosthesis/flap failure | |
| 18 Myocardial infarction | |

Additional Information

- The Field Value #1, *Complications occurred that are otherwise not on this list*, is chosen if that patient had a complication but it is not included in the list here. The list here mirrors the NTDS list of tracked patient complications.
- The field value #0, *No Complications*, should be used for patients who knowingly developed no medical complications as a result of this injury episode.

Data Source Hierarchy

- 1 Discharge Summary
- 2 History and Physical
- 3 Billing Sheet

References to Other Databases

- NTDS 1.2.5

REVISED OCTOBER 11, 2011

GLOSSARY OF TERMS

Discharge Disposition

Field Value	Variable	Definition
2	Intermediate Care Facility (ICF)	A nursing home providing long-term care less than a skilled level, usually custodial care only.
7	Skilled Nursing Facility (SNF)	A nursing home or unit which provides skilled nursing or rehabilitation care, less than the level of an inpatient rehabilitation facility.
8	Hospice	A special way of caring for persons who are terminally ill. Hospice services can be provided in the home or at a nursing facility.
9	Inpatient Rehabilitation Facility (IRF)	A hospital or part of a hospital which provides intensive (3 hours per day) of rehabilitation therapies to persons with disability from recent injury or illness.
10	Long Term Acute Care Hospital (LTACH)	A special hospital or part of a hospital that provides treatment for patients who stay, on average, more than 25 days for extended acute care. Most patients are transferred from an intensive or critical care unit.

REVISED OCTOBER 11, 2011

CO-MORBID CONDITIONS

Field Value	Variable	Definition	ICD-9 Code Range
2	Alcoholism	Alcohol consumption to an extent that adversely affects social and work-related functioning and produces withdrawal symptoms when habitual intake is stopped or greatly reduced; to be determined based upon the screening tool used at your hospital	291.0-291.3, 291.5, 291.81, 291.89, 291.9, 303.00-303.93, 305.00-305.03, V11.3
3	Ascites	The presence of fluid accumulation (other than blood) in the peritoneal cavity noted on physical examination, abdominal ultrasound or abdominal CT/MRI	789.5 (pre 2008), 789.59
4	Bleeding disorder/ Current anti-coagulant Therapy	A condition that places the patient at risk for excessive bleeding due to a deficiency of blood clotting elements (e.g. vitamin K deficiency, hemophilia, thrombocytopenia) and/or the use of chronic anticoagulation therapy (Coumadin, Plavix, or similar medications); does not include the patient on chronic aspirin therapy	269.0, 286.0, 286.1, 286.4, 287.1, 287.3 (pre-2006), 287.5, 287.9
5	Chemotherapy for Cancer within 30 days	The receipt of oral or intravenous chemotherapy treatment in the 30 days prior to admission for any type of medically diagnosed cancer	V58.1 (pre 2006), V58.11
6	Congenital Anomaly	A medical condition present since birth	740.0 – 759.9, 758.3 (pre 2005), 752.8 (pre 2004)
7	Congestive Heart Failure (CHF)	The inability of the heart to pump a sufficient quantity of blood to meet the metabolic needs of the body; may be noted in the medical record as CHF, congestive heart failure or pulmonary edema	398.91, 402.01, 402.11, 402.91, 404.11, 404.13, 404.13, 404.91, 404.93, 425.0-425.9, 428.0
8	Current Smoker	A patient who has smoked cigarettes, pipes and/or cigars in the year prior to admission	
9	Currently requiring or on Dialysis	Acute or chronic renal failure prior to injury that requires periodic peritoneal dialysis, hemodialysis, hemofiltration or hemodiafiltration	V45.1
10	CVA/residual neurological deficit	A history prior to injury of a cerebrovascular accident (embolic, thrombotic, or hemorrhagic) with persistent residual motor, sensory or cognitive dysfunction (e.g., hemiplegia, hemiparesis, aphasia, sensory deficit and/or impaired memory)	430-438.9, 436
11	Diabetes Mellitus	Acute or chronic pancreatic failure prior to injury that requires exogenous parenteral insulin or an oral hypoglycemic agent	205.00-250.33, 250.40-250.73
12	Disseminated Cancer	Cancer that has spread to one site or more sites in addition to the primary site in the body; other terms include fulminant, terminal, diffuse, widely metastatic, widespread and/ or carcinomatosis	196.0-199.1

REVISED OCTOBER 11, 2011

CO-MORBID CONDITIONS, continued

13	Do Not Resuscitate (DNR) Status	The patient has a <i>Do Not Resuscitate</i> (DNR) medical order document or similar advance directive documented in the medical record	
14	Esophageal Varices	Engorged collateral veins in the esophagus which bypass a scarred liver to carry portal blood to the superior vena cava	456.0-456.20
15	Functionally dependent health status	An inability of the patient to complete activities of daily living (ADL) including but not limited to bathing, feeding, dressing, toileting, and/or walking; there are two generally-accepted forms: 1 Partially dependent: The patient requires the use of equipment or devices coupled with assistance from another person for some ADL. Any patient coming from a nursing home setting who is not totally dependent would fall into this category, as would any patient who requires kidney dialysis or home ventilator support that requires chronic oxygen therapy yet maintains some independent functions. 2 Totally dependent: The patient cannot perform any ADL. This includes a patient who is totally dependent upon nursing care, or a dependent nursing home patient. All patients with psychiatric illnesses should be evaluated for their ability to function with or without assistance with ADLs just as the non-psychiatric patient.	
16	History of angina within past 1 month	Pain or discomfort between the diaphragm and the mandible resulting from myocardial ischemia, experienced by the patient within the past month	V12.50
17	History of Myocardial Infarction (MI) within past 6 months	Death of a segment of heart muscle caused by a blood clot in the coronary artery interrupting blood supply, within the past 6 months	
18	History of Revascularization/ Amputation for Peripheral Vascular Disease (PVD)	Angioplasty or revascularization procedure for atherosclerotic PVD (e.g. aortafemoral, femoral-femoral, femoral-popliteal) or amputation procedure for PVD (e.g. toe amputations, transmetatarsal amputations, below the knee or above the knee amputations); excludes amputation for trauma or resection of abdominal aortic aneurysms	
19	Hypertension requiring medication	History of a persistent elevation of systolic blood pressure >140 mm Hg and a diastolic blood pressure >90 mm Hg requiring antihypertensive medications (e.g. diuretics, beta blockers, ACE inhibitors, calcium channel blockers).	401.0-401.9, 402.00, 402.10, 402.90, 403.00, 403.10, 403.90, 404.00, 404.10, 404.90, 405.01-405.99
20	Impaired sensorium	Patients with chronic mental status changes and/or delirium including but not limited to schizophrenia, dementia, Alzheimer's disease, mental retardation, developmental delay, documented behavior disturbances and/or attention deficit disorders	290-290.9, 299.00, 312.9, 314.00, 315.2, 315.31, 315.39, 315.5, 315.8, 315.9, 317, 318.0, 318.1, 319, 331.1

REVISED OCTOBER 11, 2011

			(pre 2004), 331.11-331.2, V11.0, V11.1, V11.2, V11.8
21	Prematurity	Premature birth (gestation <37 weeks), a newborn history of bronchopulmonary dysplasia, ventilator support for greater than 7 days after birth, and/or the diagnosis of cerebral palsy	343.0 - 343.9, 765.00-765.19, 770.

CO-MORBID CONDITIONS, continued

22	Obesity	Body Mass Index (BMI) of 40 or greater	278.00-278.01
23	Respiratory Disease	Severe chronic lung disease including but not limited to asthma, cystic fibrosis, chronic obstructive lung disease (COPD), emphysema and /or chronic bronchitis; excludes patients with <i>acute</i> asthma, diffuse interstitial fibrosis and/or sarcoidosis	277.00, 490-493.92
24	Steroid use	Use of oral or parenteral corticosteroid medications (e.g. Prednisone, Decadron) in the 30 days prior to injury for a chronic medical condition (e.g. COPD, asthma, rheumatologic disease, rheumatoid arthritis, inflammatory bowel disease); does not include topical/dermal corticosteroids those administered by inhalation or rectally	
24	Cirrhosis	Chronic progressive disease of the liver characterized by the replacement of healthy cells with scar tissue; often characterized by jaundice	
50	Osteoporosis	Thinning of bone tissue and loss of bone density over time; most common in post-menopausal women	733.0 – 733.01

REVISED OCTOBER 11, 2011

Complications

	Variable	Definition	ICD-9 Code Range
2	Abdominal Compartment Syndrome (ACS)	Sudden increase in intra-abdominal pressure resulting in alteration of respiratory, hemodynamic and renal functions; patients with this syndrome are critically ill requiring ventilator support and/or reoperation	958.93
3	Acute Renal Failure (ARF)	Sudden renal dysfunction after injury requiring hemodialysis, ultrafiltration or peritoneal dialysis	403.11, 403.91, 404.12, 404.92, 582.0-582.9, 583.0-583.7, 584.5-584.9, 585 (pre 2006), 586, 588.0, 958.5
5	Acute Respiratory Distress Syndrome (ARDS)	Sudden, severe lung failure characterized by $\text{PaO}_2/\text{FiO}_2 \leq 200$, decreased compliance, and diffuse bilateral pulmonary infiltrates without associated evidence of CHF, requiring mechanical ventilation and persisting beyond 36 hours; typically occurs in conjunction with catastrophic medical conditions, such as pneumonia, shock, sepsis and trauma	518.5, 518.82 cross-referenced with procedural codes for ventilator support (96.70, 96.71, 96.72)
8	Cardiac Arrest with CPR	Absence of cardiac rhythm or presence of chaotic cardiac rhythm that results in loss of consciousness requiring the initiation of any component of basic and/or advanced cardiac life support; excludes patients that arrive at the hospital in full arrest	427.5
9	Coagulopathy	Twice the upper limit of the normal range for PT or PTT in a patient without a pre-injury bleeding disorder	286.6, 287.1, 287.3
11	Decubitus Ulcer	A "pressure sore" resulting from pressure exerted on the skin, soft tissue, muscle or bone by the weight of an individual against a surface	707.0 (pre 2005), 707.00-707.09
12	Deep Surgical Site Infection	An infection that occurs within 30 days of an operation involving deep soft tissues (e.g. fascial and muscle layers) at the site of incision and at least one of the following: <ul style="list-style-type: none"> • Purulent drainage from the deep incision site • Dehiscence at the surgical site or elective reopening of the surgical site by a surgeon because of fever ($> 38^\circ\text{C}$), localized pain or tenderness • Abscess at the incision site • Diagnosis of a deep incision infection 	
13	Drug or alcohol withdrawal syndrome	Set of symptoms seen when an individual reduces or stops habitual alcohol consumption or illicit drug use; symptoms include tremulousness, agitation, rapid heartbeat, high blood pressure, seizures, hallucinations and/or delirium tremens.	291.0, 291.3, 291.81, 292.0

REVISED OCTOBER 11, 2011

14	Deep Vein Thrombosis (DVT)/ thrombophlebitis	Formation or existence of a blood clot or thrombus within the vascular system often coupled with inflammation; diagnosis may be confirmed by venogram, ultrasound or CT; treatment includes anticoagulation therapy and/or placement of a vena cava filter or vena cava surgery	451.0, 451.11, 451.19, 451.2, 451.81- 451.84, 451.89, 451.9, 453.40, 459.10-459.19, 997.2, 999.2
----	--	---	--

Complications, continued

15	Extremity compartment syndrome	Swelling and increased pressure within a limited space (a fascial compartment) that compromises blood vessels, nerves and/or tendons that run through that compartment; more commonly involves the leg but can also occur in the forearm, arm, thigh and shoulder	
16	Graft/ prosthesis/flap failure	Mechanical failure of an extracardiac vascular graft or prosthesis including myocutaneous flaps and skin grafts requiring return to the operating room or a balloon angioplasty	996.00, 996.1, 996.52, 996.61, 996.62
18	Myocardial infarction (MI)	Death of a segment of heart muscle, caused by a blood clot in the coronary artery interrupting blood supply; in this context, following the injury and occurring during the hospital stay	410.00, 410.02, 410.10, 410.12, 410.20, 410.22, 410.30, 410.32, 410.40, 410.42, 410.50, 410.52, 410.60, 410.62, 410.70, 410.72, 410.80, 410.82, 410.90, 410.92
19	Organ/ space surgical site infection	<p>An infection that occurs within 30 days after an operation and involves any part of the anatomy (e.g. organs or spaces) other than the surgical incision and at least one of the following:</p> <ul style="list-style-type: none"> ▪ Purulent drainage from a drain that is placed through a stab wound or puncture into the organ/space ▪ Organisms isolated from an aseptically obtained culture of fluid or tissue in the organ/space ▪ An abscess or other evidence of infection involving the organ/space that is found on direct examination, during reoperation or by histopathologic or radiologic examination • Diagnosis of an organ/space SSI by a surgeon or attending physician 	

REVISED OCTOBER 11, 2011

20	Pneumonia	<p>Inflammation of one or both lungs caused by infection from a bacterium, virus, chemical or physical irritant; patients must meet at least one of the following two criteria:</p> <p>Criterion 1. Rales or dullness to percussion on physical examination of chest AND any of the following:</p> <ul style="list-style-type: none"> a. New onset of purulent sputum or change in character of sputum b. Organism isolated from blood culture c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy <p>Criterion 2. Chest radiographic examination shows new or progressive infiltrate, consolidation, cavitation, or pleural effusion AND any of the following:</p> <ul style="list-style-type: none"> a. New onset of purulent sputum or change in character of sputum b. Organism isolated from the blood c. Isolation of pathogen from specimen obtained by transtracheal aspirate, bronchial brushing, or biopsy d. Isolation of virus or detection of viral antigen in respiratory secretions e. Diagnostic single antibody titer (IgM) or fourfold increase in paired serum samples (IgG) for pathogen f. Histopathologic evidence of pneumonia 	480.0-480.3, 481, 482.0, 482.1, 482.2, 482.30, 482.31, 482.32, 482.39, 482.40, 482.41, 482.49, 482.81-482.89, 482.9, 483.0, 483.1, 483.8, 484.1, 484.8, 485, 486
21	Pulmonary embolism	The obstruction of the pulmonary artery or a branch of it leading to the lungs by a blood clot; often diagnosed by a V-Q scan, pulmonary arteriogram and/or CT angiogram.	415.11, 415.19

Complications, continued

22	Stroke/CVA	Embotic, thrombotic or hemorrhagic vascular accident with motor, sensory and/or cognitive dysfunction (e.g. hemiplegia, hemiparesis, aphasia, sensory deficit, impaired memory) that persists for 24 or more hours; in this context, following the injury and occurring during the hospital stay	997.02
23	Superficial surgical site infection	<p>Infection that occurs within 30 days after an operation and infection involves only skin or subcutaneous tissue of the incision and at least one of the following:</p> <ul style="list-style-type: none"> • Purulent drainage, with or without laboratory confirmation, from the superficial incision • Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision • Pain, tenderness, localized swelling, redness, or heat at the superficial incision site and which is deliberately re-opened by the surgeon • Diagnosis of superficial incisional surgical site infection by the surgeon or attending physician 	
25	Unplanned intubation	Patient requires placement of an endotracheal tube and mechanical or assisted ventilation due to respiratory or cardiac failure manifested by severe respiratory distress, hypoxia, hypercarbia, or respiratory acidosis; unplanned intubation also occurs if a patient requires re-intubation after being extubated	
27	Urinary tract infection	Infection in the kidney, ureter, bladder and/or adjacent structures that occurs when microorganisms enter through the urethra	

REVISED OCTOBER 11, 2011

28	Catheter-related blood stream infection	Infection in the blood stream as a result of microorganisms entering through an intravenous catheter	
29	Osteomyelitis	Inflammation of bone and bone marrow, caused by infection	
30	Unplanned return to the OR	Patient requires an unanticipated subsequent surgical procedure in the operating room due to a complication	
31	Unplanned return to the ICU	Patient requires an unanticipated readmission to an intensive care unit (ICU) after discharge to another medical/surgical hospital unit, as the result of deterioration in health status	
32	Severe sepsis	Severe, widespread bloodstream infection with resultant organ dysfunction, hypoperfusion and/or hypotension; "septic shock"	

REVISED OCTOBER 11, 2011

GLOSSARY OF ABBREVIATIONS

ACE	Angiotensin Converting Enzyme
ACS	Abdominal compartment syndrome; American College of Surgeons
ADL	Activities of daily living
AIS	Abbreviated Injury Scale
ARDS	Acute respiratory distress syndrome
ARF	Acute Renal Failure
BMI	Body mass index
BP	Blood pressure
CDC	Centers for Disease Control and Prevention
CHF	Congestive heart failure
CPAP/BIPAP	Continuous positive airway pressure/variable bi-level positive airway pressure
CT	Computerized topography
CVA	Cerebral vascular accident
DNR	Do not resuscitate
DNR-CC	Do not resuscitate; comfort care only
DNR-CCA	Do not resuscitate; comfort care arrest
DVT	Deep vein thrombosis
EOA	Esophageal Obturator Airway
ED	Emergency department
EMS	Emergency medical services
FAST	Focused assessment with sonography for trauma
FIPS	Federal Information Processing Standard codes
GCS	Glasgow Coma Score
ICD-9-CM	International Classification of Diseases, Ninth Revision, Clinical Modification
IgG	Immunoglobulin G
ISS	Injury Severity Score
LMA	Laryngeal Mask Airway
MI	Myocardial infarction
MRI	Magnetic resonance imaging
MMDDYYYY	Date designation that represents the month in two digits followed by the day of the month in two digits, followed by the year in four digits
NHTSA	National Highway Traffic Safety Administration
NTDS	National Trauma Data Standard
OPO	Organ Procurement Organization
OR	Operating Room
OTR	Ohio Trauma Registry
PT	Prothrombin time
PTT	Partial thromboplastin time
PVD	Peripheral vascular disease
SaO ₂	Saturation of oxygen in arterial blood
TACR	Trauma Acute Care Registry
UB-04	Uniform Billing Form-04
XSD	XML (Extensible Markup Language) Schema definition
xs-string	XML schema defining the acceptable layout (commas, spaces, carriage returns, etc.)
YYYY	Year designation that is represented in four digits, e.g. 2010

REVISED OCTOBER 11, 2011

OHIO TRAUMA REGISTRY

DATA DICTIONARY

For

TRAUMA REHABILITATION

DATA COLLECTION

From

Inpatient Rehabilitation

Facilities

OHIO DEPARTMENT OF PUBLIC SAFETY
EMS DIVISION

1970 W. Broad Street, P.O. Box 182073
Columbus, OH 43218-2073
(614) 466-9447
(800) 233-0785

EMS Data Center
(614) 387-1951
EMSData@dps.state.oh.us

Effective January 1, 2005

Table of Contents

Patient Inclusion Criteria	3
Field Definitions	5
Field #1 Rehabilitation Facility Code	6
Field #2 Unique Patient Encounter/Admission Number	7
Field #3 Date Exported	8
Field #4 Zip Code of Residence	9
Field #5 Patient's Date of Birth	10
Field #6 Gender	11
Field #7 Race/Ethnicity	12
Field #8 Date of Onset (date injury occurred)	13
Field #9 Rehabilitation Admission From	14
Field #10 Pediatric Pre-hospital Setting	16
Field #11 Pediatric Living With	17
Field #12 Pediatric Education Category	18
Field #13 Pediatric Educational Setting	19
Field #14 Adult Pre-hospital Living With	20
Field #15 Adult Pre-hospital Vocational Category	21
Field #16 Adult Pre-hospital Vocational Effort	22
Field #17 Transferring Facility ID	23
Field #18 Rehabilitation Facility Arrival Date	24
Field #19 Etiological Diagnosis (ICD-9-CM Code)	25
Field #20 Co-Morbid Conditions (ICD-9-CM Codes)	26
Field #21 Complications During Rehabilitation Stay (ICD-9-CM Codes)	27
Field #22 Disability Assessment Tool Adult/Pediatric (FIM™ WeeFIM® instrument)	28
Field #23 Disability Assessment Score Upon Admission (FIM™ WeeFIM® rating)	29
Field #24 Disability Assessment Score Upon Discharge (FIM™ WeeFIM® rating)	30
Field #25 Date of Discharge or Death	31
Field #26 Discharge Status	32
Field #27 Adult Discharge Disposition	33
Field #28 Adult Discharge Living With	34
Field #29 Pediatric Discharge Disposition	35
Field #30 Pediatric Discharge Living With	36
Field #31 Discharge Referrals	37
Field #32 Transfer to Other Hospital / Facility	38
Field #33 Billed Rehabilitation Facility Charges	39
Field #34 Payment Source	40
Field #35 Adult Rehabilitation Length of Stay	41
Field #36 Pediatric Rehabilitation Length of Stay	42
APPENDICES	
1 - Ohio Rehabilitation Facility Codes	
2 - Ohio Hospital Codes	
3 - Out of State Rehabilitation, Hospital and Nursing Facility Codes	
4 - Ohio Nursing Facility Codes	
5 - Authority/Mandate	
6 - Trauma Registry Advisory Subcommittee	
7 - File Key Layout	

Ohio Trauma Registry Inpatient Rehabilitation Facility Patient Inclusion Criteria

Patient's first or initial admission to an inpatient rehabilitation facility who meet one of the following inclusion criteria;

1. Patients whose acute care hospitalization included any of the inclusion criteria; **OR**
2. Patients who have an Impairment Group Code on admission listed in the table on page 4 Inclusion Criteria

ICD-9-CM Diagnosis Codes on discharge from acute care hospital		
ICD-9-CM Diagnosis Codes		ICD-9-CM Diagnoses Descriptions
800.00 – 819.1		Fractures
821.00 – 904.9		Fractures, dislocations/sprains, intracranial injury, internal injury of thorax, abdomen and pelvis, open wounds, injury to blood vessels
911.0, 911.1, 912.0, 912.1		Abrasions/friction burns to trunk, shoulder and upper arm
916.0, 916.1, 919.0, 919.1		Abrasions / friction burns hip, thigh, leg, ankle, other or multiple sites
920 – 929.9		Contusions and crush injury
940.0 – 959.9		Burns, injury to nerves and spinal cord, traumatic complications and unspecified injury
987.9		Smoke inhalation
991.0 – 991.6		Frostbite, hypothermia and external effects of cold
994.0, 994.1, 994.7, 994.8		Asphyxiation, strangulation, drowning, and electrocution
995.50 – 995.59		Child maltreatment and abuse
OR		
ICD-9-CM Diagnoses		E-CODE
348.1	Anoxic Brain Injury	E800 – E848.8 E878 – E905.0 E906.0 – E928.8 E950.0 – E998.9
348.4	Uncal herniation	
348.5,	Cerebral Edema	
348.8	Pneumocephalus	
372.72	Subconjunctival hemorrhage	
518.5	Traumatic ARDS	
784.7	Epistaxis	
		AND WITH ANY OF THE FOLLOWING External Cause Codes (E-Codes)

Acute Care Hospitalization ICD-9-CM Diagnoses Codes EXCLUDED	
820.00 – 820.9	Isolated hip fracture
905.0 – 909.9	Late effects of injury
910.0 – 910.9, 911.2 – 911.7, 912.2 - 912.9, 913.0 - 913.9, 914.0 - 914.9, 915.0 - 915.9, 916.2 - 916.9, 917.0 - 917.9, 918.0 - 918.9, 919.2 - 919.9	Blisters, insect bites
930 – 939	Foreign bodies
Acute Care Hospitalization External Cause Codes EXCLUDED	
E849.0 – E849.9	Place of occurrence
E850.0 – E869.9	Poisonings
E870.0 – E879.9	Misadventures during surgical and medical care
E905.1 – E905.9	Venomous animals and plants (except snakes)
E929.0 – E929.9	Late effects of Accidental Injury
E930.0 – E949.9	Drugs, medicinal and biological substances causing adverse effects in therapeutic use

Version 1.0 Effective January 1, 2005

Adult Impairment Group Code on Admission to Rehabilitation Facility			
Brain Dysfunction		Orthopedic Disorders	
02.1	Non-traumatic injury *	08.12	Status Post Bilateral Hip Fractures
<i>* must be associated with an acceptable E-code.</i>		08.2	Status Post Femure (shaft) Fracture
		08.3	Status Post Pelvic Fracture
		08.4	Status Post Major Multiple Fractures
02.21	Traumatic, open injury		
02.22	Traumatic, closed injury		
Spinal Cord Dysfunction, Traumatic			
004.210	Paraplegia, unspecified	Amputation of Limb (trauma related)	
04.211	Paraplegia, incomplete	05.1	Unilateral Upper Limb above the elbow (AE)
04.212	Paraplegia, complete	05.2	Unilateral Upper Limb below the elbow (BE)
04.220	Quadriplegia, Unspecified	05.3	Unilateral Lower Limb above the knee (AK)
04.2211	Quadriplegia, Incomplete C1-4	05.4	Unilateral Lower Limb below the knee (BK)
04.2212	Quadriplegia, Incomplete C5-8	05.5	Bilateral Lower Limb above the knee (AK/AK)
04.2221	Quadriplegia, Complete C1-4	05.6	Bilateral Lower Limb above/below the knee (AK/AK)
04.2222	Quadriplegia, Complete C5-8	05.7	Bilateral Lower Limb below the knee (BK/BK)
04.230	Other Traumatic Spinal Cord Dysfunction	05.9	Other amputation
Major Multiple Trauma		Burns	
14.1	Brain + Spinal Cord Injury	11	Burns
14.2	Brain + Multiple Fracture/Amputation		
14.3	Spinal Cord + Multiple Fracture/amputation		
14.9	Other multiple trauma		

Pediatric Impairment Group Code on Admission to Rehabilitation Facility			
Traumatic Brain Dysfunction		Burns	
2.21	Traumatic, open injury	7.1	Burns
2.22	Traumatic, closed injury		
2.9	Unspecified traumatic brain injury	Orthopedic Disorders	
2.11	Anoxic/Hypoxemic Encephalopathy	Orthopedic Conditions	
Traumatic Spinal Cord Dysfunction		5.11	Status Post Unilateral Hip Fracture
4.21	Incomplete Traumatic Paraplegia	5.12	Status Post Femure (shaft) Fracture
4.22	Complete Traumatic Paraplegia	5.13	Status Post Pelvic Fracture
4.23	Unspecified Traumatic Paraplegia	5.14	Status Post Major Multiple Fractures
4.24	Incomplete Traumatic Tetraplegia Quadriplegia, C1-4	Amputation of Limb (trauma related)	
4.25	Incomplete Traumatic Tetraplegia Quadriplegia, C5-8	5.21	Unilateral Upper Extremity above the elbow
4.26	Complete Traumatic Tetraplegia Quadriplegia, C1-4	5.22	Unilateral Upper Extremity below the elbow
4.27	Complete Traumatic Tetraplegia Quadriplegia, C5-8	5.23	Unilateral Lower Extremity above the knee
4.29	Unspecified Traumatic Tetraplegia Quadriplegia	5.24	Unilateral Lower Extremity below the elbow
		5.25	Bilateral Lower Extremity above the knee
Major Multiple Trauma		5.26	Bilateral Lower Ext. above/below the knee
6.1	Brain + Spinal Cord Injury	5.27	Bilateral Lower Extremity below the knee
6.2	Brain + Multiple Fracture/Amputation	5.29	Other amputation
6.3	Spinal Cord + Multiple Fracture/amputation		
6.9	Other multiple trauma		

Version 1.0 Effective January 1, 2005
Ohio Trauma Rehabilitation Registry Field Definitions

Unless specifically indicated, these definitions apply to all fields in the database:

ND = Not Documented

If the information is probably known but is not documented, or the information is not documented but should have been and would have been knowable.

Example: "sex"

NA = Not Applicable

If the information requested is not applicable, or the information does not make sense for this field

Example: seat belt use for motorcycle crash

0 = Zero

Use only for numeric fields when that is what the correct number is.

Example: in *Length of Stay* fields if the patient did not have a LOS in that area

NT = Not Tested

Use for fields in which the desired data is a laboratory test result when the test was not ordered.

Example: for alcohol level, when that test was never ordered

UNK = Unknown

If the information is unknowable and cannot ever be obtained. That is, there is no way to know the answer, or the information is specifically documented as "unknown" in the medical record.

Example: The time of injury if the patient is found unconscious the next morning

Field # 1: Rehabilitation Facility Code

Values: The facility code assigned by the Ohio Department of Public Safety.

- 1. Length 4
- 2. Start Position 1
- 3. End Position 4
- 4. Allow blank or not NO
- 5. Data Type (Numeric, Character). NUMERIC

See Appendix 1 – ODPS Rehabilitation Facility Codes.

Field Instructions:

Must be present on all records submitted to the Ohio Department of Safety.

A four-digit code assigned by the Ohio Department of Public Safety. This code needs to be entered initially. After initial entry it will automatically be entered for each record.

[Click Here](#) to return to the Table of Contents

Field #2: Unique Patient Encounter/Admission Number

Values: A number assigned by each facility to the patient at the time of admission. This number should be unique for each patient AND each visit. This number may be referred to as a patient account number. Medical record numbers are typically specific to each patient BUT are frequently the same for all rehabilitation facility visits by the same patient.

1. Length 15
2. Start Position 5
3. End Position 19
4. Allow blank or not NO
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

Enter the rehabilitation facility's unique patient number for this patient.
This record is for audit purposes only and will not be made public.

[Click Here](#) to return to the Table of Contents

Field #3: Date Exported

Value: Date (mmddyyyy) that this record was submitted to the Ohio Trauma Registry.

1. Length 8
2. Start Position 20
3. End Position 27
4. Allow blank or not NO
5. Data Type (Numeric, Character). DATE

Field Instructions:

This is a generated field and will be completed when the record is exported to Ohio Trauma Registry.

[Click Here](#) to return to the Table of Contents

Field # 4: Zip Code of Residence

Values: The patient's five-digit zip code for place of residence, at the time of their injury.
Enter "99999" for patients that reside outside of the USA.

- | | | |
|------------------------------------|----|---------|
| 1. Length | 5 | |
| 2. Start Position | 28 | |
| 3. End Position | 32 | |
| 4. Allow blank or not | NO | |
| 5. Data Type (Numeric, Character). | | NUMERIC |

Field Instructions:

Enter in the patients' zip code number of their residence at the time of their injury. If patient is homeless, enter the zip code of the location of injury.
Enter "99999" for patients that reside outside of the USA. Do not enter the 4-digit extension.

[Click Here](#) to return to the Table of Contents

Field #5: Patient's Date of Birth

Values: mmdyyy
99999999 – Not documented

1. Length 8
2. Start Position 33
3. End Position 40
4. Allow blank or not NO
5. Data Type (Numeric, Character). DATE

Field Instructions:

The patient's date of birth. Enter the month, day and year of the patient's Date of Birth. If the patients' age is known, but the date of birth is not, enter 01/01/YYYY (YYYY appropriate to patients known age)

Entire year must be used

Example: 1998

Enter in the patient's date of birth. Must use this format "01/01/1998".

It is necessary to enter the year using the entire year.

[Click Here](#) to return to the Table of Contents

Field #6: Gender

Values: 1- Male
2- Female
3- ND (Not Documented)

1. Length 1
2. Start Position 41
3. End Position 41
4. Allow blank or not NO
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

The patient's gender at the injury date. Enter the patient's gender using the options available from code table above. Use the pulldown menu to select this field. Select the most appropriate option.

[Click Here](#) to return to the Table of Contents

Field #7: Race/Ethnicity

Values: 1- American Indian or Alaskan Native
2- Asian
3- Black, not of Hispanic origin
4- Hispanic or Latino
5- Native Hawaiian or Other Pacific Islander
6- White
7 – Other
8 – Multi-racial
9- ND (Not Documented)

1. Length 1
2. Start Position 42
3. End Position 42
4. Allow blank or not NO
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

The patient's race/ethnic group. Enter the patient's race from the available options. Use the pulldown menu to select this field. Select the most appropriate option. If more than one race value #1 to #6 is selected then value number 8 – *Multiracial* must be selected. Note that pediatric facilities are limited to selection of only one value. Adult facilities can select multiple values, which will reported as 8 – multi-racial.

Values: 1- White
2- Black
3- Hispanic
4- Native American
5- Asian
6- Other
7- Multi-racial

[Click Here](#) to return to the Table of Contents

Field #8: Date of Onset (Date Injury Occurred)

Values: mmdyyy
88888888 – ND (Not Documented)
99999999 – Unknown, if specifically documented as “Unknown” in the medical record.

1. Length 8
2. Start Position 43
3. End Position 50
4. Allow blank or not NO
5. Data Type (Numeric, Character). DATE

Field Instructions:

The date the injury occurred. Enter the month, day and year of the injury. The year must be 4-digits. Example: 1998. The date on which injury occurred must be the earliest date associated with the trauma event. All treatment dates must be equal to or after the date on which the injury occurred.
Enter the patient’s actual date of injury

[Click Here](#) to return to the Table of Contents

Field #9: Rehabilitation Admission From

Values: 1 – Home
2 – Board and Care
3 – Transitional Living
4 – Intermediate care
5 – Skilled Nursing Facility
6 – Acute Unit of own facility
7 – Acute Unit another facility
8 – Chronic Hospital (LTAC)
9 – Rehabilitation facility
10 – Other
12 – Alternate Level of care
13 – Subacute setting
14 – Assisted Living Residence

1. Length 2
2. Start Position 51
3. End Position 52
4. Allow blank or not NO
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

If # 4, 5, 7, or 9 is selected, field # 10 Transferring Facility ID must be competed. **Value number 11 is purposefully not utilized for this field.**

Definitions

Home: A private, community based dwelling (a house, apartment, mobile home, etc) that houses the patient, family, or friends.

Board and Care: A community based setting where individuals have private space (either a room or apartment), or a structured retirement facility. The facility may provide transportation, laundry, and meals, but no nursing care.

Transitional Living: A community based, supervised setting where individuals are taught skills so they can live independently in the community.

Intermediate care (nursing home): A long term care setting that provides health related services but a registered nurse is not present 24 hours a day. Patients live by institutional rules; care is ordered by a physician, and a medical record is maintained. Patients in intermediate care are generally less disabled than those in skilled care facilities

Skilled Nursing Facility (nursing home): A long term care setting that provides skilled nursing services. A registered nurse is present 24 hours a day. Patients live by institutional rules; care is ordered by a physician, and a medical record is maintained.

Acute Unit of own Facility: An acute medical/surgical care unit in the same facility as the rehabilitation unit.

Acute Unit another Facility: An acute medical/surgical care facility separate from the rehabilitation unit.

Chronic Hospital (LTAC): A long-term care setting classified as a hospital, long term acute care.

Rehabilitation facility: An inpatient setting that admits patients with specific disabilities and provides a team approach to comprehensive rehabilitation services, with a physiatrist (or physician of equivalent training/experience) as the physician of record.

Version 1.0 Effective January 1, 2005

Other: Used only if no other code is appropriate

Alternate Level of care: Physically and fiscally distinct units that provides care to individuals who no longer meet acute care criteria

Subacute setting: Subacute care is goal-oriented, comprehensive, inpatient care designed for an individual who has an acute illness, injury or exacerbation of a disease process. It is rendered immediately after, or instead of, acute hospitalization to treat one or more specific active, complex medical conditions an overall situation. Generally the condition of an individual receiving subacute care is such that the care does not depend heavily on high technology monitoring or complex diagnostic procedures. Subacute care requires the coordinated services of an interdisciplinary team, including physicians, nurses, and other relevant professional disciplines whoa re knowledgeable and trained to assess and manage specific conditions and perform the necessary procedures. Subacute care is given as part of a specially designed program, regardless of the site. Subacute care is generally more intensive than traditional nursing home care, but less than acute inpatient care. It requires frequent (daily to weekly) patient assessment and review of the clinical course and treatment plan for a limited time period (several days to several months), until a condition is stabilized or a predetermined course is completed.

Assisted Living Residence: A community based setting that combines housing, private quarters, freedom of entry and exit, supportive services, personalized assistance, and healthcare designed to respond to individual needs of those who need help with activities of daily living and instrumental activities of daily living. Supportive services are available 24 hours a day to meet scheduled and unscheduled needs in a way that promotes maximum dignity and independence for each resident. These services involve the resident's family, neighbors, and friends.

[Click Here](#) to return to the Table of Contents

Field #10: Pediatric Prehospital Setting

Values: 01 – Home
 02 – Acute Care unit of own facility
 03 – Acute care unit of another facility
 04 – Rehabilitation facility
 05 – Residential facility
 06 – Transitional living center
 07 - Skilled nursing facility
 08 – Shelter
 09 – Other
 10 - Died

1. Length 2
2. Start Position 53
3. End Position 54
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

Select the value that most accurately describes the patients living arrangements prior to their hospitalization.
Note the value 04 is not used in this field.

Values:

[Click Here](#) to return to the Table of Contents

Field #11: Pediatric Living With

Values: 01 – Two parents
02 – One parent
03 - Relatives
04 – Foster care
05 - Other
07 – ND

1. Length 2
2. Start Position 55
3. End Position 56
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

Select a value in this field ONLY if the value selected in field # 10 *Pediatric Prehospital Setting* is equal to "01-Home"

[Click Here](#) to return to the Table of Contents

Field #12: Pediatric Education Category

Values: 01 – Not a student
 02 – Early Intervention program
 03 – Preschool
 04 – Kindergarten through 12th
 05 – Other

1. Length 2
2. Start Position 57
3. End Position 58
4. Allow blank or not YES
5. Data Type (Numeric, Character) NUMERIC

Field Instructions: Select the value that best describes the patients educational category

[Click Here](#) to return to the Table of Contents

Field #13: Pediatric Educational Setting

Values: 01 – Regular Class
 02 – Regular class with accommodation
 03 – Special Class
 04 – Home-based or Home Schooled
 05 – Day Care/nursery school/center-based/community

1. Length 2
2. Start Position 59
3. End Position 60
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions: If value 2, 3 or 4 is selected for the Pediatric Education Category, then an appropriate value for this field must be reported. If 01 or 05 is selected for Pediatric Education Category, then 06- NA must be selected.

[Click Here](#) to return to the Table of Contents

Field #14: Adult Prehospital Living With

Values: 01 – Alone
 02 – Family/Relatives
 03 - Friends
 04 – Attendant
 05 - Other
 06 - ND

1. Length 2
2. Start Position 61
3. End Position 62
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

Select the value that most accurately describes the patients living arrangements prior to their hospitalization

[Click Here](#) to return to the Table of Contents

Field #15: Adult Prehospital Vocational Category

Values: 01 – Employed
02 – Sheltered
03 – Student
04 – Homemaker
05 – Not Working
06 – Retired for Age
07 – Retired for Disability
08 – ND

1. Length 2
2. Start Position 63
3. End Position 64
4. Allow blank or not YES
5. Data Type (Numeric, Character) NUMERIC.

Field Instructions:

Select the value that most accurately describes the patients' vocation prior to their hospitalization

DEFINITIONS

Employed – The patient works for pay in a competitive environment or is self employed

Sheltered – The patient works for pay in a non-competitive environment

Student – the patient is enrolled in an accredited school (including trade school), college or university.

Homemaker – The patient works at home, does not work outside the home, is not paid by an employer, and is not self employed

Not Working – The patient is unemployed, but is not retired or receiving disability benefits

Retired for Age – The patient is retired (usually 60 years of age or older) and is receiving retirement benefits

Retired for Disability – The patient is receiving disability benefits and is less than 60 years of age.

[Click Here](#) to return to the Table of Contents

Field #16: Adult Prehospital Vocational Effort

Values: 01 – Full-time
02 – Part-time
03 – Adjusted Work load
04 – NA
05 - ND

1. Length 2
2. Start Position 65
3. End Position 66
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions: Select the value that most accurately describes the patients' vocation prior to their hospitalization, if values 1 – 4 are selected in field # __ Prehospital Vocation Category, then 01-03 are valid selections for this field. If 05-07 are selected in field # __, then 04 must be selected

DEFINITIONS

Full-time – The patient worked a full schedule (i.e. 37.5 or 40 hours per week) – which ever is normal where he/she works

Part-time - The patient worked less than full time (i.e. less than 37.5 or 40 hours per week) depending on the norm where he/she works.

Adjusted Workload – The patients' workload was adjusted due to disability. The patient was not able to perform all the work duties of the position

[Click Here](#) to return to the Table of Contents

Field #17: Transferring Facility ID

Values: ODH or ODPS assigned number.

- | | | |
|------------------------------------|----|---------|
| 1. Length | 4 | |
| 2. Start Position | 67 | |
| 3. End Position | 70 | |
| 4. Allow blank or not | NO | |
| 5. Data Type (Numeric, Character). | | NUMERIC |

Field Instructions:

If the patient is transferred from an Ohio hospital, enter the ODH assigned Ohio hospital code.
See Appendix 2 for the list of ODH assigned Ohio hospital codes

If the patient is transferred from an out of state hospital, enter the ODPS assigned out of state hospital code.
See Appendix 3 for the list of ODPS assigned out of state hospital codes.

If the patient is transferred from an Ohio Rehabilitation Facility, enter the ODPS assigned Ohio Rehabilitation Facility code. See Appendix 1 for the list of ODPS assigned Ohio Rehabilitation Facility codes

If the patient is transferred from an Ohio Nursing Facility, enter the ODH assigned Ohio Nursing Facility code.
See Appendix 4 for the list of ODH assigned Ohio Nursing Facility codes

[Click Here](#) to return to the Table of Contents

Field #18: Rehabilitation Facility Arrival Date

Values: mmdyyy

1. Length 8
2. Start Position 71
3. End Position 78
4. Allow blank or not NO
5. Data Type (Numeric, Character) DATE

Field Instructions:

The arrival date that the patient actually arrived at the rehabilitation facility.
Enter the month, day and year.

The actual date that the patient arrived at the rehabilitation facility.
Date format: 01/29/1998. The year must be complete year (1998).

[Click Here](#) to return to the Table of Contents

Field #19: Etiologic Diagnosis (ICD-9-CM Code)

Values: Report the ICD-9-CM diagnosis codes

- | | |
|------------------------------------|---------|
| 1. Length | 5 |
| 2. Start Position | 79 |
| 3. End Position | 83 |
| 4. Allow blank or not | YES |
| 5. Data Type (Numeric, Character). | NUMERIC |

Field Instructions:

Use an ICD-9-CM code to indicate the etiologic problem that led to the condition for which the patient is receiving rehabilitation. These should be diagnosis codes, not external cause of injury codes. When creating a data file the decimal point MUST be used. Example: 801.11 = 801.11 or 810 = 810.0. Give the complete code not category codes.

[Click Here](#) to return to the Table of Contents

Field #20: Co-Morbid Conditions (ICD-9-CM Codes)

Values: Report 10 additional ICD-9-CM codes of diagnoses

- | | | |
|------------------------------------|-----|---------|
| 1. Length | 50 | |
| 2. Start Position | 84 | |
| 3. End Position | 133 | |
| 4. Allow blank or not | YES | |
| 5. Data Type (Numeric, Character). | | NUMERIC |

Field Instructions:

The ICD-9-CM code for each injury diagnosis. List up to 10 codes. When creating a data file the decimal point MUST be used. Example: 801.11 = 801.11 or 810 = 810.0

[Click Here](#) to return to the Table of Contents

Version 1.0 Effective January 1, 2005

Field #21: Complications during Rehabilitation Stay (ICD-9-CM Codes)

Values: Report up to 6 ICD-9-CM codes

- | | |
|------------------------------------|---------|
| 1. Length | 30 |
| 2. Start Position | 134 |
| 3. End Position | 163 |
| 4. Allow blank or not | YES |
| 5. Data Type (Numeric, Character). | NUMERIC |

Field Instructions:

Enter an ICD-9-CM code for each complication that began with this rehabilitation stay. List up to 6 codes. When creating a data file the decimal point MUST be used. Example: 801.11 = 801.11 or 810 = 810.0

[Click Here](#) to return to the Table of Contents

Field # 22: Disability Assessment Tool Adult/Pediatric

(FIM™/WeeFIM® instrument)

Values: 1- Adult
2- Pediatric

- | | | |
|-----------------------------------|-----|----------|
| 1. Length | 1 | |
| 2. Start Position | 164 | |
| 3. End Position | 164 | |
| 4. Allow blank or not | NO | |
| 5. Data Type (Numeric, Character) | | NUMERIC. |

Field Instructions:

Facilities using an adult assessment-scoring model (i.e. FIM™ instrument) should select *1 - Adult*. Facilities that use a pediatric scoring model, (i.e. WeeFIM® instrument) regardless of the patient's age should select *2 - Pediatric*.

The FIM™ instrument and the WeeFIM® instrument incorporated or referenced herein are the property of UB Foundation Activities, Inc. ©1993, 2001 (FIM Instrument) ©1998, 2000 (WeeFIM instrument) UB Foundation Activities, Inc. The FIM and WeeFIM marks are owned by UB Foundation Activities, Inc.

[Click Here](#) to return to the Table of Contents

Field #23: Disability Assessment Score upon Admission

(FIM™/WeeFIM® instrument)

Values: 0- Activity Does Not Occur (applies only to the FIM™ instrument)

- 1- Total Assistance
- 2- Maximum Assistance
- 3- Moderate Assistance
- 4- Minimal Assistance
- 5- Supervision / Set-up
- 6- Modified Independence
- 7- Complete independence

25	Self-Care: Eating
26	Self-Care: Grooming
27	Self-Care: Bathing
28	Self-Care: Dressing-Upper Body
29	Self Care: Dressing-Lower Body
30	Self-Care: Toileting
31	Sphincter Control: Bladder Management
32	Sphincter Control: Bowel Management
33	Transfers: Bed, Chair, Wheelchair
34	Transfers: Toilet
35	Transfers: Tub, Shower
36	Locomotion: Walk. Wheelchair, crawl
37	Locomotion: Stairs
38	Communication: Comprehension
39	Communication: Expression
40	Social Cognition: Social Interaction
41	Social Cognition: Problem Solving
42	Social Cognition: Memory
	Motor Subscore
	Cognitive subscore
	Total Motor and Cognitive score

- | | |
|-----------------------------------|----------|
| 1. Length | 18 |
| 2. Start Position | 165 |
| 3. End Position | 182 |
| 4. Allow blank or not | NO |
| 5. Data Type (Numeric, Character) | NUMERIC. |

Field Instructions:

Motor Subscore is a calculated field, the sum of fields #25 through #37

Cognitive Subscore is a calculated field; the sum of fields #38 through #42

Total Motor and Cognitive score is a calculated field, the sum of Motor subscore and Cognitive subscore

Disability Assessment upon admission should be determined during the first three calendar days of the patients admission

The FIM™ instrument and the WeeFIM® instrument incorporated or referenced herein are the property of UB Foundation Activities, Inc. ©1993, 2001 (FIM Instrument) ©1998, 2000 (WeeFIM instrument) UB Foundation Activities, Inc. The FIM and WeeFIM marks are owned by UB Foundation Activities, Inc.

[Click Here](#) to return to the Table of Contents

Field #24: Disability Assessment Score upon Discharge

(FIM™/WeeFIM® instrument)

Values: 1-Complete Dependence
2-Maximum assistance
3-Moderate Assistance
4-Minimal Assistance
5-Supervision / Set-up
6-Modified Independence
7-Complete independence

25 Self-Care: Eating
26 Self-Care: Grooming
27 Self-Care: Bathing
28 Self-Care: Dressing-Upper Body
29 Self Care: Dressing-Lower Body
30 Self-Care: Toileting
31 Sphincter Control: Bladder Management
32 Sphincter Control: Bowel Management
33 Transfers: Bed, Chair, Wheelchair
34 Transfers: Toilet
35 Transfers: Tub, Shower
36 Locomotion: Walk. Wheelchair, crawl
37 Locomotion: Stairs
38 Communication: Comprehension
39 Communication: Expression
40 Social Cognition: Social Interaction
41 Social Cognition: Problem Solving
42 Social Cognition: Memory
Motor Subscore
Cognitive subscore
Total Motor and Cognitive score

1. Length 18
2. Start Position 183
3. End Position 200
4. Allow blank or not NO
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

Motor Subscore is a calculated field, the sum of fields #25 through #37

Cognitive Subscore is a calculated field; the sum of fields #38 through #42

Total Motor and cognitive score is a calculated field, the sum of Motor subscore and cognitive subscore

The FIM™ instrument and the WeeFIM® instrument incorporated or referenced herein are the property of UB Foundation Activities, Inc. ©1993, 2001 (FIM Instrument) ©1998, 2000 (WeeFIM instrument) UB Foundation Activities, Inc. The FIM and WeeFIM marks are owned by UB Foundation Activities, Inc.

[Click Here](#) to return to the Table of Contents

Field # 25: Date of Discharge or Death

Values: mmddyyyy

1. Length 8
2. Start Position 201
3. End Position 208
4. Allow blank or not NO
5. Data Type (Numeric, Character). DATE

Field Instructions:

Enter the date of the patient's discharge, transfer or death from the rehabilitation facility. The actual date that the patient was discharged from the rehabilitation facility or date that the patient was pronounced dead.

Date format: 01/29/1998. The year must be complete year (1998).

[Click Here](#) to return to the Table of Contents

Field # 26: Discharge Status

Values: 1- Alive
2- Dead

1. Length	1	
2. Start Position	209	
3. End Position	209	
4. Allow blank or not	NO	
5. Data Type (Numeric, Character).		NUMERIC

Field Instructions:

Enter the status of the patient upon discharge from the rehabilitation facility. The patient was alive or dead when they left the rehabilitation facility.

[Click Here](#) to return to the Table of Contents

Field #27: Adult Discharge Disposition

Values:

- 1 – Home
- 2 – Board and Care
- 3 – Transitional Living
- 4 – Intermediate care
- 5 – Skilled Nursing Facility
- 6 – Acute Unit of own facility
- 7 – Acute Unit another facility
- 8 - Chronic Hospital (LTAC)
- 9 – Rehabilitation facility
- 10 – Other
- 11 - Died
- 12 – Alternate Level of care
- 13 – Subacute setting
- 14 – Assisted Living Residence

- 1. Length 2
- 2. Start Position 210
- 3. End Position 211
- 4. Allow blank or not YES
- 5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

The patient's disposition upon discharge from the rehabilitation facility. If #01 is selected you must make an entry in Field # *XX Discharge Living With*. If #04, 05, 07, or 09 is selected you must enter an ODPS or ODH Assigned facility code in field # *XX-Transfer to Other Rehabilitation Facility*.

[Click Here](#) to return to the Table of Contents

Field # 28: Adult Discharge Living With

Values: 01 – Alone
02 – Family/Relatives
03 - Friends
04 – Attendant
05 - Other
06 - NA

1. Length 2
2. Start Position 212
3. End Position 213
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

If values 1, 2, 3 or 14 are selected in field #27 – *Adult Discharge Disposition*, then values 01 through 05 are valid for this field, otherwise 06- NA must be selected.

[Click Here](#) to return to the Table of Contents

Field # 29: Pediatric Discharge Disposition

Values: 01 – Home
 02 – Acute Care unit of own facility
 03 – Acute care unit of another facility
 04 – Rehabilitation facility
 05 – Residential facility
 06 – Transitional living center
 07 - Skilled nursing facility
 08 – Shelter
 09 – Other
 10 - Died

1. Length 2
2. Start Position 214
3. End Position 215
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

Select the value that most accurately describes the patients living arrangements prior to their hospitalization.
Note that the value "04" is not used in this field.

[Click Here](#) to return to the Table of Contents

Field # 30 Pediatric Discharge Living With

Values: 01 – Two parents
 02 – One parent
 03 - Relatives
 04 – Foster care
 05 - Other
 07 – ND

1. Length 2
2. Start Position 216
3. End Position 217
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

Select a value in this field ONLY if the value selected in field # 29 *Pediatric Prehospital Setting* is equal to "01-Home"

[Click Here](#) to return to the Table of Contents

Field # 31: Discharge Referrals

Values: 01 - None
 02 – Outpatient
 03 – Home-based paid professional therapy
 04 – Both 2 and 3
 05 – Inpatient hospital
 06 - Day treatment
 07 – School-based
 08 – Other (examples – homeless or women’s shelters, protective services, etc.)

1. Length 10
2. Start Position 218
3. End Position 227
4. Allow blank or not NO
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

More than one value may be selected.

[Click Here](#) to return to the Table of Contents

Field # 32: Transfer to Other Hospital/Facility

Value: ODH assigned # for in-state hospitals
ODPS assigned # for out of state hospitals
ODPS assigned # for rehabilitation facilities
ODH assigned # for licensed nursing home

1. Length 4
2. Start Position 228
3. End Position 231
4. Allow blank or not YES/NO
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

Enter the location of the patient disposition from the hospital. If the patient is transferred to another Ohio hospital, enter the ODH assigned Ohio hospital code. See Appendix 1-A for the list of ODH assigned Ohio hospital codes. If the patient is transferred to an out of state hospital, enter the ODPS assigned out of state hospital code. See Appendix 1-B for the list of ODPS assigned out of state hospital codes. If the patient is transferred to a rehabilitation facility, enter the ODPS assigned rehabilitation facility code. See Appendix 1-C for the list of ODPS assigned rehabilitation facilities codes. If the patient is transferred to a licensed nursing home, enter the ODH assigned nursing home facility code. See Appendix 1-D for the list of ODH assigned nursing home facilities codes.

[Click Here](#) to return to the Table of Contents

Version 1.0 Effective January 1, 2005

Field #33: Billed Rehabilitation Facility Charges

Values: Whole Dollar amount of total rehabilitation facility charges rounded off to the nearest dollar
Blank* – Not Documented

1. Length 10
2. Start Position 232
3. End Position 241
4. Allow blank or not YES
5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

The final billed amount charged for this admission, excluding professional fees, at the rehabilitation facility, expressed in a whole dollar figure.

Total amount charged to the patient for treatment received at the rehabilitation facility expressed in a whole dollar amount.

*If the information is not documented leave this field blank.

NOTE that it is acceptable to leave this field blank. Calculations that will be performed on this field (addition, averages, means, etc.) require either a whole dollar amount or a blank field. DO NOT use "ND" or "9999" in this field.

[Click Here](#) to return to the Table of Contents

Field #34: Payment Source

- 1 – Primary Source
- 2 – Secondary Source

Code each source with one of the following values

01 – Blue Cross	(Adult/IRFPAI)	
02 – Medicare non-MCO	(Adult/IRFPAI)	
03 – Medicaid non-MCO	(Adult/IRFPAI)	
04 – Commercial Insurance	(Adult/IRFPAI)	
05 – MCO HMO	(Adult/IRFPAI)	
06 – Workers' Compensation	(Adult/IRFPAI)	
07 – Crippled Children's Services / Bureau of Children with Medical Handicaps	(Adult/IRFPAI)	(Adult/IRFPAI)
08 – Developmental Disabilities Services	(Adult/IRFPAI)	
09 – State Vocational Rehabilitation	(Adult/IRFPAI)	
10 – Private Pay	(Adult/IRFPAI)	
11 – Employee Courtesy	(Adult/IRFPAI)	
12 – Unreimbursed	(Adult/IRFPAI)	
13 – CHAMPUS	(Adult/IRFPAI)	
14 – Other	(Adult/IRFPAI)	
15 – None	(Adult/IRFPAI)	
16 – No-Fault Auto Insurance	(Adult/IRFPAI)	
21 – Medicaid non MCO	(Pediatric/WeeFIM II)	
22 – Medicaid Waiver Program (non-MCO)	(Pediatric/WeeFIM II)	
23 – Medicaid MCO	(Pediatric/WeeFIM II)	
24 – Medicaid Waiver Program (MCO)	(Pediatric/WeeFIM II)	
25 – MCO HMO	(Pediatric/WeeFIM II)	
26 – Commercial Insurance/PPO	(Pediatric/WeeFIM II)	
27 – Medicare	(Pediatric/WeeFIM II)	
28 – SSI	(Pediatric/WeeFIM II)	
29 – State Education Department	(Pediatric/WeeFIM II)	
30 – State Vocational Rehabilitation	(Pediatric/WeeFIM II)	
31 – Developmental Disabilities Services	(Pediatric/WeeFIM II)	
32 – Crippled Children's Services / Bureau of Children with Medical Handicaps	(Pediatric/WeeFIM II)	(Pediatric/WeeFIM II)
33 – State health Department/Department of Human Resources		(Pediatric/WeeFIM II)
34 – Children's Health Insurance Program	(Pediatric/WeeFIM II)	
35 – Worker's Compensation	(Pediatric/WeeFIM II)	
36 – TRICARE	(Pediatric/WeeFIM II)	
37 - Private Pay	(Pediatric/WeeFIM II)	
38 – Unreimbursed Care	(Pediatric/WeeFIM II)	
39 - No-Fault Auto Insurance	(Pediatric/WeeFIM II)	
40 – Government program (non U.S.)	(Pediatric/WeeFIM II)	
41 – Other	(Pediatric/WeeFIM II)	
51 – Medicare MCO	(Adult/IRFPAI)	
52 – Medicaid MCO	(Adult/IRFPAI)	

- 1. Length 4
- 2. Start Position 242
- 3. End Position 245
- 4. Allow blank or not NO
- 5. Data Type (Numeric, Character). NUMERIC

Field Instructions:

The entity that is expected to be responsible for the largest percentage of the patient's bill for the current encounter, both as a primary payor source as well as a secondary payor source. Values 17-20 and 42-50 are not

Version 1.0 Effective January 1, 2005

utilized.

Select from the pulldown menu the appropriate final payment source responsible for the outstanding charges incurred.

[Click Here](#) to return to the Table of Contents

Field #35: Adult Length of Stay in Rehabilitation Facility

Values: mm/dd/yyyy

Interruptions in care #1

1st Interruption date mm/dd/yyyy

1st Return date mm/dd/yyyy

Interruptions in care #2

2nd Interruption date mm/dd/yyyy

2nd Return date mm/dd/yyyy

Interruptions in care #3

3rd Interruption date mm/dd/yyyy

3rd Return date mm/dd/yyyy

1. Length 48

2. Start Position 246

3. End Position 293

4. Allow blank or not YES

5. Data Type (Numeric, Character). DATE

Field Instructions:

Enter the dates of up to three interruptions in care. The length of stay in the rehabilitation facility will be calculated by subtracting the total number of days of interrupted care from the total number of days from admission to discharge. Using this process will allow the LOS to be calculated

An interruption in care is defined as a discharge from the rehabilitation center and returns to the same facility within three consecutive days.

[Click Here](#) to return to the Table of Contents

Field #36: Pediatric Length of Stay in Rehabilitation Facility

Values: mm/dd/yyyy

Interruptions in care #1

1st Interruption date mm/dd/yyyy

1st Return date mm/dd/yyyy

Interruptions in care #2

2nd Interruption date mm/dd/yyyy

2nd Return date mm/dd/yyyy

Interruptions in care #3

3rd Interruption date mm/dd/yyyy

3rd Return date mm/dd/yyyy

1. Length 48

2. Start Position 294

3. End Position 341

4. Allow blank or not YES

5. Data Type (Numeric, Character). DATE

Field Instructions:

Enter the dates of up to three interruptions in care. The length of stay in the rehabilitation facility will be calculated by subtracting the total number of days of interrupted care from the total number of days from admission to discharge. Using this process will allow the LOS to be calculated.

[Click Here](#) to return to the Table of Contents

APPENDIX 1

Ohio Rehabilitation Facility Codes

Code	County	Facility Name
1007	Cuyahoga	Parma Community General Hospital
1011	Madison	Madison County Hospital
1015	Franklin	Doctor's Hospital West - Columbus
1016	Stark	Doctor's Hospital - Stark County
1021	Gallia	Holzer Medical Center
1024	Hamilton	Bethesda North - Cincinnati
1026	Hamilton	Franciscan Hospital - Mt. Airy
1036	Miami	Upper Valley Medical Center
1102	Allen	Lima Memorial Hospital
1103	Allen	St. Rita's Medical Center
1113	Belmont	Belmont Community Hospital
1116	Butler	Middletown Regional Hospital
1123	Clark	Mercy Medical Center - Springfield
1131	Crawford	MedCentral - Crestline
1133	Cuyahoga	Euclid Hospital
1134	Cuyahoga	Lakewood Hospital
1136	Cuyahoga	Marymount Hospital
1145	Cuyahoga	Fairview Hospital
1149	Cuyahoga	Lutheran Hospital
1150	Cuyahoga	MetroHealth Medical Center
1151	Cuyahoga	Cleveland Clinic Foundation
1156	Cuyahoga	University Hospitals of Cleveland
1164	Erie	Firelands Community Hospital - Decatur St. Facility
1167	Fairfield	Fairfield Medical Center
1169	Franklin	Columbus Children's Hospital
1171	Franklin	Ohio State University Medical Center
1173	Franklin	Grant Medical Center
1175	Franklin	Mount Carmel West Hospital
1180	Greene	Greene Memorial Hospital
1183	Hamilton	Mercy Franciscan Hospital - Western Hills
1186	Hamilton	Cincinnati Children's Hospital Medical Center
1187	Hamilton	The Christ Hospital
1190	Hamilton	Deaconess Hospital - Cincinnati
1191	Hamilton	Tri-Health Good Samaritan Hospital - Cincinnati
1200	Highland	Greenfield Area Medical Center
1208	Jefferson	Trinity Medical Center - East
1218	Lorain	Community Health Partners
1225	Lucas	St. Vincent Mercy Medical Center
1227	Lucas	Flower Hospital
1228	Lucas	Medical College of Ohio Hospital
1230	Mahoning	St. Elizabeth's Health Center
1233	Marion	Marion General Hospital
1235	Medina	Wadsworth-Rittman Hospital
1245	Montgomery	Good Samaritan Hospital - Dayton
1246	Montgomery	Grandview Hospital
1247	Montgomery	Miami Valley Hospital
1251	Muskingum	Genesis Good Samaritan Hospital - Zanesville
1254	Pickaway	Berger Hospital

Version 1.0 Effective January 1, 2005

1257	Richland	MedCentral - Mansfield
1264	Scioto	Southern Ohio Medical Center
1269	Stark	Alliance Community Hospital
1270	Stark	Aultman Hospital
1271	Stark	Mercy Medical Center - Canton
1272	Stark	Massillon Community Hospital
1275	Summit	Akron City Hospital
1278	Summit	St. Thomas Hospital
1279	Summit	Barberton Citizen's Hospital
1289	Washington	Marietta Memorial Hospital
1294	Williams	Community Hospital of Williams Co. - Montpelier
1297	Cuyahoga	South Pointe Hospital
1318	Sandusky	St. Francis Health Center
1320	Summit	Edwin Shaw Rehab Center
1321	Trumbull	Hillside Rehabilitation Hospital
1409	Hamilton	Drake Center Inc.
1416	Cuyahoga	Cleveland Clinic Children's Hospital for Rehabilitation
1420	Geauga	Rehab Hospital at Heather Hill
9000		Other Ohio Rehabilitation Facility

APPENDIX 2

Ohio Hospital Facility Codes

1100	Adams	Adams County Hospital
1029	Ross	Adena Regional Medical Center
1277	Summit	Akron Children's Hospital Medical Center
1275	Summit	Akron City Hospital
1276	Summit	Akron General Medical Center
1219	Lorain	Allen Memorial Hospital
1269	Stark	Alliance Community Hospital
1215	Lorain	Amherst Hospital
1106	Ashtabula	Ashtabula County Medical Center
1270	Stark	Aultman Hospital
1443	Stark	Aultman Hospital West
1279	Summit	Barberton Citizen's Hospital
1112	Belmont	Barnesville Hospital Association
1178	Lucas	Bay Park Community Hospital
1113	Belmont	Belmont Community Hospital
1254	Pickaway	Berger Hospital
1250	Muskingum	Bethesda Hospital - Zanesville
1024	Hamilton	Bethesda North - Cincinnati
1194	Hancock	Blanchard Valley Regional Health Center
1101	Allen	Blanchard Valley Regional Health Center - Bluffton
1115	Brown	Brown County General Hospital
1107	Ashtabula	Brown Memorial Hospital
1130	Crawford	Bucyrus Community Hospital
1186	Hamilton	Cincinnati Children's Hospital Medical Center
1028	Clermont	Clermont Mercy Hospital
1151	Cuyahoga	Cleveland Clinic Foundation
1124	Clinton	Clinton Memorial Hospital
1169	Franklin	Columbus Children's Hospital
1018	Lorain	Community Health Partners - West
1447	Fulton	Community Hospital - Williams County - Archbold Hospital
1293	Williams	Community Hospital - Williams County - Bryan
1122	Clark	Community Hospital of Springfield
1294	Williams	Community Hospital of Williams Co. - Montpelier
1161	Defiance	Community Memorial Hospital
1129	Coshocton	Coshocton County Memorial Hospital
1280	Summit	Cuyahoga Falls General Hospital
1411	Montgomery	Dayton Children's Medical Center
1431	Montgomery	Dayton Heart Hospital
1190	Hamilton	Deaconess Hospital - Cincinnati
1152	Cuyahoga	Deaconess Hospital - Cleveland
1160	Defiance	Defiance Hospital
1016	Stark	Doctors Hospital -- Massillon
1110	Athens	Doctors Hospital - Nelsonville
1015	Franklin	Doctor's Hospital West - Columbus
1291	Wayne	Dunlap Memorial Hospital
1127	Columbiana	East Liverpool City Hospital
1114	Belmont	East Ohio Regional Hospital
1217	Lorain	EMH Regional Medical Center
1133	Cuyahoga	Euclid Hospital
1167	Fairfield	Fairfield Medical Center

Version 1.0 Effective January 1, 2005

1145	Cuyahoga	Fairview Hospital
1168	Fayette	Fayette County Memorial Hospital
1164	Erie	Firelands Community Hospital
1204	Huron	Fisher-Titus Medical Center
1227	Lucas	Flower Hospital
1117	Butler	Fort Hamilton-Hughes Memorial Hospital
1195	Seneca	Fostoria Community Hospital
1026	Hamilton	Franciscan Hospital – Mt. Airy
1177	Fulton	Fulton County Health Center
1132	Crawford	Galion Community Hospital
1251	Muskingum	Genesis Good Samaritan Hospital - Zanesville
1245	Montgomery	Good Samaritan Hospital - Dayton
1163	Delaware	Grady Memorial Hospital
1246	Montgomery	Grandview Hospital
1173	Franklin	Grant Medical Center
1817	Greene	Greene Memorial Hospital
1200	Highland	Greenfield Area Medical Center
1252	Ottawa	H.B. Magruder Memorial Hospital
1196	Hardin	Hardin Memorial Hospital
1022	Harrison	Harrison Community Hospital
1198	Henry	Henry County Hospital
1199	Highland	Highland District Hospital
1019	Cuyahoga	Hillcrest Hospital
1201	Hocking	Hocking Valley Community Hospital
1438	Jackson	Holzer Jackson Medical Center
1021	Gallia	Holzer Medical Center
1148	Cuyahoga	Huron Hospital
1445	Allen	Institute for Orthopedic Surgery
1003	Hamilton	Jewish Hospital
1111	Auglaize	Joint Township District Memorial Hospital
1017	Montgomery	Kettering Memorial Medical Center
1030	Knox	Knox Community Hospital
1211	Lake	Lake East Hospital
1006	Lake	Lake West Hospital
1134	Cuyahoga	Lakewood Hospital
1213	Licking	Licking Memorial Hospital
1102	Allen	Lima Memorial Hospital
1234	Medina	Lodi Community Hospital
1218	Lorain	Lorain Community - St. Joseph's
1149	Cuyahoga	Lutheran Hospital
1011	Madison	Madison County Hospital
1289	Washington	Marietta Memorial Hospital
1233	Marion	Marion General Hospital
1214	Logan	Mary Rutan Hospital
1136	Cuyahoga	Marymount Hospital
1272	Stark	Massillon Community Hospital
1119	Butler	Mc Cullough-Hyde Memorial Hospital
1131	Crawford	MedCentral - Crestline
1257	Richland	MedCentral - Mansfield
1259	Richland	MedCentral - Shelby
1228	Lucas	Medical College of Ohio Hospital
1236	Medina	Medina General Hospital
1263	Sandusky	Memorial Hospital - Fremont
1108	Ashtabula	Memorial Hospital - Geneva

Version 1.0 Effective January 1, 2005

1286	Union	Memorial Hospital - Union County
1240	Mercer	Mercer County Joint Twp. Community Hospital
1183	Hamilton	Mercy Franciscan Hospital - Western Hills
1193	Hamilton	Mercy Hospital - Anderson
1033	Butler	Mercy Hospital - Fairfield
1267	Seneca	Mercy Hospital - Tiffin
1205	Huron	Mercy Hospital - Willard
1271	Stark	Mercy Medical Center - Canton
1123	Clark	Mercy Medical Center - Springfield
1121	Champaign	Mercy Memorial Hospital
1150	Cuyahoga	MetroHealth Medical Center
1247	Montgomery	Miami Valley Hospital
1116	Butler	Middletown Regional Hospital
1249	Morrow	Morrow County Hospital
1027	Franklin	Mount Carmel East Hospital
1175	Franklin	Mount Carmel West Hospital
1231	Mahoning	Northside Medical Center
1109	Athens	O'Bleness Memorial Hospital
1171	Franklin	Ohio State University Medical Center
1170	Franklin	OSU East
1007	Cuyahoga	Parma Community General Hospital
1253	Paulding	Paulding County Hospital
1299	Pike	Pike Community Hospital
1202	Holmes	Pomerene Hospital
1165	Erie	Providence Hospital
1008	Cuyahoga	Richmond Heights Hospital
1212	Lawrence	River Valley Health System
1222	Lucas	Riverside Mercy Hospital
1005	Franklin	Riverside Methodist Hospital
1255	Portage	Robinson Memorial Hospital
1125	Columbiana	Salem Community Hospital
1104	Ashland	Samaritan Regional Health System
1288	Washington	Selby General Hospital
1808	Hamilton	Shriners Burn Hospital
1297	Cuyahoga	South Pointe Hospital
1181	Guernsey	Southeastern Ohio Regional Medical Center
1264	Scioto	Southern Ohio Medical Center
1035	Montgomery	Southview Hospital & Family Health Center
1140	Cuyahoga	Southwest General Health Center
1444	Lucas	St. Anne Mercy Hospital
1606	Franklin	St. Ann's Hospital
1223	Lucas	St. Charles Hospital
1230	Mahoning	St. Elizabeth's Health Center
1034	Cuyahoga	St. John West Shore Hospital
1000	Trumbull	St. Joseph Health Center
1224	Lucas	St. Luke's Hospital - Toledo
1154	Cuyahoga	St. Luke's Medical Center - Cleveland
1158	Cuyahoga	St. Michael Hospital
1103	Allen	St. Rita's Medical Center
1155	Cuyahoga	St. Vincent Charity
1225	Lucas	St. Vincent Mercy Medical Center
1031	Montgomery	Sycamore Hospital
1261	Sandusky	The Bellevue Hospital
1187	Hamilton	The Christ Hospital

Version 1.0 Effective January 1, 2005

1226	Lucas	The Toledo Hospital
1189	Hamilton	The University Hospital - Cincinnati
1441	Lawrence	Three Gables Surgery Center
1191	Hamilton	Tri-Health Good Samaritan Hospital - Cincinnati
1208	Jefferson	Trinity Medical Center - East
1004	Jefferson	Trinity Medical Center - West
1283	Trumbull	Trumbull Memorial Hospital
1284	Tuscarawas	Twin City Hospital
1141	Cuyahoga	UHHS - Bedford Medical Center
1001	Geauga	UHHS - Geauga Regional Hospital
1142	Cuyahoga	UHHS - Rainbow Babies and Children's Hospital
1285	Tuscarawas	Union Hospital
1242	Miami	Upper Valley Medical Center
1700	Cuyahoga	VA Medical Center - Brecksville
1706	Ross	VA Medical Center - Chillicothe
1704	Hamilton	VA Medical Center - Cincinnati
1701	Cuyahoga	VA Medical Center - Cleveland
1705	Montgomery	VA Medical Center - Dayton
1287	Van Wert	Van Wert County Hospital
1235	Medina	Wadsworth-Rittman Hospital
1159	Darke	Wayne Hospital
1268	Shelby	Wilson Hospital
1295	Wood	Wood County Hospital
1292	Wayne	Wooster Community Hospital
1180	Montgomery	Wright Patterson Medical Center - 74th Medical Division
1296	Wyandot	Wyandot Memorial Hospital
1998		Specialty Hospital/LTC
1999		Free Standing Emergency Center

APPENDIX 3

Out of State Hospital, Rehabilitation and Nursing Facility Codes

INDIANA			
Code	State	County	Facility Name
6000	IN		Other Indiana Hospital
6001	IN	Steuben	Cameron Memorial Community Hospital
6002	IN	DeKalb	Dekalb Memorial Hospital
6003	IN	Allen	Dupont Hospital
6004	IN	Allen	Lutheran Hospital of Indiana
6005	IN	Allen	Parkview Hospital
6006	IN	Allen	St. Joseph Hospital
6007	IN	Adams	Adams County Memorial Hospital
6008	IN	Jay	Jay County Hospital
6009	IN	Randolph	St. Vincent Randolph Hospital
6010	IN	Wayne	Reid Hospital and Health Care Services
6011	IN	Dearborn	Dearborn County Hospital
6012	IN	LaGrange	Lagrange Community Hospital
6013	IN	Noble	Parkview Noble Hospital
6014	IN	Whitley	Whitley Memorial Hospital
6015	IN	Wells	Bluffton Regional Medical Center
6016	IN	Blackford	Blackford County Hospital
6017	IN	Delaware	Ball Memorial Hospital
6018	IN	Henry	Henry County Memorial Hospital
6019	IN	Fayette	Fayette Memorial Hospital Association
6020	IN	Ripley	Margaret Mary Community Hospital
6888	IN		Other Indiana Nursing Facility
6999	IN		Other Indiana Rehabilitation Facility

KENTUCKY			
Code	State	County	Facility Name
7000	KY		Other Kentucky Hospital
7001	KY	Kenton	St. Elizabeth Medical Center - North
7002	KY	Kenton	St. Elizabeth Medical Center - South
7003	KY	Campbell	St. Luke Hospital - East
7004	KY	Fleming	Fleming County Hospital
7005	KY	Mason	Meadowview Regional Medical Center
7006	KY	Rowan	St. Claire Medical Center
7007	KY	Boyd	King's Daughters' Medical Center
7008	KY	Greenup	Our Lady of Bellefonte Hospital
7009	KY	Harrison	Harrison Memorial Hospital
7010	KY	Grant	St. Elizabeth Medical Center - Grant
7011	KY	Boone	St. Luke Hospital - West
7888	KY		Other Kentucky Nursing Facility
7999	KY		Other Kentucky Rehabilitation Facility

MICHIGAN			
Code	State	County	Facility Name
5000	MI		Other Michigan Hospital
5001	MI	Berrien	Community Hospital
5002	MI	Berrien	Lakeland Hospital
5003	MI	Branch	Community Health Center of Branch
5004	MI	Calhoun	Battle Creek Health System
5005	MI	Calhoun	Fieldstone Center of Battle Creek
5006	MI	Cass	Lee Memorial

Version 1.0 Effective January 1, 2005

5007	MI	Hillsdale	Hillsdale Community Health Center
5008	MI	Jackson	Doctors Hospital of Jackson
5009	MI	Jackson	W.A. Foote Memorial Hospital
5010	MI	Kalamazoo	Borgess Medical Center
5011	MI	Kalamazoo	Bronson Methodist Hospital
5012	MI	Kalamazoo	Bronson Vicksburg Hospital
5013	MI	Lenawee	Emma L. Bixby Medical Center
5014	MI	Lenawee	Herrick Memorial Hospital
5015	MI	Monroe	Mercy Memorial Hospital
5016	MI	St. Joseph	Sturgis Memorial
5017	MI	St. Joseph	Three Rivers Area Hospital
5018	MI	Van Buren	Lakeview Community Hospital
5019	MI	Van Buren	South Haven Community Hospital
5020	MI	Washtenaw	Chelsea Community Hospital
5021	MI	Wayne	Forest Health Medical Center
5022	MI	Wayne	Saline Community Hospital
5023	MI	Wayne	St. Joseph Mercy Hospital
5024	MI	Wayne	University of Michigan Health Center
5888	MI		Other Michigan Nursing Facility
5999	MI		Other Michigan Rehabilitation Facility

PENNSYLVANIA

Code	State	County	Facility Name
8000	PA		Other Pennsylvania Hospital
8001	PA	Allegheny	Allegheny General Hospital
8002	PA	Allegheny	Allegheny Valley Hospital
8003	PA	Washington	AUMC Canonsburg
8004	PA	Allegheny	Children's Hospital of Pittsburgh
8005	PA	Erie	Corry Memorial Hospital
8006	PA	Allegheny	Forbes Regional Hospital
8007	PA	Greene	Greene County Memorial Hospital
8008	PA	Erie	Hamot Medical Center
8009	PA	Allegheny	Lifecare Hospitals of Pittsburgh
8010	PA	Crawford	Meadville Medical Center
8011	PA	Beaver	Medical Center Beaver PA
8012	PA	Allegheny	Mercy Hospital of Pittsburgh
8013	PA	Allegheny	Mercy Providence Hospital
8014	PA	Erie	Metro Health Center
8015	PA	Erie	Millcreek Community Hospital
8016	PA	Washington	Monongahela Valley Hospital
8017	PA	Allegheny	Ohio Valley General Hospital
8018	PA	Erie	St. Vincent Health Center
8019	PA	Allegheny	Sewickley Valley Hospital
8020	PA	Mercer	Sharon Regional Health System
8021	PA	Erie	Shriners Hospital for Children - Erie
8022	PA	Allegheny	South Hills Health System
8023	PA	Allegheny	St. Clair Memorial Hospital
8024	PA	Allegheny	Suburban General Hospital - Pittsburgh
8025	PA	Crawford	Titusville Area Hospital
8026	PA	Erie	Union City Memorial Hospital
8027	PA	Mercer	United Community Hospital
8028	PA	Beaver	UPMC Beaver Valley
8029	PA	Allegheny	UPMC Braddock
8030	PA	Mercer	UPMC Horizon
8031	PA	Allegheny	UPMC McKeesport

Version 1.0 Effective January 1, 2005

8032	PA	Allegheny	UPMC Passavant
8033	PA	Allegheny	UPMC Presbyterian
8034	PA	Allegheny	IPMC Shadyside
8035	PA	Allegheny	UPMC South side
8036	PA	Allegheny	UPMC St. Margaret
8037	PA	Erie	VA Medical Center - Erie
8038	PA	Washington	Washington Hospital
8039	PA	Allegheny	Western Pennsylvania Hospital
8888	PA		Other Pennsylvania Nursing Facility
8999	PA		Other Pennsylvania Rehabilitation Facility

WEST VIRGINIA

Code	State	County	Facility Name
4000	WV		Other West Virginia Hospital
4001	WV	Brooke	Weirton Medical Center
4002	WV	Ohio	Ohio Valley Medical Center
4003	WV	Ohio	Peterson Hospital
4004	WV	Ohio	Wheeling Hospital
4005	WV	Marshall	Reynolds Memorial Hospital
4006	WV	Wetzel	Wetzel County Hospital
4007	WV	Tyler	Sistersville General Hospital
4008	WV	Mason	Pleasant Valley Hospital
4009	WV	Wayne	Huntington VA Medical Center
4010	WV	Marion	Fairmont General Hospital
4011	WV	Roane	Roane General Hospital
4012	WV	Putnam	Putnam General Hospital
4013	WV	Kanawha	CAMA General Hospital
4014	WV	Cabell	Cabell Huntington Hospital
4015	WV	Cabell	Mildred Mitchell-Bateman Hospital
4016	WV	Cabell	River Park Hospital
4017	WV	Cabell	St. Mary's Hospital
4018	WV	Wood	Camden-Clark Memorial
4019	WV	Wood	St. Joseph's Hospital/Parkersburg
4888	WV		Other West Virginia Nursing Facility
4999	WV		Other West Virginia Rehabilitation Facility

STATES OTHER THAN MI. WV. IN. PA. KY.

Code	State	County	Facility Name
9227			Rehabilitation Facility in a state other than MI, WV, IN, PA, KY
9300			Nursing Facility in another country
9333			Hospital in a state other than MI, WV, IN, PA, KY
9444			Hospital in another country
9888			Nursing Facility in a state other than MI, WV, IN, PA, KY

APPENDIX 4

Ohio Nursing Facility Codes

2020	Cuyahoga	A. M. McGregor Home
2021	Cuyahoga	A. M. McGregor Home
2170	ADAMS	Adams County Manor
2770	Muskingum	Adams Lane Care Center
2115	Hamilton	Alaska Acres Care Center
2039	Cuyahoga	Algart Health Care, Inc.
2972	Hamilton	Alois Alzheimer Center The
2907	Cuyahoga	Altenheim
2765	Stark	Altercare of Alliance Center for Rehab. & Nursing Care, Inc.
2596	Crawford	Altercare of Bucyrus Center for Rehab. & Nursing Care, Inc.
2212	Stark	Altercare of Canton
2271	Stark	Altercare of Hartville Center for Rehabilitation & Nursing Care, Inc.
2944	Cuyahoga	Altercare of Mayfield Village, Inc.
2287	Lake	Altercare of Mentor Center for Rehab. & Nursing Care, Inc.
2703	Stark	Altercare of Navarre Center for Rehab. & Nursing Care, Inc.
2835	Portage	Altercare of Ravenna Center for Rehab. & Nursing Care, Inc.
2072	Fairfield	Altercare of Valley View Nursing Home, Inc.
2857	Medina	Altercare of Wadsworth Center for Rehab. & Nursing Care, Inc.
2076	Cuyahoga	Amasa Stone House Div, A M McGregor Hm
2094	Tuscarawas	Amberwood Manor
2357	Lorain	Amherst Manor
2321	Lorain	Anchor Lodge Nursing Home, Inc.
2148	Hamilton	Anderson, The
2758	Ashtabula	Andover Village Retirement Community
2919	Portage	Anna Maria of Aurora, Inc.
2095	Wayne	Apostolic Christian Home, Inc.
2842	Stark	Arbors at Canton Subacute Rehabilitation Center
2509	Sandusky	Arbors at Clyde - Nursing Center
2158	Montgomery	Arbors at Dayton Nursing & Subacute Center
2760	Delaware	Arbors at Delaware
2550	Summit	Arbors at Fairlawn
2801	Gallia	Arbors at Gallipolis
2522	Franklin	Arbors at Hilliard
2868	Madison	Arbors at London
2551	Washington	Arbors at Marietta
2559	Clermont	Arbors at Milford
2673	Lucas	Arbors at Oregon
2241	Lucas	Arbors at Sylvania
2902	Lucas	Arbors at Toledo Subacute & Rehab Center
2502	Lucas	Arbors at Waterville
2414	Franklin	Arbors East Subacute and Rehabilitation Center
2747	Madison	Arbors West
2281	Hocking	Arcadia Acres, Inc.
2624	Athens	Arcadia Nursing Center
2041	Hamilton	Archbishop Leibold Home
2608	Cuyahoga	Aristocrat Berea Nursing Home
2858	Cuyahoga	Aristocrat Lakewood Nursing Home Corp.
2332	Franklin	Arlington Court Nursing Home
2385	Hancock	Arlington Good Samaritan Center
2735	Licking	Arlington Nursing Home

Version 1.0 Effective January 1, 2005

2251	Ashtabula	Ashtabula County Medical Center SNU
2508	Ashtabula	Ashtabula County Nursing Home
2469	Mahoning	Assumption Village, The
2217	Crawford	Atwood Manor, Inc.
2820	Montgomery	Auburn Hills Healthcare Center
2557	Fayette	Auburn Manor
2231	Stark	Aultman Transitional Care Center
2418	Portage	Aurora Manor Special Care Centre
2218	Ashtabula	Austinburg Nursing & Rehabilitation Ctr
2575	Mahoning	AustinWoods Nursing Center
2341	Lorain	Autumn Aegis Nursing Center
2108	Putnam	Autumn Court
2383	Coshocton	Autumn Health Care of Coshocton, Inc.
2067	Licking	Autumn Healthcare
2562	Trumbull	Autumn Hills Care Center, Inc.
2216	Clinton	Autumn Years Nursing Center
2779	Seneca	Autumnwood Care Center
2646	Wayne	Autumnwood Nursing and Rehabilitation Center
2490	Lorain	Avon Oaks Nursing Home
2658	Cuyahoga	Baldwin Manor Nursing Home, Inc.
2093	Holmes	Baltic Country Manor
2089	Belmont	Barnesville Health Care Center
2712	Clermont	Batavia Nursing and Convalescent Inn
2416	Summit	Bath Manor
2440	Hamilton	Bayley Place
2920	Cuyahoga	Beachwood Nursing & Health Care Center
2090	Tuscarawas	Beacon Pointe Rehab Center
2142	Muskingum	Beckett House at New Concord
2731	Hamilton	Beechwood Home
2122	Mahoning	Beeghly Oaks
2034	Stark	Bel-Air Convalescent Center
2181	Guernsey	Bell Nursing Home
2861	Belmont	Bell Nursing Home, Inc.
2595	Greene	Bellbrook Health Care Center
2676	Clark	Belle Manor Nursing Home
2178	Sandusky	Bellevue Care Center
2126	Belmont	Belmont Manor
2123	Morrow	Bennington Glen Nursing and Rehabilitation Center
2380	Cuyahoga	Berea Center
2246	Butler	Berkeley Square Retirement Center
2768	Scioto	Best Care Nursing & Rehab
2693	Montgomery	Bethany Lutheran Village
2973	Stark	Bethany Nursing Home
2680	Sandusky	Bethesda Care Center
2885	Franklin	Beverly Health & Rehab. Center
2883	Allen	Beverly Healthcare Lima
2945	Hancock	Birchaven Health Care
2156	Butler	Birchwood
2776	Wood	Blakely Care Center
2918	Wood	Blakely Care Center of Bowling Green
2655	Clinton	Blanchester Care Center
2184	Geauga	Blossom Hill Care Center
2146	Columbiana	Blossom Nursing and Rehabilitation Center
2878	Hamilton	Blue Ash Nursing & Rehabilitation Center, L.L.C.

Version 1.0 Effective January 1, 2005

2890	Mahoning	Boardman Community Care Center
2812	Wood	Bowling Green Manor
2860	Cuyahoga	Bradley Bay Health Center
2520	Cuyahoga	BraeView Care & Rehabilitation Center
2185	Wayne	Brenn-Field Nursing Center
2503	Summit	Brentwood Healthcare Center
2149	Ashland	Brethren Care, Inc.
2938	Darke	Brethren Retirement Community
2056	Stark	Brewster Parke
2343	Geauga	Briar Hill Health Care Residence
2659	Mahoning	Briarfield at Ashley Circle
2934	Lucas	Briarfield at Glanzman Road
2437	Mahoning	Briarfield Manor
2333	Trumbull	Briarfield of Cortland
2236	Erie	Briarfield of Milan
2387	Erie	Briarfield of Sandusky
2806	Mercer	Briarwood Manor
2409	Summit	Briarwood The
2862	Summit	Bridgepark Center for Rehab & Nsg Svcs
2507	Pike	Bristol Pavilion
2323	Lake	Broadfield Manor Nursing Home, Inc.
2453	Franklin	Broadview Health Care Center of Columbus
2494	Cuyahoga	Broadview Multi-Care Center
2751	Montgomery	Brookhaven Nursing & Care Center
2729	Defiance	Brookview Healthcare Center
2533	Hamilton	Brookwood Retirement Community
2194	Pickaway	Brown Memorial Home, Inc.
2463	Lawrence	Bryant Health Center
2400	Franklin	Bryden Place
2381	Hamilton	Burlington House
2215	Geauga	Burton Health Care Center
2307	Columbiana	Calcutta Health Care Center
2279	Putnam	Calvary Manor Nursing Home
2413	Hamilton	Camargo Manor Nursing Home
2483	Guernsey	Cambridge Health & Rehabilitation Center
2319	Mahoning	Camelot Arms Care Center
2798	Cuyahoga	Candlewood Park Healthcare Center
2614	Stark	Canterbury Villa of Alliance
2042	Stark	Canton Christian Home
2228	Stark	Canton Health Care Center
2535	Stark	Canton Regency Retirement Community
2240	Mahoning	Caprice Health Care Center
2846	Ashtabula	Carington Park
2255	Warren	Carlisle Manor Health Care, Inc.
2886	Fayette	Carlton Manor
2013	Harrison	Carriage Inn of Bowerston, Inc.
2805	Harrison	Carriage Inn of Cadiz, Inc.
2395	Montgomery	Carriage Inn of Dayton
2855	Jefferson	Carriage Inn of Steubenville, Inc.
2459	Mahoning	Carrington South Health Care Center, Inc
2632	Carroll	Carroll Healthcare Center, Inc.
2096	Clark	Castle Knoll, The K.W. Hess Ohio Pythian Home
2022	Muskingum	Cedar Hill Care Center
2006	Preble	Cedar Springs Care Center

Version 1.0 Effective January 1, 2005

2188	Warren	Cedar Village
2032	Warren	Cedars of Lebanon
2933	Cuyahoga	Cedarwood Plaza
2781	Mercer	Celina Manor
2320	Darke	Center of Hope
2553	Lorain	Center Ridge Nursing Home Inc.
2541	Cuyahoga	Century Oak Care Center
2692	Stark	Chapel Hill Home
2534	Geauga	Chardon Center
2946	Delaware	Cherith Care Center at Willow Brook
2225	Butler	Chesterwood Village Realty LTD
2546	Ross	Chillicothe Nursing & Rehab. Center
2310	Montgomery	Christel Manor of Miamisburg
2392	Cuyahoga	Cityview Manor, Inc.
2947	Cuyahoga	Clare Hall
2733	Clermont	Clermont Nursing Care Center
2309	Cuyahoga	Cleveland Clinic Subacute Services
2334	Cuyahoga	Cleveland Rehabilitation and Special Care Center
2656	Hamilton	Clovernook Health Care Pavilion
2661	Mahoning	Colonial Manor
2496	Ashland	Colonial Manor Health Care Center, Inc.
2278	Stark	Colonial Nursing Center
2948	Mercer	Colonial Nursing Home
2422	Franklin	Columbus Alzheimer Care Center
2752	Franklin	Columbus Colony for Elderly Care, Inc.
2552	Franklin	Columbus Healthcare Center
2497	Franklin	Columbus Rehabilitation & Subacute Institute
2455	Franklin	Columbus West Park Nursing & Rehab Ctr
2833	Hamilton	Communicare of Clifton
2472	Stark	Community Care Center
2815	Marion	Community Healthcare Center
2367	Williams	Community Hospitals of Williams Co.-LTC
2791	Butler	Community Multicare Center
2757	Trumbull	Community Skilled Health Care Centre
2621	Clinton	Continental Manor Nursing and Rehabilitation Center
2528	Franklin	Convalarium at Indian Run
2060	Columbiana	Convalescent Center #2
2237	Van Wert	Convoy Care Center
2482	Summit	Copley Health Center, Inc.
2268	Hardin	Corinthian The
2443	Trumbull	Cortland Center
2391	Coshocton	Coshocton Health & Rehabilitation Center
2576	Hamilton	Cottingham Retirement Community
2754	Tuscarawas	Country Club Center I
2584	Ashtabula	Country Club Center III
2442	Knox	Country Club Retirement Center II
2543	Belmont	Country Club Retirement Center IV
2856	Knox	Country Court
2300	Stark	Country Lawn Nursing Home
2286	Richland	Country Meadow Care Center
2822	Fayette	Court House Manor
2456	Hamilton	Courtyard at Seasons
2458	Cuyahoga	Covenant Care Center
2702	Miami	Covington Care Center

Version 1.0 Effective January 1, 2005

2637	Mahoning	Crandall Nursing Home
2294	Crawford	Crestline Nursing Home
2396	Cuyahoga	Crestmont Nursing Home North Corp.
2138	Belmont	Crestview Health Care Center
2689	Greene	Crestview Manor
2829	Fairfield	Crestview Manor Nursing Home #1
2803	Fairfield	Crestview Manor Nursing Home #2
2847	Richland	Crestwood Care Center
2346	Highland	Crestwood Nursing Center
2144	Auglaize	Cridersville Nursing Home
2461	Summit	Crown Center at Laurel Lake
2352	Franklin	Crown Pointe Care Center
2402	Scioto	Crystal Care Center
2099	Ashland	Crystal Care Center of Ashland
2337	Richland	Crystal Care Center of Mansfield
2261	Carroll	Cumberland Health Care Center
2465	Cuyahoga	Cuyahoga County Nursing Home
2845	Summit	Cuyahoga Falls Country Place
2372	Paulding	Dallas Lamb Foundation Home
2430	Mahoning	Danridge's Burgundi Manor
2808	Lucas	Darlington Nursing & Rehabilitation Center
2716	Washington	DaySpring Healthcare Center
2164	Clark	Dayspring of Miami Valley Health Care Center & Rehabilitation
2198	Clark	DayView Care Center, Inc.
2558	Delaware	Delaware Court
2931	Hamilton	Deupree Retirement Community
2592	Jefferson	Dixon Health Care Center, Inc.
2083	Clermont	Dobbins Nursing Home, Inc.
2683	Shelby	Dorothy Love Retirement Community
2545	Wayne	Doylestown Healthcare Center
2949	Hamilton	Drake Center
2339	Hamilton	Dual Manor Health Care Center
2626	ADAMS	Eagle Creek Nursing Center
2242	Wyandot	Eaglewood Care Center
2554	Clark	Eaglewood Care Center
2007	Carroll	East Carroll Nursing Home
2514	Hamilton	East Galbraith Health Care Center, Inc
2046	Columbiana	East Liverpool Conv. Center, Home #1
2641	Belmont	East Ohio Regional Hospital Long Term Care
2518	Cuyahoga	East Park Care Center
2135	Cuyahoga	Eastern Star Home of Cuyahoga County
2481	Clermont	Eastgate Health Care Center
2638	Franklin	Eastland Care Center
2390	Fairfield	Echo Manor Extended Care Center
2024	Coshocton	Echoing Hills Residential Center
2347	Franklin	Edge Wood Manor of Westerville
2697	Ottawa	Edgewood Manor Nursing Center
2877	Highland	Edgewood Manor of Greenfield
2627	Scioto	Edgewood Manor of Lucasville I
2348	Scioto	Edgewood Manor of Lucasville II
2349	Scioto	Edgewood Manor of Lucasville II
2342	Jackson	Edgewood Manor of Wellston
2924	Summit	Edwin Shaw Hospital for Rehabilitation
2205	Cuyahoga	Eliza Bryant Center

Version 1.0 Effective January 1, 2005

2226	Cuyahoga	Eliza Jennings Home
2132	Lucas	Elizabeth Scott Memorial Care Center
2031	Summit	Ellet Manor
2189	Lorain	Elms Retirement Village, Inc.
2044	Sandusky	Elmwood
2895	Lorain	Elyria United Methodist Village
2136	Cuyahoga	Emerald Ridge of Solon Senior and Health Care Community
2912	Montgomery	Englewood Manor
2088	Cuyahoga	Enniscourt
2950	Erie	Erie County Care Facility
2210	Columbiana	Essex of Salem I
2202	Columbiana	Essex of Salem II
2264	Columbiana	Essex of Salem III
2753	Clark	Essex of Springfield
2590	Summit	Essex of Tallmadge
2691	Williams	Evergreen Manor Nursing Home
2567	Medina	Evergreen Rehab & Specialty Care Center
2100	Shelby	Fair Haven Shelby County Home
2200	Cuyahoga	Fairfax Health Care Center
2706	Wyandot	Fairhaven Retirement and Hlth Care Comm.
2050	Fulton	Fairlawn Haven
2630	Lake	Fairmount Health Ctr. of Breckenridge Vlg
2324	Cuyahoga	Fairview Hospital Skilled Nursing Unit
2698	Lucas	Fairview Skilled Nursing & Rehabilitation
2195	Cuyahoga	Falling Water Health Care Center
2951	Summit	Falls Village Retirement Community LTD
2928	Franklin	First Community Village Healthcare Ctr.
2700	Licking	Flint Ridge Nursing and Rehabilitation Center
2544	Belmont	Forest Hill Retirement Community
2313	Franklin	Forest Hills Center
2695	Cuyahoga	Forest Hills Center for Rehabilitation & Nursing Care, Inc.
2974	Jefferson	Forester Nursing Home, Inc.
2499	Lucas	Foundation Park Care Center
2293	Scioto	Fountainhead Nursing Home
2363	Montgomery	Fountainview The
2565	Jackson	Four Winds Nursing Facility
2809	Hancock	Fox Run Manor
2531	Montgomery	Franciscan at St. Leonard, The
2368	Lucas	Franciscan Care Center-Sylvania
2775	Cuyahoga	Franklin Plaza Extended Care
2619	Warren	Franklin Ridge
2561	Franklin	Franklin Woods Nursing and Rehabilitation
2063	Montgomery	Friendly Nursing Home, Inc.
2664	Greene	Friends Care Center of Yellow Springs
2828	Montgomery	Friendship Village
2767	Franklin	Friendship Village Health Center
2648	Franklin	Friendship Village of Dublin
2209	Fulton	Fulton Manor Nursing and Rehabilitation
2405	Union	Gables at Green Pastures
2247	Harrison	Gables Care Center
2009	Lake	Gables Nursing Home
2075	Darke	Gade Nursing Home, Inc.
2684	Darke	Gade Nursing Home, Inc.
2340	Crawford	Galion Community Hospital SNF

Version 1.0 Effective January 1, 2005

2881	Butler	Garden Manor Extended Care Ctr., Inc.
2670	Hamilton	Garden Park
2952	Mercer	Gardens at Celina
2121	Mercer	Gardens at St. Henry The
2058	Stark	Gaslite Villa Convalescent Center, Inc.
2519	Cuyahoga	Gateway Health Care Center
2743	Huron	Gaymont Nursing Center
2290	Geauga	Geauga Hospital Sub-Acute Care Center
2570	Ottawa	Genoa Care Center
2180	Trumbull	Gillette Nursing Home
2654	Butler	Glen Meadows
2165	Hamilton	Glencare Center
2262	Wayne	Glendora Health Care Center
2942	Franklin	Glenmont
2436	Trumbull	Glenn View Manor
2975	Lucas	Goerlich Center
2916	Hamilton	Golden Age Care Center
2953	Medina	Golden Leaf of Sterling Oaks
2826	Scioto	Golden Years Convalescent Center
2120	Butler	Golden Years Nursing Center
2896	Lorain	Good Samaritan Nursing Home, LLC
2326	Seneca	Good Shepherd Home
2911	Ashland	Good Shepherd The
2016	Clark	Good Shepherd Village, LLC
2002	Montgomery	Grace Brethren Village
2529	Montgomery	Grafton Oaks Nursing Center
2134	Wood	Grand Rapids Care Center
2245	Ashtabula	Grand Valley Country Manor
2289	Cuyahoga	Grande Pointe Healthcare Community
2560	Carroll	Great Trail Care Center
2792	Logan	Green Hills Center
2612	Stark	Green Meadows Health and Wellness Center
2412	Mahoning	Greenbriar Center
2727	Scioto	Greenbriar Convalescent Center
2411	Preble	Greenbriar Nursing Center
2887	Cuyahoga	Greenbrier Health Care Center
2615	Greene	Greene Oaks Health Center
2721	Greene	Greenwood Manor
2192	Cuyahoga	Greens Postacute & Rehab. Center
2061	Richland	Griffeth Nursing Home, Inc.
2059	Scioto	Hallmark Care Center, Inc.
2250	Cuyahoga	Hanna House Skilled Nursing Center
2841	Stark	Hanover House, Inc.
2447	Cuyahoga	Harborside HC-Beachwood Rehab & NC
2571	Cuyahoga	Harborside HC-Broadview Hgts. Rehab & NC
2724	Cuyahoga	Harborside HC-Westlake I Rehab & NC
2725	Cuyahoga	Harborside HC-Westlake II Rehab & NC
2431	Williams	Harborside Healthcare - Northwestern OH
2597	Wood	Harborside Healthcare - Perrysburg
2504	Fulton	Harborside Healthcare - Swanton
2849	Miami	Harborside Healthcare - Troy
2682	Defiance	Harborside Healthcare, Defiance
2312	Montgomery	Harborside Healthcare-Dayton
2376	Montgomery	Harborside Healthcare-New Lebanon

Version 1.0 Effective January 1, 2005

		Harborside Healthcare-Point Place Rehabilitation and Nursing Center
2259	Lucas	Center
2375	Lucas	Harborside Sylvania
2295	Washington	Harmar Place Rehab. & Extended Care
2107	Hamilton	Harmony Court
2923	Hamilton	Harrison House
2254	Paulding	Hawthorn Court
2444	Butler	Hawthorn Glen Nursing Center
2492	Cuyahoga	Health Center at The Renaissance
2055	Summit	Healthaven Nursing Home
2478	Franklin	Healthcare Center at The Forum
2260	Highland	Hearth & Care at Greenfield
2795	Fairfield	Heartland - Fairfield
2605	Logan	Heartland of Bellefontaine
2603	Lucas	Heartland of Browning
2601	Crawford	Heartland of Bucyrus
2672	Knox	Heartland of Centerburg
2206	Montgomery	Heartland of Centerville
2635	Ross	Heartland of Chillicothe
2651	Preble	Heartland of Eaton
2667	Darke	Heartland of Greenville
2599	Highland	Heartland of Hillsboro
2030	Logan	Heartland of Indian Lake Nursing Center
2568	Logan	Heartland of Indian Lake Rehab Center
2771	Jackson	Heartland of Jackson
2604	Montgomery	Heartland of Kettering
2473	Washington	Heartland of Marietta
2634	Union	Heartland of Marysville
2548	Lake	Heartland of Mentor
2585	Montgomery	Heartland of Oak Ridge
2722	Lucas	Heartland of Oregon
2665	Wood	Heartland of Perrysburg
2609	Miami	Heartland of Piqua
2628	Scioto	Heartland of Portsmouth
2600	Lawrence	Heartland of Riverview
2679	Clark	Heartland of Springfield
2789	Champaign	Heartland of Urbana
2814	Fulton	Heartland of Wauseon
2784	Greene	Heartland-Beavercreek
2415	Lucas	Heartland-Holly Glen
2649	Belmont	Heartland-Lansing Nursing Center
2825	Franklin	Heartland-Victorian Village
2713	Licking	Heath Nursing Care Center
2925	Geauga	Heather Hill, Inc.
2510	Summit	Heather Knoll of Summit County
2512	Lucas	Heatherdowns Rehabilitation and Residential Care Center
2976	Muskingum	Helen Purcell Home
2583	Scioto	Hempstead Manor
2119	Tuscarawas	Hennis Care Centre of Bolivar
2423	Tuscarawas	Hennis Care Centre of Dover
2435	Cuyahoga	Heritage Care
2813	Shelby	Heritage Care Center
2662	Hancock	Heritage Manor
2643	Auglaize	Heritage Manor Nursing Center

Version 1.0 Effective January 1, 2005

2906	Mahoning	Heritage Manor, Jewish Home for Aged
2102	Wayne	Heritage Park Nursing and Rehabilitation
2556	Defiance	Hickory Creek at Hicksville
2623	Athens	Hickory Creek of Athens
2732	Scioto	Hill View Retirement Center
2258	Butler	Hillandale
2068	Lake	Hillandale Manor
2091	Fayette	Hillcrest Manor
2369	ADAMS	Hillcrest Nursing Home
2930	Hamilton	Hillebrand Nursing and Rehabilitation Center
2064	Marion	Hillside Care Center
2940	Cuyahoga	Hillside Plaza
2131	Warren	Hillspring Health Care & Rehabilitation Center
2266	Putnam	Hilty Memorial Home
2315	Columbiana	Holander House, Ltd.
2335	Geauga	Holly Hill Nursing Home
2977	Cuyahoga	Holy Family Home
2297	Gallia	Holzer Senior Care Center
2954	Hamilton	Home at Hearthstone The
2694	Lake	Homestead I
2870	Lake	Homestead II
2012	Ashtabula	Homestead Nursing Home
2663	Warren	Horizon Village Nursing & Rehabilitation Center
2222	Wayne	Horn Nursing Home
2936	Greene	Hospitality Home East
2830	Greene	Hospitality Home West
2057	Stark	Hospitality House
2978	Stark	House of Loreto
2397	Summit	Hudson Elms Nursing Home
2130	Mahoning	Humility House
2322	Erie	Huron Health Care Center
2773	Vinton	Huston Nursing Home, Inc.
2540	Lucas	IHS at Waterford Commons
2594	Montgomery	IHS of Huber Heights at Spring Creek
2573	Huron	IHS of New London at Firelands
2617	Montgomery	IHS of West Carrollton at Elm Creek
2932	Warren	Imperial Skilled Care Center
2407	Hancock	Independence House
2564	Cuyahoga	Indian Hills Health and Rehabilitation Center
2734	Ashtabula	Inn-Conneaut Health Center
2572	Lake	Inn-Madison Health Center
2114	Franklin	Isabelle Ridgway Nursing Center
2720	Hamilton	Ivy Woods Care Center
2536	Mahoning	Ivy Woods Manor
2054	Coshocton	Jacob's Dwelling Nursing Home
2027	Hamilton	Jean Byars Care Center, Inc.
2587	Ashtabula	Jefferson Geriatric & Rehab Center
2742	Jackson	Jenkins Memorial Health Facility
2253	Cuyahoga	Jennings Hall
2790	Montgomery	Jewish Home for Aged
2450	Auglaize	Joint Twp. Dist. Mem. Transitional Unit
2645	Lawrence	Jo-Lin Health Center, Inc.
2428	Hamilton	Judson Care Center
2399	Cuyahoga	Judson Park

Version 1.0 Effective January 1, 2005

2329	Lorain	Kendal at Oberlin
2292	Portage	Kensington Care Center
2427	Portage	Kent Center
2419	Hardin	Kenton Nursing and Rehabilitation Center
2892	Hamilton	Kenwood Terrace Care Center
2941	Cuyahoga	Kethley House at Benjamin Rose Place
2015	Athens	Kimes Convalescent Center, Ltd.
2167	Ross	Kingston Health Care Center
2580	Ashland	Kingston of Ashland
2586	Lorain	Kingston of Vermilion
2513	Miami	Koester Pavilion
2280	Jefferson	LaBelle View Nursing Home
2922	Lucas	Lake Park Nursing Care Center
2010	Lake	Lakeland
2532	Lake	LakeMed Nursing and Rehabilitation Center, The
2168	Hamilton	Lakeridge Villa Healthcare Center
2668	Jefferson	Lancia Villa Royale Nursing Home
2110	Fairfield	Lanfair Nursing & Rehabilitation Center
2774	Defiance	Laurels of Defiance The
2301	Highland	Laurels of Hillsboro The
2227	Stark	Laurels of Massillon
2764	Knox	Laurels of Mt. Vernon The
2876	Franklin	Laurels of Norworth The
2183	Mercer	Laurels of Shane Hill The
2864	Franklin	Laurels of Worthington
2410	Trumbull	Laurie Ann Nursing Home
2359	Warren	Lebanon Country Manor
2549	Warren	Lebanon Nursing & Rehabilitation Residence
2220	Stark	Legends Care Center
2285	Richland	Lexington Court Care Center
2193	Trumbull	Liberty Health Care Center, Inc.
2955	Sandusky	Liberty Nursing Center of Fremont, Inc.
2788	Greene	Liberty Nursing Center of Jamestown, Inc.
2804	Huron	Liberty Nursing Center of Willard, Inc.
2888	Greene	Liberty Nursing Center of Xenia, Inc.
2488	Montgomery	Liberty Retirement Community of Washington Township
2139	Lorain	Life Care Center of Elyria
2913	Medina	Life Care Center of Medina
2201	Hamilton	Lighthouse Pointe Health Care Center
2979	Allen	Lima Convalescent Home
2834	Allen	Lima Manor
2159	Hamilton	Lincoln Crawford
2480	Montgomery	Lincoln Park Manor
2065	Lucas	Little Sisters of the Poor
2078	Cuyahoga	Little Sisters of the Poor-Home for the Aged
2577	Montgomery	Livingston Care Center
2711	Hamilton	Llanfair Retirement Community
2810	Brown	Locust Ridge Nursing Home
2384	Hamilton	Lodge Care Center The
2485	Logan	Logan Acres
2839	Pickaway	Logan Elm Health Care
2739	Hocking	Logan Health Care Center
2797	Portage	Longmeadow Care Center
2404	Lorain	Lorain Manor Nursing Home

Version 1.0 Effective January 1, 2005

2821	Summit	Lorantffy Care Center, Inc.
2616	Allen	Lost Creek Care Center
2302	Stark	Louisville Center For Rehabilitation & Nursing Care, Inc.
2746	Warren	Loveland Health Care Center
2704	Licking	LPN Health Care Facility, Inc.
2011	Ottawa	Luther Home of Mercy
2153	Henry	Lutheran Home
2937	Cuyahoga	Lutheran Home
2128	Lucas	Lutheran Home at Toledo
2019	Erie	Lutheran Memorial Home
2124	Lucas	Lutheran Village at Wolf Creek
2687	Franklin	Lutheran Village of Columbus - The Care Center
2647	Hamilton	Madeira Health Care Center
2831	Lake	Madison Health Care
2004	Lake	Madison Village Nursing Home
2077	Cuyahoga	Madonna Hall
2745	Medina	Magnolia Care & Rehabilitation Center
2282	Fairfield	Main Street Terrace Care Center
2526	Summit	Maison Aine'
2591	Holmes	Majora Lane Center for Rehab & Nursing Care, Inc.
2980	Cuyahoga	Manor at Hamlet Village in Chagrin Falls The
2276	Wood	Manor at Perrysburg
2001	Franklin	Manor at Whitehall
2882	Franklin	Manor Care - Westerville
2824	Summit	Manor Care Health Services - Akron
2807	Summit	Manor Care Health Services - Barberton
2817	Stark	Manor Care Health Services - Belden Village
2832	Lake	Manor Care Health Services - Willoughby
2840	Hamilton	Manor Care of Cincinnati
2511	Butler	Manor Care of Woodridge
2889	Hamilton	Manor Care-Woodside Nursing Center
2620	Cuyahoga	ManorCare Health Services - Lake Shore
2796	Cuyahoga	ManorCare Health Services-Mayfield Heights
2827	Cuyahoga	ManorCare Health Services-North Olmsted
2772	Cuyahoga	ManorCare Health Services-Rocky River
2903	Richland	Mansfield Memorial Homes
2542	Cuyahoga	Maple Care Center
2800	Hamilton	Maple Knoll Village
2104	Ross	Maple View Manor
2527	Portage	Maple Wood Care Centre
2125	Mahoning	Maplecrest Nursing & Home for the Aged
2818	Marion	Maplewood Nursing Center, Inc.
2819	Montgomery	Maria-Joseph Center The
2462	Washington	Marietta Nursing and Rehabilitation Center
2921	Lucas	Mariner Health Care of Toledo
2891	Marion	Marion Manor Nursing Home, Inc.
2899	Morgan	Mark Rest Center
2186	Montgomery	Mary Scott Nursing Center
2305	Cuyahoga	Marymount Skilled Nursing Unit
2109	Warren	Mason Health Care Center
2175	Hamilton	Masonic Eastern Star Community, Inc.
2191	Clark	Masonic Health Care, Inc.
2452	Stark	Massillon Community Skilled Nursing Unit
2759	Franklin	Mayfair Village Nursing Care Center

Version 1.0 Effective January 1, 2005

2589	Stark	McCrea Manor Nursing & Rehab Ctr.
2358	Belmont	McGraw Nursing Home
2574	Stark	McKinley Health Care Center The
2379	Warren	MCV - Health Care Facilities, Inc.
2569	Stark	Meadow Wind Health Care Center, Inc.
2783	Hamilton	Meadowbrook Care Center
2371	Trumbull	Meadowbrook Manor
2140	Hamilton	Meadows of Forest Park The
2644	Medina	Meadowview Healthcare Center
2873	Brown	MeadowWood Assisted Living, Inc.
2169	Allen	Mennonite Memorial Home
2910	Cuyahoga	Menorah Park Center for Senior Living
2283	Lake	Mentor Way Nursing & Rehabilitation Center, Inc.
2850	Butler	Mercy Franciscan at Schroder
2613	Hamilton	Mercy Franciscan at West Park
2362	Hamilton	Mercy Franciscan Skilled Nursing Unit Western Hills
2366	Hamilton	Mercy Franciscan Terrace
2956	Seneca	Mercy Hospital of Tiffin TCU
2578	Champaign	Mercy McAuley Center
2439	Montgomery	Mercy Siena Retirement Community
2336	Hamilton	Mercy St. Theresa Center
2338	Cuyahoga	Meridia Euclid Subacute Care Center
2517	Mahoning	Meridian Arms Living Center
2036	Hamilton	Miami Haven
2678	Montgomery	Miami Shores of Moraine Nursing Center
2939	Summit	Middlebury Manor Health Care Center
2489	Richland	Mifflin Care Center
2611	Union	Milcrest Nursing Center
2267	Erie	Mill Manor
2171	Franklin	Mill Run Care Center
2129	Stark	Minerva Eldercare Center
2451	Franklin	Minerva Park Nursing and Rehabilitation
2176	Franklin	Mohun Health Care Center
2238	Monroe	Monroe County Care Center
2929	Cuyahoga	Montefiore Home
2917	Franklin	Monterey Care Center
2816	Hamilton	Montgomery Care Center
2179	Morgan	Morgan Care Center
2897	Tuscarawas	Morning View Care Center
2052	Knox	Morning View Care Center #1
2475	Knox	Morning View Care Center of Danville
2345	Marion	Morning View Care Center of Marion
2477	Delaware	Morning View Care Center Sunbury
2101	Clermont	Morris Nursing Home
2851	Morrow	Morrow County Hosp. Long Term Care Fac.
2426	Morrow	Morrow Manor
2981	Hamilton	Mother Margaret Hall Nursing Home
2982	Cuyahoga	Mount Alverna Annex, Inc.
2233	Cuyahoga	Mount Alverna Home, Inc.
2273	Hamilton	Mount Healthy Christian Home
2105	Hamilton	Mount Notre Dame Health Center
2794	Butler	Mount Pleasant Retirement Village
2157	Cuyahoga	Mount Royal Villa
2699	Cuyahoga	Mount Saint Joseph

Version 1.0 Effective January 1, 2005

2750	Hamilton	Mount Washington Care Center
2785	Hamilton	Mountain Crest Nursing & Rehabilitation Center
2786	Hamilton	Mountain Crest Nursing & Rehabilitation Center
2161	Franklin	Nelson Park Care Center
2081	Columbiana	Nentwick Convalescent Home, Inc.
2160	Franklin	New Albany Care Center
2304	Tuscarawas	New Dawn Health Care Center
2748	Licking	Newark Healthcare Center
2355	Cuyahoga	Normandy Manor of Rocky River
2530	Mahoning	North Eastern OH Alzheimer Research Ctr
2894	Henry	Northcrest Nursing & Rehab Center
2957	Summit	Northfield Village Retirement Community
2581	Lorain	Northridge Health Center The
2111	Licking	Northview Senior Living Center
2446	Cuyahoga	Northwestern Center
2351	Montgomery	Northwood Nursing and Rehabilitation Center
2566	Huron	Norwalk Memorial Home
2374	Montgomery	Oak Creek Terrace
2486	Henry	Oak Grove Center
2424	Richland	Oak Grove Manor
2657	Lorain	Oak Hills Nursing Center
2766	Cuyahoga	Oak Park Health Care Center
2898	Hamilton	Oak Pavilion Nursing Center
2092	Hamilton	Oak Terrace at East Galbraith
2172	Stark	Oakhill Manor Care Center, Inc.
2927	Cuyahoga	Oakridge Home The
2361	Clark	Oakwood Village
2653	Trumbull	O'Brien Memorial Nursing Home
2207	Clark	Odd Fellows Home of Ohio
2714	Muskingum	Ohio District Council Nursing Home
2229	Knox	Ohio Eastern Star Health Care Center
2983	Knox	Ohio Eastern Star Home
2598	Lorain	Ohio Extended Care Center
2479	Medina	Ohio Pythian Home of Medina
2782	Brown	Ohio Valley Manor Nursing & Rehabilitation Center
2035	Erie	Ohio Veterans Home - Sandusky
2666	Cuyahoga	Olmsted Manor Skilled Nursing Center
2740	Mahoning	Omni Manor
2303	Trumbull	Orange Village Care Center, Inc.
2235	Lucas	Orchard Villa
2000		Other Ohio Nursing Home
2688	Ottawa	Ottawa County Riverview Nursing Home
2018	Putnam	Otterbein Leipsic Retirement Community
2249	Auglaize	Otterbein-Cridersville Retirement Community
2802	Warren	Otterbein-Lebanon Retirement Community
2639	Wood	Otterbein-Portage Valley
2330	Auglaize	Otterbein-St. Marys Retirement Community
2525	Meigs	Overbrook Center
2943	Cuyahoga	Overlook House
2863	Butler	Oxford View Nursing Center
2154	Lorain	Palm Crest East, Inc.
2098	Cuyahoga	Palm Crest, Bellaire, Inc.
2151	Lorain	Palm Crest, West, Inc.
2761	Putnam	Paradise Oaks Center

Version 1.0 Effective January 1, 2005

2958	Ashtabula	Park Haven Home
2317	Belmont	Park Health Center
2640	Williams	Park View Nursing Center
2214	Tuscarawas	Park Village Health Care Center
2852	Mahoning	Park Vista Retirement Community
2487	Columbiana	Parkside Health Care Center
2959	Cuyahoga	Parkside Villa
2224	Sandusky	Parkview Care Center
2298	Erie	Parkvue Health Care Center
2493	Cuyahoga	Parma Care Center
2325	Cuyahoga	Parma Community Skilled Nursing Facility
2460	Licking	Pataskala Oaks Care Center
2741	Cuyahoga	Patrician Skilled Nursing Center
2314	Greene	Patriot Ridge
2837	Shelby	Pavilion The
2521	Summit	Pebble Creek Senior Care Residence
2652	Pickaway	Pickaway Manor Care Center
2588	Fairfield	Pickerington Nursing & Rehabilitation Center
2328	Pike	Piketon Nursing Center
2378	Clark	Pillars Nursing Home, Ltd.
2393	Warren	Pine Crest Nursing Center
2066	Licking	Pine Kirk Nursing Home
2787	Summit	Pine Valley Care Center
2406	Stark	Pines The
2062	Pike	Pineview Manor, Inc.
2859	Miami	Piqua Manor
2457	Lucas	Plaza Care Center
2730	Pike	Pleasant Hill Manor
2538	Cuyahoga	Pleasant Lake Villa
2762	Summit	Pleasant View Health Care Center
2079	Columbiana	Pleasant View North Retirement Center
2080	Columbiana	Pleasant View Nursing Home
2914	Cuyahoga	Pleasantview Care Center
2344	Allen	Plus Health Care Center
2037	Franklin	Plus of Gahanna Health Care Center
2715	Hamilton	Price Hill Nursing Home
2316	Erie	Providence Care Center
2048	Lawrence	Pulley Nursing Home
2350	Putnam	Putnam Acres Care Center
2318	Warren	Quaker Heights Nursing Home
2069	Hamilton	Queen City Nursing Home
2243	Cuyahoga	Rae Ann Nursing Center
2417	Cuyahoga	Rae Ann Suburban
2252	Ashtabula	Rae-Ann Geneva
2905	Cuyahoga	Rae-Ann Westlake
2223	Hardin	Ravenwood Care Center
2043	Guernsey	Red Carpet Health Care Center
2701	Franklin	Regency Manor Rehabilitation and Subacute Care
2117	Wayne	Regency Park Nursing and Rehabilitation Center
2880	Hamilton	Regency Village Ltd.
2354	Summit	Regina Health Center
2454	Geauga	Rehabilitation Hosp. Skilled Nrsg Unit
2707	Hamilton	Residence at Garden Gate
2736	Hamilton	Residence at Greystone The

Version 1.0 Effective January 1, 2005

2113	Butler	Residence at Huntington Court
2718	Butler	Residence at Kensington Place
2710	Hamilton	Residence at Park View The
2705	Hamilton	Residence at Salem Woods The
2199	Scioto	Rest Haven Nursing Home
2728	Darke	Rest Haven Nursing Home, Inc.
2763	Allen	Richland Manor Nursing Home
2501	Trumbull	Ridge Crest Care Center
2686	Hamilton	Ridge Pavilion
2884	Hamilton	Ridge Terrace
2838	Summit	Ridgewood Healthcare Center
2331	Lucas	Ridgewood Manor
2671	Clark	Ridgewood Nrsng & Rehabilitation Center
2756	Lawrence	River's Bend Health Care, LLC
2085	Pike	Riverside Manor
2744	Tuscarawas	Riverside Manor
2875	Franklin	Riverside Methodist Hosp Skilled Nursing Unit
2394	Montgomery	Riverside Nursing and Rehabilitation Center
2669	Hamilton	Riverview Community
2053	Jefferson	Riverview Nursing Home
2005	Stark	Rockhill Place
2709	Fairfield	Rockmill Rehabilitation Centre
2726	Meigs	Rocksprings Rehabilitation Center
2926	Summit	Rockynol Retirement Community
2723	Medina	Rolling Hills Healthcare Center
2491	Mahoning	Ron Joy Nursing Home
2960	Lucas	Rosary Care Center
2152	Knox	Rose Garden Nursing Home
2844	Stark	Rose Lane Health Center
2505	Allen	Roselawn Manor Nursing Home
2014	Stark	Roselawn Terrace
2116	Jefferson	Rosewood Manor
2799	Crawford	Rosewood Manor
2498	Cuyahoga	Royal Oak Nursing & Rehabilitation Center
2901	Cuyahoga	Rudwick Manor Special Care Centre
2190	Seneca	Ruffing Family Care Center
2311	Seneca	Ruffing Family Care Center of Bloomville
2086	Athens	Russell Nursing Home
2593	Clermont	S.E.M. Haven Health Care Center
2327	Ashtabula	Sacred Heart Nursing Center
2388	Cuyahoga	Saint Augustine Manor
2177	Mahoning	Saint Elizabeth Health Center-Subacute Unit
2909	Sandusky	Saint Francis Health Care Centre
2204	Seneca	Saint Francis Home, Inc.
2811	Clark	Saint John's Center
2370	Stark	Saint Joseph Care Center
2674	Stark	Saint Luke Lutheran Home for the Aging
2515	Hamilton	Saint Margaret Hall
2516	Hamilton	Saint Margaret Hall
2448	Auglaize	Saint Mary's Living Center
2984	Hamilton	Saint Mary's Memorial Home
2738	Franklin	Saint Raphael Home for the Aged
2893	Franklin	Saint Rita's Home for the Aged, Inc.
2441	Medina	Samaritan Care Center, Inc.

Version 1.0 Effective January 1, 2005

2145	Franklin	Sanctuary At Tuttle Crossing
2464	Montgomery	Sanctuary At Whispering Meadows
2017	Van Wert	Sarah Jane Living Center The
2073	Delaware	Sarah Moore Health Care Center
2961	Hamilton	Scarlet Oaks Retirement Community
2625	Gallia	Scenic Hills Nursing Center
2045	Holmes	Scenic View Nursing Home
2962	Franklin	Scioto Community
2471	Ashtabula	Serenity Manor
2622	Wayne	Shady Lawn Home
2038	Belmont	Shadyside Care Center
2084	Clark	Sharonview Nursing Home
2793	Allen	Shawnee Manor
2963	Trumbull	Shepherd of the Valley - Howland
2631	Mahoning	Shepherd of the Valley Lutheran Retirement
2836	Trumbull	Shepherd of the Valley Lutheran Retirement Services, Inc.
2023	Montgomery	Shiloh Springs Care Center, Inc.
2265	Shelby	Sidney Care Center
2049	Cuyahoga	Singleton Health Care Center
2365	Lake	Skilled Nursing & Rehabilitation Unit
2642	Cuyahoga	Slovene Home for the Aged
2141	Stark	Smith Nursing Home, Inc.
2823	Wayne	Smithville-Western Care Center
2500	Perry	Somerset Center
2277	Cuyahoga	Somerset Point
2749	Clark	Southbrook Health Care Center, Inc.
2244	Cuyahoga	Southern Hills Health and Rehabilitation Center
2360	Cuyahoga	Southwest General HC, Shalkhauser TCU
2610	Champaign	Spring Meadows Care Center
2256	Lucas	Spring Meadows Extended Care Facility
2389	Miami	SpringMeade Health Center
2106	Allen	Springview Manor Nursing Home
2377	Hancock	St. Catherine's Care Center of Findlay
2636	Seneca	St. Catherine's Care Center of Fostoria
2353	Fayette	St. Catherine's Care Center of WCH
2234	Cuyahoga	St. John West Shore Hospital Skilled Nursing Unit
2308	Hamilton	St. John's Transitional Care Unit
2239	Cuyahoga	St. Vincent Charity Hospital Skilled Nursing Unit
2208	Jefferson	Steubenville Convalescent Center
2964	Jefferson	Steubenville Country Club Manor
2033	Summit	Stow Glen Health Care Center
2965	Cuyahoga	Stratford Commons
2879	Cuyahoga	Suburban Pavilion, Inc.
2174	Summit	Summa Health System: TCU
2606	Noble	Summit Acres Nursing Home
2288	Summit	Summit Villa Care Center
2408	Summit	Sumner Home for the Aged
2719	Pickaway	SunBridge Care & Rehabilitation for Circleville
2602	Marion	SunBridge Care & Rehabilitation for Marion
2633	Perry	SunBridge Care & Rehabilitation for New Lexington
2866	Fairfield	SunBridge Care & Rehabilitation-Homestead
2386	Lucas	SunBridge Care and Rehabilitation for West Toledo
2074	Delaware	Sunbury Nursing Home
2660	Delaware	Sunny Vee Nursing Home, Inc.

Version 1.0 Effective January 1, 2005

2248	Muskingum	Sunnyview Nursing Home
2082	Clermont	Sunrise Manor & Convalescent Center, Inc
2675	Cuyahoga	Sunrise Pointe
2966	Jefferson	Sunset Health Care, Inc.
2967	Lucas	Sunset House
2871	Ashtabula	Sunset Manor
2118	Lawrence	Sunset Nursing Center
2196	Cuyahoga	Sunset Nursing Home
2274	Holmes	Sunset View Castle Nursing Home
2968	Lucas	Sunset Village
2299	Lucas	Swan Creek Retirement Village
2257	Lucas	Swan Pointe Care Center
2232	Fulton	Swanton Health Care & Retirement Center
2296	Montgomery	Sycamore Glen Health Center
2040	Holmes	Terrace View Castle Nursing Home
2162	Hamilton	Terrace View Gardens
2470	Mahoning	The Assumption Village
2737	Champaign	The Wellington Nursing and Rehabilitation Center
2915	Hamilton	Three Rivers Nursing & Rehabilitation Center
2143	Lucas	Toledo Hospital The
2434	Summit	Traditions at Bath Road
2213	Franklin	Traditions at Stygler Road
2904	Cuyahoga	Traditions Care Center
2769	Butler	Tri-County Extended Care Center
2476	Greene	Trinity Home
2523	Jefferson	Trinity Skilled Care Center
2677	Huron	Twilight Gardens Home, Inc.
2173	Vinton	Twin Maples Nursing Home
2403	Richland	Twin Oaks Care Center
2133	Summit	Twin Pines Retreat Care Center
2969	Hamilton	Twin Towers
2211	Cuyahoga	UHHS - Richmond Heights Hospital TCU
2008	Darke	Union City Christel Manor
2429	Cuyahoga	University Manor Health Care Center
2908	Summit	University Park Nursing and Rehabilitation Center
2970	Lucas	Ursuline Center
2155	Licking	Utica Nursing Home
2872	Auglaize	Valley Nursing & Rehabilitation Center
2230	Ross	Valley View Alzheimer's Care Center
2421	Sandusky	Valley View Healthcare Center
2900	Summit	Valley View Nursing & Rehab Center
2867	Van Wert	Van Wert Manor
2865	Van Wert	Vancrest Health Care Center
2127	Allen	Vancrest Health Care Center of Delphos
2221	Preble	Vancrest Health Care Center of Eaton
2398	Henry	Vancrest Health Care Center of Holgate
2263	Montgomery	Vandalia Park
2373	Darke	Versailles Health Care Center
2003	Hamilton	Victoria Retirement Center
2696	Hamilton	Victory Park Nursing Home
2780	Franklin	Villa Angela Care Center
2629	Lorain	Villa Camillus
2466	Brown	Villa Georgetown
2269	Cuyahoga	Villa Sancta Anna Home for the Aged, Inc

Version 1.0 Effective January 1, 2005

2432	Clark	Villa Springfield
2425	Summit	Village at St. Edward Nursing Care The
2607	Franklin	Village at Westerville Nursing Center
2777	Crawford	Village Care Center
2219	Columbiana	Vista Centre
2438	Montgomery	Walnut Creek Nursing Center
2087	Holmes	Walnut Hills Nursing Home
2051	Ross	Walnut Manor
2539	Cuyahoga	Walton Manor Health Care Center
2869	Auglaize	Wapakoneta Manor
2468	Trumbull	Washington Square Healthcare Center
2025	Summit	Wayside Farm Nursing & Rehab Center
2070	Franklin	Wecare Health Facility
2681	Lorain	Welcome Nursing Home
2650	Butler	Wellington Manor
2047	Lorain	Wellington Manor Nursing Home, Inc.
2445	Hamilton	Wellspring Health Center
2203	Cuyahoga	Welsh Home for the Aged
2685	Franklin	Wesley Glen, The Health Center at
2356	Hamilton	Wesley Hall
2420	Butler	West Chester Nursing & Rehabilitation Residence
2029	Hamilton	West Hills Nursing Home, Inc.
2382	Coshocton	West Lafayette Rehabilitation and Nursing Center
2848	Lucas	West Toledo Healthcare and Rehabilitation Center
2163	Wayne	West View Manor, Inc.
2547	Hamilton	Western Hills Retirement Village
2843	Lake	Western Reserve Healthcare Center
2150	Medina	Western Reserve Masonic Community, Inc.
2401	Franklin	Westerville Center for Rehab. & Nursing Care, Inc.
2449	Cuyahoga	Westlake Healthcare Center
2755	Franklin	Westminster-Thurber Community
2618	Ross	Westmoreland Place
2971	Butler	Westover Retirement Community
2026	Hamilton	Westside Health Center
2935	Franklin	Wexner Heritage Village
2854	Franklin	Whetstone Gardens & Care Ctr
2284	Knox	Whispering Hills Care Center
2275	Stark	White Oak Convalescent Home
2495	Lucas	Whitehouse Country Manor
2778	Lake	Wickliffe Country Place
2137	Montgomery	Widows Home of Dayton
2484	Huron	Willard Center
2166	Williams	Williams County Hillside Country Living
2306	Franklin	Willow Brook Christian Home
2097	Muskingum	Willow Haven Care Center
2579	Butler	Willow Knoll Nursing Center
2433	Cuyahoga	Willow Park Convalescent Home, Inc.
2467	Medina	Willowood Care Center of Brunswick, Inc.
2874	Clinton	Wilmington Nursing & Rehabilitation Residence
2582	Franklin	Winchester Place Nursing and
2364	Richland	Winchester Terrace
2537	Summit	Windsong Care Center
2717	Mahoning	Windsor House
2555	Sandusky	Windsor Lane Healthcare Center

Version 1.0 Effective January 1, 2005

2985	Stark	Windsor Medical Center, Inc.
2028	Hamilton	Windsor Park Nursing Home, Inc.
2272	Delaware	Wintersong Village of Delaware
2291	Ashland	Wintersong Village of Hayesville
2071	Fayette	Wintersong Village of Washington Court House
2524	Montgomery	Wood Glen Nursing Center
2103	Scioto	Woodland Care Center
2197	Butler	Woodland Country Manor, Inc.
2182	Portage	Woodlands at Robinson, The
2708	Richland	Woodlawn Health Care & Rehabilitation
2112	Hamilton	Woods Edge Pointe
2690	Monroe	Woodsfield Nursing & Rehab. Center
2270	Morrow	Woodside Village Care Center
2563	Franklin	Worthington Christian Village
2506	Greene	Wright Nursing and Rehabilitation Center
2147	Wyandot	Wyandot County Nursing Home
2853	Wyandot	Wyandot Manor
2474	Summit	Wyant Woods Care Center
2187	Hamilton	Zion Care Center, Inc.

APPENDIX 5

Authority/Mandate Ohio Revised Code

§ 4765.06 Incidence reporting system for collecting information on delivery and frequency of services; trauma registries; confidentiality of information.

Text of Statute

(A) The state board of emergency medical services shall establish an emergency medical services incidence reporting system for the collection of information regarding the delivery of emergency medical services in this state and the frequency at which the services are provided. All emergency medical service organizations shall submit to the board any information that the board determines is necessary for maintaining the incidence reporting system.

(B) The board shall establish a state trauma registry to be used for the collection of information regarding the care of adult and pediatric trauma victims in this state. The registry shall provide for the reporting of adult and pediatric trauma-related deaths, identification of adult and pediatric trauma patients, monitoring of adult and pediatric trauma patient care data, determination of the total amount of uncompensated adult and pediatric trauma care provided annually by each facility that provides care to trauma victims, and collection of any other information specified by the board. All persons designated by the board shall submit to the board any information it determines is necessary for maintaining the state trauma registry. At the request of the board any state agency possessing information regarding adult or pediatric trauma care shall provide the information to the board. The board shall maintain the state trauma registry in accordance with rules adopted under section [4765.11](#) of the Revised Code.

Rules relating to the state trauma registry adopted under this section and section [4765.11](#) of the Revised Code shall not prohibit the operation of other trauma registries and may provide for the reporting of information to the state trauma registry by or through other trauma registries in a manner consistent with information otherwise reported to the state trauma registry. Other trauma registries may report aggregate information to the state trauma registry, provided the information can be matched to the person that reported it. Information maintained by another trauma registry and reported to the state trauma registry in lieu of being reported directly to the state trauma registry is a public record and shall be maintained, made available to the public, held in confidence, risk adjusted, and not subject to discovery or introduction into evidence in a civil action as provided in section [149.43](#) of the Revised Code and this section. Any person who provides, maintains, or risk adjusts such information shall comply with this section and rules adopted under it in performing that function and has the same immunities with respect to that function as a person who performs that function with respect to the state trauma registry.

(C) The board and any employee or contractor of the board or the department of public safety shall not make public information it receives under Chapter [4765](#). of the Revised Code that identifies or would tend to identify a specific recipient of emergency medical services or adult or pediatric trauma care.

(D) Not later than two years after the effective date of this amendment, the board shall adopt and implement rules under section [4765.11](#) of the Revised Code that provide written standards and procedures for risk adjustment of information received by the board under Chapter [4765](#). of the Revised Code. The rules shall be developed in consultation with appropriate medical, hospital, and emergency medical service organizations and may provide for risk adjustment by a contractor of the board. Before risk adjustment standards and procedures are implemented, no member of the board and no employee or contractor of the board or the department of public safety shall make public information received by the board under Chapter [4765](#). of the Revised Code that identifies or would tend to identify a specific provider of emergency medical services or adult or pediatric trauma care. After risk adjustment standards and procedures are implemented, the board shall make public such information only on a risk adjusted basis.

(E) The board shall adopt rules under section [4765.11](#) of the Revised Code that specify procedures for ensuring the confidentiality of information that is not to be made public under this section. The rules shall specify the circumstances in which deliberations of the persons performing risk adjustment functions under this section are

Version 1.0 Effective January 1, 2005

not open to the public and records of those deliberations are maintained in confidence. Nothing in this section prohibits the board from making public statistical information that does not identify or tend to identify a specific recipient or provider of emergency medical services or adult or pediatric trauma care.

(F) No provider that furnishes information to the board with respect to any patient the provider examined or treated shall, because of this furnishing, be deemed liable in damages to any person or be held to answer for betrayal of a professional confidence in the absence of willful or wanton misconduct. No such information shall be subject to introduction in evidence in any civil action against the provider. No provider that furnishes information to the board shall be liable for the misuse or improper release of the information by the board or any other person.

No person who performs risk adjustment functions under this section shall, because of performing such functions, be held liable in a civil action for betrayal of professional confidence or otherwise in the absence of willful or wanton misconduct.

Ohio Administrative Code

4765-4-01 State trauma registry.

(A) In carrying out its responsibilities for the collection of trauma data pursuant to section ORC"4765.06 of the Revised Code and this chapter, the board may reference commonly accepted medical diagnostic codes in identifying those conditions that are included within the definition of trauma.

(B) The board shall use the state trauma registry to collect and analyze data that is necessary to evaluate the delivery of adult and pediatric trauma care within the state. The data collected by the state trauma registry shall be of such a nature as to allow the board to identify and evaluate the following:

- (1) Incidence, type, severity, and outcome of trauma injuries;
- (2) Criteria used to establish triage protocols;
- (3) Geographic patterns of injury, including but not limited to areas or regions of the state where improvements are needed in the delivery of trauma care;
- (4) Other factors to consider in recommending, designing, or implementing an integrated statewide trauma care delivery system, including but not limited to public education on trauma and injury prevention, access to trauma care, prehospital availability, and cost of trauma care.

(C) Data and information submitted to, and maintained by, the state trauma registry shall be in such a format that:

- (1) Protects the identity of specific patients to whom medical care has been rendered;
- (2) Identifies specific health care facilities by a code or similar designation other than name;
- (3) Avoids or minimizes duplication of entry.

HISTORY: Eff 5-19-97; 4-28-02

Rule promulgated under: RC <JL:JUMP,"119.03","1_PORC"119.03

Rule authorized by: RC <JL:JUMP,"4765.11","1_PORC"4765.11

Rule amplifies: RC <JL:JUMP,"4765.06","1_PORC"4765.06R.C.

<JL:JUMP,"119.032","1_PORC"119.032 review dates: 2/11/2002 and 04/28/2007

<JD:"4765-4-02"

4765-4-02 Operation of state trauma registry.

(A) As used in this rule, "subcommittee" means the trauma registry advisory subcommittee authorized in paragraph (B) of this rule.

(B) The state trauma registry established pursuant to section <JL:JUMP,"4765.06","1_PORC"4765.06 of the Revised Code and this chapter shall be overseen by a subcommittee of the state trauma committee, which shall be known as the trauma registry advisory subcommittee.

(C) The board shall make appointments to the subcommittee. Membership of the subcommittee shall include the following:

- (1) Two surgeons selected from a list of nine names, three each submitted by the Ohio chapter of the American college of surgeons, the Ohio state medical association, and the Ohio osteopathic association, respectively. One of the two surgeons chosen shall be affiliated with a facility that has applied for designation as, or has been verified as, a level I or level II trauma center by the

Version 1.0 Effective January 1, 2005

American college of surgeons;

(2) Two emergency physicians, one each selected from list of three names submitted by the Ohio chapter of the American college of emergency physicians and a list of three names submitted by the Ohio chapter of the American academy of pediatrics;

(3) Two trauma registrars selected from a list of three names submitted by the alliance of Ohio trauma registrars;

(4) Two nurses, one each selected from a list of three names submitted by the Ohio society of trauma nurse coordinators and a list of three names submitted by the Ohio emergency nurses association;

(5) Two hospital representatives selected from a list of twelve names, three each submitted by the Ohio hospital association, the Ohio osteopathic association, the association of Ohio children's hospitals, and the health forum of Ohio, respectively;

(6) One prehospital emergency medical services provider selected from a list of three names submitted by each organization representing prehospital emergency medical services providers that is authorized by section <JL:JUMP,"4765.02","1_PORC"4765.02 of the Revised Code to submit nominations to the governor for appointments to the board;

(7) One representative of rehabilitation providers selected from a list of three names submitted by the Ohio rehabilitation association;

(8) One consumer who is not affiliated with an emergency medical services provider, selected from a list of three names submitted by the chairman of the board.

(9) One physical medicine and rehabilitation physician selected from a list of nine names, three each submitted by the Ohio society of physical and rehabilitative medicine, the Ohio state medical association, and the Ohio osteopathic association, respectively.

(10) One county coroner selected from a list of nine names, three each submitted by the Ohio state coroner's association, the Ohio state medical association, and the Ohio osteopathic association, respectively.

(11) Two health information management technicians or medical record coders from non-trauma center hospitals, selected from a list of three names submitted by the Ohio health information management association.

(12) One representative from a regional trauma registry selected from a list of three names submitted by the chairman of the state trauma committee.

(D) In making appointments to the subcommittee, the board shall make a good faith effort to ensure representation from health care facilities of differing size and trauma care capabilities, and from various geographic regions of the state.

(E) The initial subcommittee members shall serve staggered terms. Of the initial appointments to the subcommittee, the board shall designate four members whose terms shall end one year after the initial date of appointment and four members whose terms shall end two years after the initial date of appointment. The remaining initial subcommittee members shall each serve a term of three years. Any member appointed to the subcommittee after the initial appointments shall serve a term of three years. No member shall serve more than two consecutive terms.

(F) The board may fill any vacancies that occur prior to the expiration of a term in the same manner as the original appointment. Any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall serve for the remainder of the unexpired term. Any member appointed to fill an unexpired term shall remain eligible to serve two additional three-year terms.

(G) The subcommittee shall annually select a chairman from among its members.

(H) The subcommittee may establish such task forces or work groups as it deems necessary to assist in its functions.

HISTORY: Eff 5-19-97; 4-28-02

Rule promulgated under: RC <JL:JUMP,"119.03","1_PORC"119.03

Rule authorized by: RC <JL:JUMP,"4765.11","1_PORC"4765.11

Rule amplifies: RC <JL:JUMP,"4765.06","1_PORC"4765.06R.C.

<JL:JUMP,"119.032","1_PORC"119.032 review dates: 2/11/2002 and 04/28/2007

<JD:"4765-4-03"

Version 1.0 Effective January 1, 2005

4765-4-03 Required reporting to state trauma registry.

(A) The following entities shall submit data and information to the state trauma registry:

(1) Health care facilities including:

(a) Hospitals registered under Chapter <JL:JUMP,"3701","1_PORC"3701. of the Revised Code;

(b) Nursing facilities licensed or certified under Chapter <JL:JUMP,"3721","1_PORC"3721. of the Revised Code;

(c) County homes or county nursing homes as defined in section <JL:JUMP,"5155.31","1_PORC"5155.31 of the Revised Code;

(d) Inpatient rehabilitation facilities as defined in Chapter 3701-83 of the Administrative Code;

(e) Ambulatory surgical facilities as defined in section <JL:JUMP,"3702.30","1_PORC"3702.30 of the Revised Code;

(2) State and other public agencies designated by the board that possess information regarding trauma care;

(3) County coroners.

(B) Those entities required to submit data and information to the state trauma registry under this chapter shall provide information regarding injured patients in the following categories that are applicable to its operations:

(1) Trauma patients who meet the minimum requirements set forth by the board for inclusion into the Ohio trauma registry;

(2) Type of trauma injury as identified by medical diagnostic codes designated by the board;

(3) Severity of injury;

(4) Patient outcomes;

(5) Type of prehospital emergency care received by each trauma patient;

(6) Financial data pertinent to trauma care;

(7) Remuneration received from all sources for treatment of trauma patients.

(C) All trauma related deaths shall be reported by the coroner of the county in which the death occurred to the state trauma registry in a manner specified by the board within one hundred-eighty days after the death occurs,

(D) The information required to be provided to the state trauma registry under section <JL:JUMP,"4765.06","1_PORC"4765.06 of the Revised Code and this chapter shall be provided and maintained in such a way as to protect against revealing the identity of the patient. Any person handling information received for the state trauma registry has a fiduciary duty to maintain the confidentiality of such information and shall sign and adhere to a contract with the department of public safety, division of EMS, regarding the confidentiality of such information. If such person violates this fiduciary duty or violates any terms of the contract, the department of public safety, division of EMS, may terminate such person and employ any other remedies, legal or equitable, available to it. Health care facilities and other providers shall be identified in the registry by a code or similar designation other than name.

(E) Except as provided in paragraph (C) of this rule or as otherwise specified by the board, the information required under section <JL:JUMP,"4765.06","1_PORC"4765.06 of the Revised Code and this chapter shall be reported on a quarterly basis and shall be submitted to the state trauma registry not later than ninety calendar days after March thirty-first, June thirtieth, September thirtieth, and December thirty-first of each year. The board may develop policies for granting extensions to the submission deadlines.

(F) The information required to be provided to the state trauma registry under section <JL:JUMP,"4765.06","1_PORC"4765.06 of the Revised Code and this chapter shall be submitted in a format authorized by the board for such purpose,

(G) In identifying the information to be provided to the state trauma registry under section <JL:JUMP,"4765.06","1_PORC"4765.06 of the Revised Code and this chapter, the board shall take into consideration the financial and other burdens that these requirements will place on the entities that are required to report.

(H) Any entity, otherwise required to report to the state trauma registry under section <JL:JUMP,"4765.06","1_PORC"4765.06 of the Revised Code or this chapter, that reports required information to a regional trauma registry need not report individually to the state trauma registry, provided the regional registry reports such information to the state trauma registry in compliance with section <JL:JUMP,"4765.06","1_PORC"4765.06 of the Revised Code and this chapter. Those entities intending to report through a regional registry shall so notify the board in a manner

Version 1.0 Effective January 1, 2005

indicated by the board.

(I) Any entity that fails to submit data and information to the state trauma registry, as required under section <JL:JUMP,"4765.06","1_PORC"4765.06 of the Revised Code or this chapter, may be ineligible to participate in the emergency medical services grants program established under section <JL:JUMP,"4765.07","1_PORC"4765.07 of the Revised Code and as provided in Chapter 4765-5 of the Administrative Code.

HISTORY: Eff 5-19-97; 4-28-02

Rule promulgated under: RC <JL:JUMP,"119.03","1_PORC"119.03

Rule authorized by: RC <JL:JUMP,"4765.11","1_PORC"4765.11

Rule amplifies: RC <JL:JUMP,"4765.06","1_PORC"4765.06R.C.

<JL:JUMP,"119.032","1_PORC"119.032 review dates: 2/11/2002 and 04/28/2007

<JD:"4765-4-04"

4765-4-04 Definitions.

(A) "Glasgow coma scale" or "GCS" is a numeric rating used to assess the severity of neurologic injury.

(B) "Information that identifies or would tend to identify a specific recipient of emergency medical services or adult or pediatric care" shall have the same meaning as "individually identifiable health information" as defined in the health insurance portability and accountability act (HIPAA) of 1996, attached hereto as an appendix.

(C) As used in HIPAA and this chapter, "Individually identifiable health information" is information that is a subset of health information, including demographic information collected from an individual, and

(1) Is created or received by a health care provider, health plan, employer, or health care clearinghouse; and

(2) Relates to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present, or future payment for the provision of health care to an individual; and

(a) That identifies the individual; or

(b) With respect to which there is a reasonable basis to believe the information can be used to identify the individual.

(D) "Injury severity score" or "ISS" is a mathematical measure assessing the cumulative effect of injury severity.

(E) "Major Trauma Outcome Study" or "MTOS" is a nationally based research project conducted between 1982 and 1987, which created and validated the TRISS Methodology.

(F) "Risk Adjustment" means methodologies applied to a data set in order to identify and control patient variables that are present which may influence patient outcome.

(G) "TRISS" is a methodology which combines the following variables in order to determine a probability of survival:

(1) Physiologic (Systolic Blood Pressure, Respiratory Rate, Glasgow Coma Scale Score);

(2) Anatomic injury severity score;

(3) Age (55 years or older, or younger than 55 years);

(4) Trauma Type (Blunt or Penetrating Injury).

HISTORY: Eff 4-28-02

Rule promulgated under: RC <JL:JUMP,"119.03","1_PORC"119.03

Rule authorized by: RC <JL:JUMP,"4765.11","1_PORC"4765.11

Rule amplifies: RC 4765.66R.C. <JL:JUMP,"119.032","1_PORC"119.032 review dates: 04/28/2007

<JD:"4765-4-05"

4765-4-05 Purpose of risk adjustment.

The purpose of risk adjustment is to identify and control patient variables that are present which may influence patient outcome.

HISTORY: Eff 4-28-02

Rule promulgated under: RC <JL:JUMP,"119.03","1_PORC"119.03

Rule authorized by: RC <JL:JUMP,"4765.11","1_PORC"4765.11

Rule amplifies: RC <JL:JUMP,"4765.06","1_PORC"4765.06R.C.

4765-4-06 Risk adjustment of state trauma registry data.

(A) Methodologies

- (1) TRISS shall be the primary methodology used to risk adjust data in the state trauma registry.
- (2) The subcommittee may evaluate other methodologies and make recommendations to the trauma committee and board on the use of such methodologies.
- (3) The coefficients used to calculate TRISS shall be those derived from the MTOS.
- (4) The subcommittee may evaluate the possibility of creating Ohio specific coefficients, based upon the Ohio trauma registry data set, to utilize with the TRISS methodology, and when appropriate, these equations may be utilized. Additionally, the subcommittee may evaluate other appropriate data sets for use in developing specific coefficients.

(B) Analysis

- (1) The subcommittee shall utilize a variety of acceptable techniques for providing statistical analysis of risk-adjusted data.
- (2) The subcommittee shall utilize a variety of methodologies to risk adjust by sex, age, or other factors, in order to analyze state trauma registry data for specific age groupings, including pediatric and geriatric age groupings.

(C) Risk Adjusted Outcomes

- (1) Mortality shall be an outcome that is risk adjusted. In addition, the subcommittee may evaluate the feasibility of risk adjusting other outcomes and make recommendations to the trauma committee and board on the selection and evaluation of such outcomes.

HISTORY: Eff 4-28-02

Rule promulgated under: RC <JL:JUMP,"119.03","1_PORC"119.03

Rule authorized by: RC <JL:JUMP,"4765.11","1_PORC"4765.11

Rule amplifies: RC <JL:JUMP,"4765.06","1_PORC"4765.06R.C.

<JL:JUMP,"119.032","1_PORC"119.032 review dates: 04/28/2007

<JD:"4765-4-07"

4765-4-07 Protected information within the state trauma registry.

(A) Information that identifies or would tend to identify a specific recipient of emergency medical services or adult or pediatric trauma care shall include, but not be limited to, the recipient's social security number, date of birth, and name.

- (1) No records shall be provided in response to a public records request if the request asks for information sorted by, or if the request contains, information that identifies or would tend to identify a specific recipient of emergency medical services or adult or pediatric trauma care.
- (2) No records provided in response to a public records request shall contain any information that identifies or would tend to identify a specific recipient of emergency medical services or adult or pediatric trauma care.

(B) Information that identifies or would tend to identify a specific provider of emergency medical services or adult or pediatric trauma care shall include, but not be limited to, the provider's hospital code, medical record number, and county.

- (1) Prior to the implementation of risk adjustment standards and procedures, no records shall be provided in response to a public records request if the request asks for information sorted by, or if the request contains, information that identifies or would tend to identify a specific provider of emergency medical services or adult or pediatric trauma care.
- (2) Prior to the implementation of risk adjustment standards and procedures, no records provided in response to a public records request shall contain any information that identifies or would tend to identify a specific provider of emergency medical services or adult or pediatric trauma care.
- (3) After risk adjustment standards and procedures are implemented, such records may be made public, but only on a risk adjusted basis.

HISTORY: Eff 4-28-02

Rule promulgated under: RC <JL:JUMP,"119.03","1_PORC"119.03

Rule authorized by: RC <JL:JUMP,"4765.11","1_PORC"4765.11

Rule amplifies: RC <JL:JUMP,"4765.06","1_PORC"4765.06R.C.

<JL:JUMP,"119.032","1_PORC"119.032 review dates: 04/28/2007

<JD:"4765-4-08"

4765-4-08 Risk adjustment deliberations.

(A) The department of public safety, division of EMS, may contract with individuals or organizations with specific expertise in risk adjustment and statistical analysis of medical data in order to perform risk adjustment of information received by the board under Chapter

<JL:JUMP,"4765","1_PORC"4765. of the Revised Code.

(B) Each person performing risk adjustment of Ohio trauma registry data has a fiduciary duty to maintain the confidentiality of such information. In the event a person performing risk adjustment under this chapter violates this duty, the department of public safety, division of EMS, may terminate such person and employ any other remedies, legal or equitable, available to it.

(C) Each person performing risk adjustment of Ohio trauma registry data shall sign and adhere to a contract with the department of public safety, division of EMS, regarding the confidentiality of such information. In the event a person performing risk adjustment under this chapter violates any terms of this contract, the department of public safety, division of EMS, may terminate such person and employ any other remedies, legal or equitable, available to it.

(D) All meetings in which persons are engaged in performing risk adjustment functions, including deliberations therein, shall not be open to the public.

(E) All records of deliberations of persons performing risk adjustment functions shall be maintained in confidence.

HISTORY: Eff 4-28-02

Rule promulgated under: RC <JL:JUMP,"119.03","1_PORC"119.03

Rule authorized by: RC <JL:JUMP,"4765.11","1_PORC"4765.11

Rule amplifies: RC <JL:JUMP,"4765.06","1_PORC"4765.06R.C.

<JL:JUMP,"119.032","1_PORC"119.032 review dates: 04/28/2007

APPENDIX 6

Trauma Registry Advisory Subcommittee

Dr. James Begley M.D.	Physical Medicine/Rehabilitation Physician
Ms. Sally Betz, R.N., MSN	Registered Nurse
Ms. Margie Brunn, CSTR	Trauma Registrar
Ms. Paula Fowles, R.N.	Rehab Representative
Ms. Elizabeth Gash, RHIA	Medical Records Professional
Ms. Roxanna Giambri, RHIA	Regional Trauma Registry Representative
Ms. Vickie Graymire, R.N., MS	Registered Nurse
Mr. Henry Kauffman, EMT-P, Fire Chief	EMS Representative
Dr. Barry Knotts, M.D., FACS, Ph.D	Surgeon, level 1 Trauma Center
Mr. Jon Konves, EMT-P	Trauma Registrar
Dr. Carl Parrott, M.D.	County Coroner
Dr. Douglas Paul, D.O.	Hospital Representative
Ms. Vicki Ruppert, R.N., BSN	Hospital Representative
Mr. Michael Smeltzer, MPH	Consumer
Dr. Richard Treat, M.D.	Surgeon, non level 1 Trauma Center
Ms. Debbie Znosko, CCS	Medical Records Professional

APPENDIX 7

File Key Lay Out

No.	Field Name	Length	Type	Start	End	Nullable	Values	Instructions
1	Rehabilitation Facility Code	4	N	1	4	NO	The facility code assigned by the Ohio Department of Public Safety. See Appendix 1 - ODPs Rehabilitation Facility Codes.	Must be present on all records submitted to the Ohio Department of Safety. A four-digit code assigned by the Ohio Department of Public Safety. This code needs to be entered initially. After initial entry it will automatically be entered for each record.
2	Unique Patient Encounter/Admission Number	15	A	5	19	NO	A number assigned by each facility to the patient at the time of admission. This number should be unique for each patient AND each visit. This number may be referred to as a patient account number. Medical record numbers are typically specific to each patient BUT are frequently the same for all rehabilitation facility visits by the same patient.	Enter the rehabilitation facility's unique patient number for this patient. This record is for audit purposes only and will not be made public.
3	Date Exported	8	DATE	20	27	NO	Date (mmddyyyy) that this record was submitted to the Ohio Trauma Registry.	This is a generated field and will be completed when the record is exported to Ohio Trauma Registry.
4	Zip Code of Residence	5	N	28	32	NO	The patient's five-digit zip code for place of residence, at the time of their injury. Enter "99999" for patients that reside outside of the USA.	Enter in the patients' zip code number of their residence at the time of their injury. If patient is homeless, enter the zip code of the location of injury. Enter "99999" for patients that reside outside of the USA. Do not enter the 4-digit extension.
5	Patient's Date of Birth	8	DATE	33	40	NO	mmddyyyy	The patient's date of birth. Enter the month, day and year of the patient's Date of Birth. If the patients age is known, but the date of birth is not, enter 01/01/YYYY (YYYY appropriate to patients known age) Entire year must be used Example: 1998 Enter in the patient's date of birth. Must use this format "01/01/1998". It is necessary to enter the year using the entire year.
6	Gender	1	N	41	41	NO	1 - Male 2 - Female 3 - ND (Not Documented)	The patient's gender at the injury date. Enter the patient's gender using the options available from code table above. Use the pulldown menu to select this field. Select the most appropriate option.
7	Race/Ethnicity	1	N	42	42	NO	1 - American Indian or Alaskan Native 2 - Asian 3 - Black, not of Hispanic origin 4 - Hispanic or Latino 5 - Native Hawaiian or Other Pacific Islander 6 - White 7 - Other 8 - Multi-racial 9 - ND (Not Documented)	The patient's race/ethnic group. Enter the patient's race from the available options. Use the pulldown menu to select this field. Select the most appropriate option. If more than one race value #1 to #6 is selected then value number 8 - <i>Multiracial</i> must be selected. Note that pediatric facilities are limited to selection of only one value. Adult facilities can select multiple values, which will reported as 8 - multi-racial.
8	Date of Onset (Date Injury Occurred)	8	DATE	43	50	NO	mmddyyyy	The date the injury occurred. Enter the month, day and year of the injury. The year must be 4-digits. Example: 1998. The date on which injury

Version 1.0 Effective January 1, 2005

								<p>occurred must be the earliest date associated with the trauma event. All treatment dates must be equal to or after the date on which the injury occurred.</p> <p>Enter the patient's actual date of injury.</p>
9	Rehabilitation Admission From	2	N	51	52	NO	<p>01 - Home 02 - Board and Care 03 - Transitional Living 04 - Intermediate care 05 - Skilled Nursing Facility 06 - Acute Unit of own facility 07 - Acute Unit another facility 08 - Chronic Hospital (LTAC) 09 - Rehabilitation facility 10 - Other 12 - Alternate Level of care 13 - Subacute setting 14 - Assisted Living Residence</p>	<p>If # 4, 5, 7, or 9 is selected, field # 10 Transferring Facility ID must be completed. Value number 11 is purposefully not utilized for this field. <u>Home</u>: A private, community based dwelling (a house, apartment, mobile home, etc) that houses the patient, family, or friends.</p> <p><u>Board and Care</u>: A community based setting where individuals have private space (either a room or apartment), or a structured retirement facility. The facility may provide transportation, laundry, and meals, but no nursing care.</p> <p><u>Transitional Living</u>: A community based, supervised setting where individuals are taught skills so they can live independently in the community.</p> <p><u>Intermediate care (nursing home)</u>: A long term care setting that provides health related services but a registered nurse is not present 24 hours a day. Patients live by institutional rules; care is ordered by a physician, and a medical record is maintained. Patients in intermediate care are generally less disabled than those in skilled care facilities</p> <p><u>Skilled Nursing Facility (nursing home)</u>: A long term care setting that provides skilled nursing services. A registered nurse is present 24 hours a day. Patients live by institutional rules; care is ordered by a physician, and a medical record is maintained.</p> <p><u>Acute Unit of own Facility</u>: An acute medical/surgical care unit in the same facility as the rehabilitation unit.</p> <p><u>Acute Unit another Facility</u>: An acute medical/surgical care facility separate from the rehabilitation unit.</p> <p><u>Chronic Hospital (LTAC)</u>: A long-term care setting classified as a hospital, long term acute care.</p> <p><u>Rehabilitation facility</u>: An inpatient setting that admits patients with specific disabilities and provides a team approach to comprehensive rehabilitation services, with a physiatrist (or physician of equivalent training/experience) as the physician of record.</p> <p><u>Other</u>: Used only if no other code is appropriate</p> <p><u>Alternate Level of care</u>: A physically and fiscally distinct unit that provides care to individuals who no longer meet acute care criteria</p> <p><u>Subacute setting</u>: Subacute care is goal-oriented, comprehensive,</p>

Version 1.0 Effective January 1, 2005

								<p>inpatient care designed for an individual who has an acute illness, injury or exacerbation of a disease process. It is rendered immediately after, or instead of, acute hospitalization to treat one or more specific active, complex medical conditions an overall situation. Generally the condition of an individual receiving subacute care is such that the care does not depend heavily on high technology monitoring or complex diagnostic procedures. Subacute care requires the coordinated services of an interdisciplinary team, including physicians, nurses, and other relevant professional disciplines whoa re knowledgeable and trained to assess and manage specific conditions and perform the necessary procedures. Subacute care is given as part of a specially designed program, regardless of the site. Subacute care is generally more intensive than traditional nursing home care, but less than acute inpatient care. It requires frequent (daily to weekly) patient assessment and review of the clinical course and treatment plan for a limited time period (several days to several months), until a condition is stabilized or a predetermined course is completed.</p> <p><u>Assisted Living Residence:</u> A community based setting that combines housing, private quarters, freedom of entry and exit, supportive services, personalized assistance, and healthcare designed to respond to individual needs of the those who need help with activities of daily living and instrumental activities of daily living. Supportive services are available 24 hours a day to meet scheduled and unscheduled needs in a way that promotes maximum dignity and independence for each resident. These services involve the resident's family, neighbors, and friends.</p>
10	Pediatric Prehospital Setting	2	N	53	54	YES	01 - Home 02 - Transitional living center 03 - Skilled nursing facility 05 - Other 06 - ND	Select the value that most accurately describes the patients living arrangements prior to their hospitalization. Note the value 04 is not used in this field.
11	Pediatric Living With	2	N	55	56	YES	01 - Two parents 02 - One parent 03 - Relatives 04 - Foster care 05 - Shelter 06 - Other 07 - ND	Select a value in this field ONLY if the value selected in field # 10 <i>Pediatric Prehospital Setting</i> is equal to "01-Home"
12	Pediatric Education Category	2	N	57	58	YES	01 - Not a student 02 - Early Intervention program 03 - Preschool 04 - Kindergarten through 12th 05 - Other	Select the value
13	Pediatric Educational Setting	2	N	59	60	YES	01 - Regular Class 02 - Special class (approx. 12:1) 03 - Special Class (approx. 6:1) 04 - Home-based 05 - Day Care/nursery school/center-based/community 06 - NA	If value 2, 3 or 4 is selected for the Pediatric Education Category, then an appropriate value for this field must be reported. If 01 or 05 is selected for Pediatric Education Category, then 06- NA must be selected.

Version 1.0 Effective January 1, 2005

14	Adult Prehospital Living With	2	N	61	62	YES	01 - Alone 02 - Family/Relatives 03 - Friends 04 - Attendant 05 - Other 06 - ND	Select the value that most accurately describes the patients living arrangements prior to their hospitalization.
15	Adult Prehospital Vocational Category	2	N	63	64	YES	01 - Employed 02 - Sheltered 03 - Student 04 - Homemaker 05 - Not Working 06 - Retired for Age 07 - Retired for Disability 08 - ND	Select the value that most accurately describes the patients' vocation prior to their hospitalization. Employed - The patient works for pay in a competitive environment or is self employed Sheltered - The patient works for pay in a non-competitive environment Student - the patient is enrolled in an accredited school (including trade school), college or university. Homemaker - The patient works at home, does not work outside the home, is not paid by an employer, and is not self employed Not Working - The patient is unemployed, but is not retired or receiving disability benefits Retired for Age - The patient is retired (usually 60 years of age or older) and is receiving retirement benefits Retired for Disability - The patient is receiving disability benefits and is less than 60 years of age.
16	Adult Prehospital Vocational Effort	2	N	65	66	YES	01 - Full-time 02 - Part-time 03 - Adjusted Work load 04 - NA 05 - ND	Select the value that most accurately describes the patients vocation prior to their hospitalization, if values 1 - 4 are selected in field # __ Prehospital Vocation Category, then 01-03 are valid selections for this field. If 05-07 are selected in field # __, then 04 must be selected. Full-time - The patient worked a full schedule (i.e. 37.5 or 40 hours per week) - which ever is normal where he/she works Part-time - The patient worked less than full time (i.e. less than 37.5 or 40 hours per week) depending on the norm where he/she works. Adjusted Workload - The patients workload was adjusted due to disability. The patient was not able to perform all the work duties of the position
17	Transferring Facility ID	4	N	67	70	NO	ODH or ODPS assigned number.	If the patient is transferred from an Ohio hospital, enter the ODH assigned Ohio hospital code. See Appendix 1-A for the list of ODH assigned Ohio hospital codes If the patient is transferred from an out of state hospital, enter the ODPS assigned out of state hospital code. See Appendix 1-B for the list of ODPS assigned out of state hospital codes. If the patient is transferred from an Ohio Rehabilitation Facility, enter the ODPS assigned Ohio Rehabilitation Facility code. See Appendix 1-C for the list of ODPS assigned Ohio Rehabilitation Facility codes If the patient is transferred from an Ohio Nursing Facility, enter the ODH assigned Ohio Nursing Facility code. See Appendix 1-D for the list of ODH assigned Ohio Nursing Facility codes
18	Rehabilitation Facility	8	DATE	71	78	NO	mmddyyyy	The arrival date that the patient actually arrived at the rehabilitation

Version 1.0 Effective January 1, 2005

	Arrival Date						facility. Enter the month, day and year. The actual date that the patient arrived at the rehabilitation facility. Date format: 01/29/1998. The year must be complete year (1998).
19	Etiologic Diagnosis (ICD-9-CM Code)	5	N	79	83	YES	Report the ICD-9-CM diagnosis codes Use an ICD-9-CM code to indicate the etiologic problem that led to the condition for which the patient is receiving rehabilitation. These should be diagnosis codes, not external cause of injury codes. When creating a data file the decimal point MUST be used. Example: 801.11 = 801.11 or 810 = 810.0. Give the complete code not category codes.
20	Co-Morbid Conditions (ICD-9-CM Codes)	50	N	84	133	YES	Report 10 additional ICD-9-CM codes of diagnoses The ICD-9-CM code for each injury diagnosis. List up to 10 codes. When creating a data file the decimal point MUST be used. Example: 801.11 = 801.11 or 810 = 810.0
21	Complications during Rehabilitation Stay (ICD-9-CM Codes)	30	N	134	163	YES	Report up to 6 ICD-9-CM codes Enter an ICD-9-CM code for each complication that began with this rehabilitation stay. List up to 6 codes. When creating a data file the decimal point MUST be used. Example: 801.11 = 801.11 or 810 = 810.0
22	Disability Assessment Tool Adult/Pediatric	1	N	164	164	NO	1 - Adult 2 - Pediatric Facilities using an adult assessment-scoring model (i.e. FIMTM) should select <i>1 - Adult</i> . Facilities that use a pediatric scoring model, (i.e. WeeFIMTM) regardless of the patient's age should select <i>2 - Pediatric</i> .
23	Disability Assessment upon Admission	18	N	165	182	NO	0 - Activity Does Not Occur 1 - Total Assistance 2 - Maximum Assistance 3 - Moderate Assistance 4 - Minimal Assistance 5 - Supervision 6 - Modified Independence 7 - Complete independence 25 Self-Care: Eating 26 Self-Care: Grooming 27 Self-Care: Bathing 28 Self-Care: Dressing-Upper Body 29 Self Care: Dressing-Lower Body 30 Self-Care: Toileting 31 Sphincter Control: Bladder Management 32 Sphincter Control: Bowel Management 33 Transfers: Bed, Chair, Wheelchair 34 Transfers: Toilet 35 Transfers: Tub, Shower 36 Locomotion: Walk. Wheelchair 37 Locomotion: Stairs 38 Communication: Comprehension 39 Communication: Expression 40 Social Cognition: Social Interaction 41 Social Cognition: Problem Solving 42 Social Cognition: Memory Motor Subscore Motor Subscore is a calculated field, the sum of fields #25 through #37 Cognitive Subscore is a calculated field; the sum of fields #38 through #42 Total Motor and Cognitive score is a calculated field, the sum of Motor subscore and Cognitive subscore Disability Assessment upon admission should be determined during the first three calendar days of the patients admission

Version 1.0 Effective January 1, 2005

							Cognitive subscore Total Motor and Cognitive score	
24	Disability Assessment Score upon Discharge	18	N	183	200	NO	1 - Complete Dependence 2 - Maximum assistance 3 - Moderate Assistance 4 - Minimal Assistance 5 - Supervision 6 - Modified Independence 7 - Complete independence 25 Self-Care: Eating 26 Self-Care: Grooming 27 Self-Care: Bathing 28 Self-Care: Dressing-Upper Body 29 Self Care: Dressing-Lower Body 30 Self-Care: Toileting 31 Sphincter Control: Bladder Management 32 Sphincter Control: Bowel Management 33 Transfers: Bed, Chair, Wheelchair 34 Transfers: Toilet 35 Transfers: Tub, Shower 36 Locomotion: Walk. Wheelchair 37 Locomotion: Stairs 38 Communication: Comprehension 39 Communication: Expression 40 Social Cognition: Social Interaction 41 Social Cognition: Problem Solving 42 Social Cognition: Memory Motor Subscore Cognitive subscore Total Motor and Cognitive score	Motor Subscore is a calculated field, the sum of fields #25 through #37 Cognitive Subscore is a calculated field; the sum of fields #38 through #42 Total Motor and cognitive score is a calculated field, the sum of Motor subscore and cognitive subscore
25	Date of Discharge or Death	8	DATE	201	208	NO	mmddyyyy	Enter the date of the patient's discharge, transfer or death from the rehabilitation facility. The actual date that the patient was discharged from the rehabilitation facility or date that the patient was pronounced dead. Date format: 01/29/1998. The year must be complete year (1998).
26	Discharge Status	1	N	209	209	NO	1 - Alive 2 - Dead	Enter the status of the patient upon discharge from the rehabilitation facility. The patient was alive or dead when they left the rehabilitation facility.
27	Adult Discharge Disposition	2	N	210	211	YES	01 - Home 02 - Board and Care 03 - Transitional Living 04 - Intermediate care 05 - Skilled Nursing Facility 06 - Acute Unit of own facility 07 - Acute Unit another facility 08 - Chronic Hospital (LTAC) 09 - Rehabilitation facility 10 - Other	The patient's disposition upon discharge from the rehabilitation facility. If #01 is selected you must make an entry in Field # <i>XX Discharge Living With</i> . If #04, 05, 07, or 09 is selected you must enter an ODPS or ODH Assigned facility code in field # <i>XX-Transfer to Other Rehabilitation Facility</i> .

Version 1.0 Effective January 1, 2005

							11 - Died 12 - Alternate Level of care 13 - Subacute setting 14 - Assisted Living Residence	
28	Adult Discharge Living With	2	N	212	213	YES	01 - Alone 02 - Family/Relatives 03 - Friends 04 - Attendant 05 - Other 06 - NA	If values 1, 2, 3 or 14 are selected in field #27 - <i>Adult Discharge Disposition</i> , then values 01 through 05 are valid for this field, otherwise 06- NA must be selected.
29	Pediatric Discharge Disposition	2	N	214	215	YES	01 - Home 02 - Transitional living center 03 - Skilled nursing facility 05 - Other 06 - ND	Select the value that most accurately describes the patients living arrangements prior to their hospitalization. Note that the value "04" is not used in this field.
30	Pediatric Discharge Living With	2	N	216	217	YES	01 - Two parents 02 - One parent 03 - Relatives 04 - Foster care 05 - Shelter 06 - Other 07 - ND	Select a value in this field ONLY if the value selected in field # 29 <i>Pediatric Prehospital Setting</i> is equal to "01-Home"
31	Discharge Referrals	10	N	218	227	NO	01 - Referral to Bureau of Vocational Rehabilitation 02 - Referral to Bureau of Visual Impairment 03 - Outpatient therapy 04 - Home Health Services 05 - Other (examples - homeless or women's shelters, protective services, etc.) 09 - No Referrals Made	More than one value may be selected.
32	Transfer to Other Hospital/Facility	4	N	228	231	YES/NO	ODH assigned # for in-state hospitals ODPS assigned # for out of state hospitals ODPS assigned # for rehabilitation facilities ODH assigned # for licensed nursing homeMay be BLANK if Field Number #27 is NOT = 5, 6, 7, 8, 9 (adult) or if Field Number #29 is NOT = 03	Enter the location of the patient disposition from the hospital. If the patient is transferred to another Ohio hospital, enter the ODH assigned Ohio hospital code. See Appendix 1-A for the list of ODH assigned Ohio hospital codes. If the patient is transferred to an out of state hospital, enter the ODPS assigned out of state hospital code. See Appendix 1-B for the list of ODPS assigned out of state hospital codes. If the patient is transferred to a rehabilitation facility, enter the ODPS assigned rehabilitation facility code. See Appendix 1-C for the list of ODPS assigned rehabilitation facilities codes. If the patient is transferred to a licensed nursing home, enter the ODH assigned nursing home facility code. See Appendix 1-D for the list of ODH assigned nursing home facilities codes.
33	Billed Rehabilitation Facility Charges	10	N	232	241	YES	Whole Dollar amount of total rehabilitation facility charges rounded off to the nearest dollar Blank* - Not Documented It is acceptable to leave this field blank . Calculations that will be performed on this field (addition, averages, means, etc.) require either a whole dollar amount or a blank field. DO NOT use "ND" or "9999" in this field.	The final billed amount charged for this admission, excluding professional fees, at the rehabilitation facility, expressed in a whole dollar figure. Total amount charged to the patient for treatment received at the rehabilitation facility expressed in a whole dollar amount. *If the information is not documented leave this field blank.

Version 1.0 Effective January 1, 2005

34	Payment Source	4	N	242	245	NO	<p>1 - Primary Source 2 - Secondary Source</p> <p>Code each source with one of the following values 01 - Blue Cross 02 - Medicare non-MCO 03 - Medicaid non-MCO 04 - Commercial Insurance 05 - MCO HMO 06 - Workers' Compensation 07 - Crippled Children's Services / Bureau of Children with Medical Handicaps 08 - Developmental Disabilities Services 09 - State Vocational Rehabilitation 10 - Private Pay 11 - Employee Courtesy 12 - Unreimbursed 13 - CHAMPUS 14 - Other 15 - None 16 - No-Fault Auto Insurance 51 - Medicare MCO 52 - Medicaid MCO</p>	<p>The entity that is expected to be responsible for the largest percentage of the patient's bill for the current encounter, both as a primary payor source as well as a secondary payor source. Values 17-50 are not utilized.</p> <p>Select from the pulldown menu the appropriate final payment source responsible for the outstanding charges incurred.</p>
35	Adult Length of Stay in Rehabilitation Facility	48	DATE	246	293	YES	<p>mm/dd/yyyy Interruptions in care #1 1st Interruption date mm/dd/yyyy 1st Return date mm/dd/yyyy</p> <p>Interruptions in care #2 2nd Interruption date mm/dd/yyyy 2nd Return date mm/dd/yyyy</p> <p>Interruptions in care #3 3rd Interruption date mm/dd/yyyy 3rd Return date mm/dd/yyyy</p>	<p>Enter the dates of up to three interruptions in care. The length of stay in the rehabilitation facility will be calculated by subtracting the total number of days of interrupted care from the total number of days from admission to discharge. Using this process will allow the LOS to be calculated</p> <p>An interruption in care is defined as a discharge from the rehabilitation center and returns to the same facility within three consecutive days.</p>
36	Pediatric Length of Stay in Rehabilitation Facility	48	DATE	294	341	YES	<p>mm/dd/yyyy Interruptions in care #1 1st Interruption date mm/dd/yyyy 1st Return date mm/dd/yyyy</p> <p>Interruptions in care #2 2nd Interruption date mm/dd/yyyy 2nd Return date mm/dd/yyyy</p> <p>Interruptions in care #3 3rd Interruption date mm/dd/yyyy 3rd Return date mm/dd/yyyy</p>	<p>Enter the dates of up to three interruptions in care. The length of stay in the rehabilitation facility will be calculated by subtracting the total number of days of interrupted care from the total number of days from admission to discharge. Using this process will allow the LOS to be calculated.</p>

This page intentionally blank

EMSIRES Data Point

Last Updated : 07:45:33 AM on March 27, 2012

DATA_ELEMENT_NUMBER : **S1**DATA_ELEMENT_NAME : **Software Creator**

NEMSIS_ELEMENT_ID : E01_02

FIELD_TYPE : String

FIELD_LENGTH : 0030

FIELD_START_POSITION : 0001

FIELD_END_POSITION : 0030

MULTIPLE_ENTRY : No

TAB_NAME : No Page

ALLOWED VALUES : Any alphanumeric entry.VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.DATA_ELEMENT_NUMBER : **S2**DATA_ELEMENT_NAME : **Software Name**

NEMSIS_ELEMENT_ID : E01_03

FIELD_TYPE : String

FIELD_LENGTH : 0030

FIELD_START_POSITION : 0031

FIELD_END_POSITION : 0060

MULTIPLE_ENTRY : No

TAB_NAME : No Page

ALLOWED VALUES : Any alphanumeric entry.VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.DATA_ELEMENT_NUMBER : **S3**DATA_ELEMENT_NAME : **Software Version**

NEMSIS_ELEMENT_ID : E01_04

FIELD_TYPE : String

FIELD_LENGTH : 0030

FIELD_START_POSITION : 0061

FIELD_END_POSITION : 0090

MULTIPLE_ENTRY : No

TAB_NAME : No Page

ALLOWED VALUES : Any alphanumeric entry.VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.DATA_ELEMENT_NUMBER : **001**DATA_ELEMENT_NAME : **EMS Agency Number**

NEMSIS_ELEMENT_ID : E02_01

FIELD_TYPE : String

FIELD_LENGTH : 0007

FIELD_START_POSITION : 0091

FIELD_END_POSITION :

: 0097

MULTIPLE_ENTRY : No**TAB_NAME** : Create/Edit Record**ALLOWED VALUES** : Any valid EMS Agency Identification Number.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.
 2. Only valid values are in EMS Agency Database.

DATA_ELEMENT_NUMBER : **002****DATA_ELEMENT_NAME** : **Incident/PCR Number****NEMESIS_ELEMENT_ID** : E01_01**FIELD_TYPE** : String**FIELD_LENGTH** : 0010**FIELD_START_POSITION** : 0098**FIELD_END_POSITION** : 0107**MULTIPLE_ENTRY** : No**TAB_NAME** : Create/Edit Record**ALLOWED VALUES** : Any alphanumeric entry.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.
 2. Can NOT be repeated for an agency ever.
 3. Minimum length 3 characters.

DATA_ELEMENT_NUMBER : **003****DATA_ELEMENT_NAME** : **Type of Service Requested****NEMESIS_ELEMENT_ID** : E02_04**FIELD_TYPE** : Numeric**FIELD_LENGTH** : 0002**FIELD_START_POSITION** : 0108**FIELD_END_POSITION** : 0109**MULTIPLE_ENTRY** : No**TAB_NAME** : Incident & Patient**ALLOWED VALUES** : **30** - Scene Response**35** - Intercept**40** - ED-to-ED Transfer**50** - Mutual Aid

VALIDATIONS AND CROSSCHECKS : 1. NHTSA-2 values **45** and **55** not accepted.

DATA_ELEMENT_NUMBER : **004****DATA_ELEMENT_NAME** : **Unit ID / Call Sign****NEMESIS_ELEMENT_ID** : E02_12**FIELD_TYPE** : String**FIELD_LENGTH** : 0015**FIELD_START_POSITION** : 0110**FIELD_END_POSITION** : 0124**MULTIPLE_ENTRY** : No**TAB_NAME** : Incident & Patient**ALLOWED VALUES** : Any alphanumeric value.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.

DATA_ELEMENT_NUMBER : **005**
 DATA_ELEMENT_NAME : **Primary Role of the Reporting Unit**
 NEMSIS_ELEMENT_ID : E02_05
 FIELD_TYPE : Number
 FIELD_LENGTH : 0002
 FIELD_START_POSITION : 0125
 FIELD_END_POSITION : 0126
 MULTIPLE_ENTRY : No
 TAB_NAME : Incident & Patient
ALLOWED VALUES : **60** - Non-transport
 65 - Rescue
 70 - Supervisor
 75 - Transport

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.

DATA_ELEMENT_NUMBER : **006**
 DATA_ELEMENT_NAME : **Crew Certification/License Levels**
 NEMSIS_ELEMENT_ID : E04_03
 FIELD_TYPE : Numeric
 FIELD_LENGTH : 0004
 FIELD_START_POSITION : 0127
 FIELD_END_POSITION : 0150
 MULTIPLE_ENTRY : Yes, 06
 TAB_NAME : Incident & Patient
ALLOWED VALUES : **635** - Student (EMS or other healthcare)
 640 - Other healthcare provider
 645 - Other non-healthcare provider
 6120 - First Responder
 6090 - EMT-Basic
 6100 - EMT-Intermediate
 6110 - EMT-Paramedic
 6111 - Nurse (RN or LPN)
 6112 - Physician (MD or DO)

VALIDATIONS AND CROSSCHECKS : 1. If Element #74 (Incident / Patient Disposition) is value "Transported by EMS", then must have at least two (2) values "EMTs", "First Responder", "Nurses", or "Physicians". Can NOT be only value "Others".
 2. If Element #34 (Level of Service) is value "ALS Level 1" or "ALS Level 2" then must have at least one (1) value "EMT-I" or "EMT-P".

DATA_ELEMENT_NUMBER : **007**
 DATA_ELEMENT_NAME : **Incident Address**
 NEMSIS_ELEMENT_ID : E08_11
 FIELD_TYPE : String
 FIELD_LENGTH : 0030
 FIELD_START_POSITION : 0151
 FIELD_END_POSITION : 0180

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : Any alphanumeric entry.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.
2. Minimum length 3 characters.

DATA_ELEMENT_NUMBER : **008**

DATA_ELEMENT_NAME : **Incident City/Village/Township**

NEMESIS_ELEMENT_ID : E08_12

FIELD_TYPE : Numeric

FIELD_LENGTH : 0005

FIELD_START_POSITION : 0181

FIELD_END_POSITION : 0185

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : Any valid FIPS Code.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.
2. Only valid values are valid FIPS Codes. Please email the Office of Research and Analysis (EMSdata@dps.state.oh.us) if this needs added to the database.

DATA_ELEMENT_NUMBER : **009**

DATA_ELEMENT_NAME : **Incident ZIP Code**

NEMESIS_ELEMENT_ID : E08_15

FIELD_TYPE : Numeric

FIELD_LENGTH : 0005

FIELD_START_POSITION : 0186

FIELD_END_POSITION : 0190

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : Any valid 5-digit ZIP Code.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.
2. Must start with 43, 44, or 45.
3. Any valid ZIP Code.

DATA_ELEMENT_NUMBER : **010**

DATA_ELEMENT_NAME : **Incident County**

NEMESIS_ELEMENT_ID : E08_13

FIELD_TYPE : String

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0191

FIELD_END_POSITION : 0193

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : **001** - Adams
003 - Allen

005 - Ashland
007 - Ashtabula
009 - Athens
011 - Auglaize
013 - Belmont
015 - Brown
017 - Butler
019 - Carroll
021 - Champaign
023 - Clark
025 - Clermont
027 - Clinton
029 - Columbiana
031 - Coshocton
033 - Crawford
035 - Cuyahoga
037 - Darke
039 - Defiance
041 - Delaware
043 - Erie
045 - Fairfield
047 - Fayette
049 - Franklin
051 - Fulton
053 - Gallia
055 - Geauga
057 - Greene
059 - Guernsey
061 - Hamilton
063 - Hancock
065 - Hardin
067 - Harrison
069 - Henry
071 - Highland
073 - Hocking
075 - Holmes
077 - Huron
079 - Jackson
081 - Jefferson
083 - Knox
085 - Lake
087 - Lawrence
089 - Licking
091 - Logan
093 - Lorain
095 - Lucas
097 - Madison
099 - Mahoning
101 - Marion
103 - Medina
105 - Meigs
107 - Mercer
109 - Miami
111 - Monroe
113 - Montgomery
115 - Morgan

117 - Morrow

119 - Muskingum

121 - Noble

123 - Ottawa

125 - Paulding

127 - Perry

129 - Pickaway

131 - Pike

133 - Portage

135 - Preble

137 - Putnam

139 - Richland

141 - Ross

143 - Sandusky

145 - Scioto

147 - Seneca

149 - Shelby

151 - Stark

153 - Summit

155 - Trumbull

157 - Tuscarawas

159 - Union

161 - Van Wert

163 - Vinton

165 - Warren

167 - Washington

169 - Wayne

171 - Williams

173 - Wood

175 - Wyandot

NOTE: These values are FIPS Codes, not the old standard Ohio County codes.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.

DATA_ELEMENT_NUMBER : **011**

DATA_ELEMENT_NAME : **Type of Dispatch Delay**

NEMESIS_ELEMENT_ID : E02_06

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0194

FIELD_END_POSITION : 0205

MULTIPLE_ENTRY : Yes, 04

TAB_NAME : Times & Situation

ALLOWED VALUES : **80** - Caller (Uncooperative)

85 - High Call Volume

90 - Language Barrier

95 - Location (Unable to obtain)

100 - No Units Available

105 - None

110 - Other

115 - Scene Safety (Not secure for EMS)

120 - Technical Failure (Computer, Phone, etc.)

-10 - Not Known

-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required.
 2. If Element #20 (Unit Notified By Dispatch) is greater than Element #19 (Initial Call for Help) by more than three (3) minutes then values "None" and "Not Applicable" can NOT be used.

DATA_ELEMENT_NUMBER : 012

DATA_ELEMENT_NAME : Type of Response Delay

NEMESIS_ELEMENT_ID : E02_07

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0206

FIELD_END_POSITION : 0217

MULTIPLE_ENTRY : Yes, 04

TAB_NAME : Times & Situation

ALLOWED VALUES : **125** - Crowd
130 - Directions
135 - Distance
140 - Diverted
145 - HazMat
150 - None
155 - Other
160 - Safety
165 - Staff Delay
170 - Traffic
175 - EMS Unit Involved in Vehicle Crash
180 - EMS Unit Vehicle Failure
185 - Weather
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required.
 2. If Element #22 (Unit Arrived on Scene) is greater than Element #20 (Unit Notified By Dispatch) by more than twenty (20) minutes then value "None" can NOT be used.
 3. "Not Applicable" can only be used if Element #74 (Incident Disposition) is value "Cancelled".

DATA_ELEMENT_NUMBER : 013

DATA_ELEMENT_NAME : Type of Scene Delay

NEMESIS_ELEMENT_ID : E02_08

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0218

FIELD_END_POSITION : 0229

MULTIPLE_ENTRY : Yes, 04

TAB_NAME : Times & Situation

ALLOWED VALUES : **190** - Crowd
195 - Directions
200 - Distance
205 - Diversion
210 - Extrication >20 minutes

215 - HazMat
220 - Language Barrier
225 - None
230 - Other
235 - Safety
240 - Staff Delay
245 - Traffic
250 - EMS Unit Involved in Vehicle Crash
255 - EMS Unit Vehicle Failure
260 - Weather
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required.
 2. If Element #3 (Type of Service Requested) is value "ED-to-ED Transfer" then any value may be used for this element.
 3. If Element #3 (Type of Service Requested) is not value "ED-to-ED Transfer" and if Element #24 (Unit Left Scene) is greater than Element #22 (Unit Arrived On Scene) by more than thirty (30) minutes then value "None" can NOT be used.
 4. "Not Applicable" can only be used if Element #74 (Incident Disposition) is value "Cancelled".

DATA_ELEMENT_NUMBER : 014

DATA_ELEMENT_NAME : Type of Transport Delay

NEMESIS_ELEMENT_ID : E02_09

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0230

FIELD_END_POSITION : 0241

MULTIPLE_ENTRY : Yes, 04

TAB_NAME : Times & Situation

ALLOWED VALUES : **265** - Crowd
270 - Directions
275 - Distance
280 - Diversion
285 - HazMat
290 - None
295 - Other
300 - Safety
305 - Staff Delay
310 - Traffic
315 - EMS Unit Involved in Vehicle Crash
320 - EMS Unit Vehicle Failure
325 - Weather
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required.
 2. If Element #3 (Type of Service Requested) is value "ED-to-ED Transfer" then any value may be used for this element.
 3. If Element #3 (Type of Service Requested) is not value "ED-to-ED Transfer" and if Element #25 (Arrival at Destination) is greater than Element #24 (Unit Left Scene) by more than thirty (30) minutes then value "None" can NOT be used.
 4. "Not Applicable" can only be used if Element #74 (Incident Disposition) is value "Cancelled".

DATA_ELEMENT_NUMBER : **015**

DATA_ELEMENT_NAME : **Type of Return to Service Delay**

NEMSIS_ELEMENT_ID : E02_10

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0242

FIELD_END_POSITION : 0253

MULTIPLE_ENTRY : Yes, 04

TAB_NAME : Times & Situation

ALLOWED VALUES : **330** - Clean up

335 - Decontamination

340 - Documentation

345 - ED Overcrowding

350 - Equipment Failure

355 - Equipment Replenishment

360 - None

365 - Other

370 - Staff Delay

375 - EMS Unit Failure

-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required.
2. "Not Applicable" can only be used if Element #74 (Incident Disposition) is value "Cancelled".

DATA_ELEMENT_NUMBER : **016**

DATA_ELEMENT_NAME : **Response Mode to Scene**

NEMSIS_ELEMENT_ID : E02_20

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0254

FIELD_END_POSITION : 0256

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : **380** - Initial Lights and Sirens, Downgraded to No Lights or Sirens

385 - Initial No Lights or Sirens, Upgraded to Lights and Sirens

390 - Lights and Sirens

395 - No Lights or Sirens

VALIDATIONS AND CROSSCHECKS : 1. None.

DATA_ELEMENT_NUMBER : **017**

DATA_ELEMENT_NAME : **Complaint Reported by Dispatch**

NEMSIS_ELEMENT_ID : E03_01

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0257

FIELD_END_POSITION : 0259

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : **400** - Abdominal Pain

405 - Allergies

410 - Animal Bite

415 - Assault

420 - Back Pain

425 - Breathing Problem

430 - Burns

435 - CO Poisoning / HazMat

440 - Cardiac Arrest

445 - Chest Pain

450 - Choking

455 - Convulsions / Seizures

460 - Diabetic Problem

465 - Drowning

470 - Electrocutation

475 - Eye Problem

480 - Fall Victim

485 - Headache

490 - Heart Problems

495 - Heat / Cold Exposure

500 - Hemorrhage / Laceration

525 - Illness not listed here

505 - Industrial Accident

510 - Ingestion / Poisoning

545 - Injury not listed here

515 - Pregnancy / Childbirth

520 - Psychiatric Problems

530 - Stab / Gunshot Wound

535 - Stroke / CVA

540 - Traffic Accident

550 - Unconscious / Fainting

555 - Unknown Problem / Person Down

560 - ED-to-ED Transfer

565 - Mass Casualty Incident

NOTE: Values are not in numeric order because of wording differences from NHTSA-2.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.

2. Must be value "ED-to-ED Transfer" if Element #3 (Type of Service Requested) is value "ED-to-ED Transfer".

DATA_ELEMENT_NUMBER : **018**

DATA_ELEMENT_NAME : **Emergency Medical Dispatch (EMD) Performed**

NEMIS_ELEMENT_ID : E03_02

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0260

FIELD_END_POSITION : 0262

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : **570** - Yes, with Pre-Arrival Instructions

575 - Yes, without Pre-Arrival Instructions

0 - No

-10 - Unknown

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.

DATA_ELEMENT_NUMBER : 019

DATA_ELEMENT_NAME : Date/Time of Initial Call for Help

NEMESIS_ELEMENT_ID : E05_02

FIELD_TYPE : Date/Time

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0263

FIELD_END_POSITION : 0276

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.

2. Date must be equal to or greater than Element #32 (Patient's DOB), if given.

3. Date can NOT be later than the date the incident is submitted to EMSIRS.

DATA_ELEMENT_NUMBER : 020

DATA_ELEMENT_NAME : Unit Notified by Dispatch Date/Time

NEMESIS_ELEMENT_ID : E05_04

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0277

FIELD_END_POSITION : 0290

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.

2. If given, it MUST be in MMDDYYYYHH24MISS format.

3. Date must be equal to or greater than Element #32 (Patient's DOB), if given.

4. Must be equal to or greater than Element #19 (Initial Call for Help), if given.

5. Date can NOT be later than the date the incident is submitted to EMSIRS.

6. Can never be Unknown, Not Documented, Not Applicable.

DATA_ELEMENT_NUMBER : 021

DATA_ELEMENT_NAME : Unit En Route Date/Time

NEMESIS_ELEMENT_ID : E05_05

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0291

FIELD_END_POSITION : 0304

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.
 2. May be **blank** if Element #74 (Incident Disposition) is value "Cancelled".
 3. Date must be equal to or greater than Element #32 (Patient's DOB), if given.
 4. Must be equal to or greater than Element #20 (Unit Notified by Dispatch).
 5. Date can NOT be later than the date the incident is submitted to EMSIRS.

DATA_ELEMENT_NUMBER : **022**

DATA_ELEMENT_NAME : **Unit Arrived on Scene Date/Time**

NEMESIS_ELEMENT_ID : E05_06

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0305

FIELD_END_POSITION : 0318

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.
 2. May be **blank** if Element #74 (Incident Disposition) is value "Cancelled".
 3. Must be equal to or greater than Element #21 (Unit En Route).
 4. Date can NOT be later than the date the incident is submitted to EMSIRS.

DATA_ELEMENT_NUMBER : **023**

DATA_ELEMENT_NAME : **Arrived at Patient Date/Time**

NEMESIS_ELEMENT_ID : E05_07

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0319

FIELD_END_POSITION : 0332

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.
 2. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 3. Must be equal to or greater than Element #22 (Unit Arrived on Scene) if Element #74 (Incident Disposition) is value "Treated and Transported by EMS".
 4. Date can NOT be later than the date the incident is submitted to EMSIRS.

DATA_ELEMENT_NUMBER : **024**

DATA_ELEMENT_NAME : **Unit Left Scene for Hospital Date/Time**

NEMSIS_ELEMENT_ID : E05_09

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0333

FIELD_END_POSITION : 0346

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.
 2. Must be **blank** if Element #74 (Incident Disposition) is not value "Treated, Transported by EMS".
 3. Must be equal to or greater than Element #23 (Arrived at Patient) if Element #74 (Incident Disposition) is value "Treated and Transported by EMS".
 4. Date can NOT be later than the date the incident is submitted to EMSIRS.

DATA_ELEMENT_NUMBER : **025**

DATA_ELEMENT_NAME : **Patient Arrived at Destination Date/Time**

NEMSIS_ELEMENT_ID : E05_10

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0347

FIELD_END_POSITION : 0360

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.
 2. Must be **blank** if Element #74 (Incident Disposition) is not value "Treated, Transported by EMS".
 3. Must be equal to or greater than Element #24 (Unit Left Scene for Hospital) if Element #74 (Incident Disposition) is value "Treated and Transported by EMS".
 4. Date can NOT be later than the date the incident is submitted to EMSIRS.

DATA_ELEMENT_NUMBER : **026**

DATA_ELEMENT_NAME : **Date/Time Incident Completed**

NEMSIS_ELEMENT_ID : E05_11

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0361

FIELD_END_POSITION : 0374

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.
 2. Must be equal to or later than Element #20 (Unit Notified by Dispatch).

3. Date can NOT be later than the date the incident is submitted to EMSIRS.

DATA_ELEMENT_NUMBER : **027**

DATA_ELEMENT_NAME : **Date/Time Unit Available for Next Incident**

NEMSIS_ELEMENT_ID : E05_13

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 0375

FIELD_END_POSITION : 0388

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : Any valid date/time.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.
 2. Must be equal to or later than Element #20 (Unit Notified by Dispatch).
 3. Date can NOT be later than the date the incident is submitted to EMSIRS.

DATA_ELEMENT_NUMBER : **028**

DATA_ELEMENT_NAME : **Patient's Home ZIP Code**

NEMSIS_ELEMENT_ID : E06_08

FIELD_TYPE : String

FIELD_LENGTH : 0005

FIELD_START_POSITION : 0389

FIELD_END_POSITION : 0393

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : Any valid 5-digit ZIP Code.

-**25** - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Any valid ZIP Code.
 2. Must be a blank if Element #74 (Incident / Patient Disposition) is value **4815** (Cancelled) or **4825** (No Patient Found).

DATA_ELEMENT_NUMBER : **029**

DATA_ELEMENT_NAME : **Gender**

NEMSIS_ELEMENT_ID : E06_11

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0394

FIELD_END_POSITION : 0396

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : **650** - Male

655 - Female

-**10** - Unknown

VALIDATIONS AND CROSSCHECKS : 1. May be value "Unknown" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

2. Must be value "Female" for any of the following conditions:

- a. If Element #44 (Complaint Organ System) is value "Obstetric/Gynecologic".
- b. If Element #47 (Provider's Primary Impression) is value "Pregnancy/OB" or value "Vaginal Hemorrhage".
- c. If Element #48 (Provider's Secondary Impression) is value "Pregnancy/OB or Vaginal Hemorrhage".
- d. If Element #65 (Medication Given) is value "oxytocin".
- e. If Element #67 (Procedure) is value "Childbirth".

DATA_ELEMENT_NUMBER : **030**

DATA_ELEMENT_NAME : **Race**

NEMESIS_ELEMENT_ID : E06_12

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0397

FIELD_END_POSITION : 0399

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : **660** - American Indian / Alaska Native

665 - Asian

670 - Black or African-American

675 - Native Hawaiian / Pacific Islander

680 - White

685 - Other Race

-10 - Unknown

May be blank.

VALIDATIONS AND CROSSCHECKS : 1. May be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

DATA_ELEMENT_NUMBER : **031**

DATA_ELEMENT_NAME : **Ethnicity**

NEMESIS_ELEMENT_ID : E06_13

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0400

FIELD_END_POSITION : 0402

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : **690** - Hispanic or Latino

695 - Not Hispanic or Latino

-10 - Unknown

May be blank.

VALIDATIONS AND CROSSCHECKS : 1. May be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

DATA_ELEMENT_NUMBER : **032**

DATA_ELEMENT_NAME : **Date of Birth**

NEMESIS_ELEMENT_ID : E06_16

FIELD_TYPE : Date

FIELD_LENGTH : 0008

FIELD_START_POSITION : 0403

FIELD_END_POSITION : 0410

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : Any valid date.

NOTE: Must be answered for all incidents where patient contact was made.
See EMSIRS-2 Data Dictionary for standardized methods of estimation.

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYY format.
2. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

DATA_ELEMENT_NUMBER : **033**

DATA_ELEMENT_NAME : **Primary Method of Payment**

NEMSIS_ELEMENT_ID : E07_01

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0411

FIELD_END_POSITION : 0413

MULTIPLE_ENTRY : No

TAB_NAME : Disposition

ALLOWED VALUES : **720** - Commercial Insurance

725 - Medicaid

730 - Medicare

735 - Not Billed (for any reason)

740 - Other Government (Not Medicare, Medicaid, or Worker's Comp)

745 - Self Pay / Patient Has No Insurance

-10 - Unknown

750 - Worker's Compensation

-25 - Not Applicable

May be blank.

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "Cancelled", "Dead at Scene", "No Patient Found", "No Treatment Required" or "Patient Refused Care".

DATA_ELEMENT_NUMBER : **034**

DATA_ELEMENT_NAME : **Level of Service Provided**

NEMSIS_ELEMENT_ID : E07_34

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0414

FIELD_END_POSITION : 0417

MULTIPLE_ENTRY : No

TAB_NAME : Incident & Patient

ALLOWED VALUES : **995** - BLS, Emergency

The provision of basic life support (BLS) services. Please note that just because an EMT-I or EMT-P was on the run does not mean ALS service

was provided.

1005 - ALS, Level 1 Emergency

The provision of an assessment by an advanced life support (ALS) provider and/or the provision of one or more ALS interventions. An ALS provider is defined as a provider certified as an EMT-Intermediate or Paramedic. An ALS intervention is defined as any procedure beyond the scope of an EMT-Basic.

1010 - ALS, Level 2

The administration of at least three different medications and/or the provision of one or more of the following ALS procedures:

- Defibrillation/Cardioversion
- Endotracheal Intubation
- Central Venous Line
- Cardiac Pacing
- Chest Decompression
- Surgical Airway
- Intraosseous Line

1015 - Paramedic Intercept

ALS services delivered by paramedics that operate separately from the agency that provides the ambulance transport.

1020 - Specialty Care Transport

A level of inter-facility service provided beyond the scope of the Paramedic. This is necessary when a patient's condition requires ongoing care that must be provided by one or more health professionals from an appropriate specialty (nursing, medicine, respiratory care, or cardiovascular care).

1030 - Rotary Wing (Helicopter)

Transportation was made by helicopter ambulance. This takes precedence over BLS, ALS and Specialty Care Transport.

-25 - Not Applicable

This value may be used only if the Incident Disposition indicates no patient contact.

NOTE: NHTSA-2 values 990, 1000, 1015, and 1025 not accepted by EMSIRS-2.

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "Cancelled", "No Patient Found", "No Treatment Required", or "Patient Refused Care".
2. If Element #6 (Crew Certification/License Levels) does not have at least one value "EMT-Intermediate" or "EMT-Paramedic", then can NOT be values "ALS Level 1", or "ALS Level 2".

DATA_ELEMENT_NUMBER : **035**

DATA_ELEMENT_NAME : **Condition Code**

NEMSIS_ELEMENT_ID : E07_35

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0418

FIELD_END_POSITION : 0421

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **8001** - Severe Abdominal Pain (789.00).

8002 - Abdominal Pain (789.00)

8003 - Abnormal Cardiac Rhythm/Cardiac Dysrhythmia (427.9)

8004 - Abnormal Skin Signs (780.8)
8005 - Abnormal Vital Signs (796.4)
8006 - Allergic Reaction (ALS-995.0)
8007 - Allergic Reaction (BLS-692.9)
8008 - Blood Glucose (790.21)
8009 - Respiratory Arrest (799.1)
8010 - Difficulty Breathing (786.05)
8011 - Cardiac Arrest-Resuscitation in Progress (427.5)
8012 - Chest Pain (non-traumatic) (786.50)
8013 - Choking Episode (784.9)
8014 - Cold Exposure (ALS-991.6)
8015 - Cold Exposure (BLS-991.9)
8016 - Altered Level of Consciousness (non-traumatic) (780.01)
8017 - Convulsions/Seizures (780.39)
8018 - Eye Symptoms (non-traumatic) (379.90)
8019 - Non Traumatic Headache (437.9)
8020 - Cardiac Symptoms other than Chest Pain (palpitations) (785.1)
8021 - Cardiac Symptoms other than Chest Pain (atypical pain) (536.2)
8022 - Heat Exposure (ALS-992.5)
8023 - Heat Exposure (BLS-992.2)
8024 - Hemorrhage (459.0)
8025 - Infectious Diseases requiring Isolation/Public Health Risk (038.9)
8026 - Hazmat Exposure (987.9)
8027 - Medical Device Failure (ALS-996.0)
8028 - Medical Device Failure (BLS-996.3)
8029 - Neurologic Distress (436.0)
8030 - Pain (Severe) (780.99)
8031 - Back Pain (non-traumatic possible cardiac or vascular) (724.5)
8032 - Back Pain (non-traumatic with neurologic symptoms) (724.9)
8033 - Poisons (all routes) (977.9)
8034 - Alcohol Intoxication or Drug Overdose (305.0)
8035 - Severe Alcohol Intoxication (977.3)
8036 - Post-Operative Procedure Complications (998.9)
8037 - Pregnancy Complication/Childbirth/Labor (650.0)
8038 - Psychiatric/Behavioral (abnormal mental status) (292.9)
8039 - Psychiatric/Behavioral (threat to self or others) (298.9)
8040 - Sick Person-Fever (036.9)
8041 - Severe Dehydration (787.01)
8042 - Unconscious/Syncope/Dizziness (780.02)
8075 - Malaise/Fatigue/Weakness (780.79)
8043 - Major Trauma (959.8)
8044 - Other Trauma (need for monitor or airway) (518.5)
8045 - Other Trauma (major bleeding) (958.2)
8046 - Other Trauma (fracture/dislocation) (829.0)
8047 - Other Trauma (penetrating extremity) (880.0)
8048 - Other Trauma (amputation digits) (886.0)
8049 - Other Trauma (amputation other) (887.4)
8050 - Other Trauma (suspected internal injuries) (869.0)
8076 - Other Trauma (minor) (959.9)
8051 - Burns-Major (949.3)
8052 - Burns-Minor (949.2)
8053 - Animal Bites/Sting/Envenomation (ALS-989.5)
8054 - Animal Bites/Sting/Envenomation (BLS-879.8)
8055 - Lightning (994.0)
8056 - Electrocution (994.8)
8057 - Near Drowning (994.1)

8058 - Eye Injuries (921.9)

8059 - Sexual Assault (major injuries) (995.83)

8060 - Sexual Assault (minor injuries) (995.8)

8061 - Cardiac/Hemodynamic Monitoring Required (428.9)

8062 - Advanced Airway Management (518.81)

8063 - IV Meds Required (No ICD code provided))

8064 - Chemical Restraint (293.0)

8065 - Suctioning/Oxygen/IV fluids required (496.0)

8066 - Airway Control/Positioning Required (786.09)

8067 - Third Party Assistance/Attendant Required (496.0)

8068 - Patient Safety (restraints required) (298.9)

8069 - Patient Safety (monitoring required) (293.1)

8070 - Patient Safety (seclusion required) (298.8)

8071 - Patient Safety (risk of falling off stretcher) (781.3)

8072 - Special Handling (Isolation) (041.9)

8073 - Special Handling (orthopedic device required) (907.2)

8074 - Special Handling (positioning required) (719.45)

-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "Cancelled", "Dead at Scene", "No Patient Found", "No Treatment Required" or "Patient Refused Care".

DATA_ELEMENT_NUMBER : **036**

DATA_ELEMENT_NAME : **Number of Patients at Scene**

NEMESIS_ELEMENT_ID : E08_05

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0422

FIELD_END_POSITION : 0425

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : **1120** - None

1125 - Single

1130 - Multiple

-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Multiple" if Element #37 (Mass Casualty Incident) is value "Yes".

DATA_ELEMENT_NUMBER : **037**

DATA_ELEMENT_NAME : **Mass Casualty Incident**

NEMESIS_ELEMENT_ID : E08_06

FIELD_TYPE : Numeric

FIELD_LENGTH : 0001

FIELD_START_POSITION : 0426

FIELD_END_POSITION : 0426

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : **0** - No

1 - Yes

VALIDATIONS AND CROSSCHECKS : 1. Can NOT be value "Yes" if Element #36 (Number of Patients on Scene)

is value "None" or "Single".

DATA_ELEMENT_NUMBER : **038**

DATA_ELEMENT_NAME : **Incident Location Type**

NEMESIS_ELEMENT_ID : E08_07

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0427

FIELD_END_POSITION : 0430

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : **1135** - Home/Residence

Any home, apartment, or residence (not just the patient's home).
Includes the yard, driveway, garage, pool, garden, or walk of a home, apartment, or residence.

1140 - Farm

A place of agriculture, except for a farmhouse. Includes land under cultivation and non-residential farm buildings.

1145 - Mine or Quarry

Includes sand pits, gravel pits and tunnels under construction.

1150 - Industrial Place and Premises

A place where things are made or are being built, includes construction sites, factories, warehouses, industrial plants, docks and railway yards.

1155 - Place of Recreation or Sport

Includes amusement parks, public parks and playgrounds, sports fields/courts/courses, sports stadiums, skating rinks, gymnasiums, and resorts.

1160 - Street or Highway

Any public street, road, highway, or avenue.

1165 - Public Building

Any publicly owned building and its grounds, including schools and government offices.

1170 - Trade or Service

Any privately owned building used for business. Includes bars, restaurants, office buildings, churches, stores, bus/railway stations. Excludes health care facilities.

1175 - Health Care Facility

A place where healthcare is delivered, except nursing homes. Includes clinics, doctor's offices, and hospitals.

1180 - Residential Institution (nursing home, jail/prison, group home)

A place where people live that is not a private home, apartment, or residence. Includes nursing home, jail/prison, orphanage, and group home.

1185 - Lake, River, Reservoir

Any body of water, except swimming pools.

1190 - Other Location

Any place that does not fit any of the above categories (this should be very rare).

-10 - Unknown

This value may be used only if the Incident Disposition was "Cancelled".

VALIDATIONS AND CROSSCHECKS :

DATA_ELEMENT_NUMBER : **039**

DATA_ELEMENT_NAME : **Prior Aid**

NEMESIS_ELEMENT_ID : E09_01

FIELD_TYPE : String

FIELD_LENGTH : 0007

FIELD_START_POSITION : 0431

FIELD_END_POSITION : 0500

MULTIPLE_ENTRY : Yes, 10

TAB_NAME : Times & Situation

ALLOWED VALUES : Any value from Medications (Data Element #65) and/or Procedures (Data Element #67).

-25 - Prior Aid was not provided

-10 - Unknown if Prior Aid was provided

VALIDATIONS AND CROSSCHECKS : 1. May NOT be value "Prior Aid was not provided" if Element #40 (Prior Aid Performed By) is given.

2. May NOT be value "Prior Aid was not provided" if Element #41 (Outcome of Prior Aid) is given.

3. Must be **blank** if Element #3 (Type of Service Requested) is value "ED-to-ED Transfer".

DATA_ELEMENT_NUMBER : **040**

DATA_ELEMENT_NAME : **Prior Aid Performed By**

NEMESIS_ELEMENT_ID : E09_02

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0501

FIELD_END_POSITION : 0540

MULTIPLE_ENTRY : Yes, 10

TAB_NAME : Times & Situation

ALLOWED VALUES : **1195** - EMS Provider

1200 - Law Enforcement

1205 - Lay Person

1210 - Other Healthcare Provider

1215 - Patient

May be blank.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #39 (Prior Aid) is value "Unknown if Prior Aid was provided" or "Prior Aid was not provided".

2. Must be **blank** if Element #3 (Type of Service Requested) is value "ED-to-ED Transfer".

DATA_ELEMENT_NUMBER : **041**

DATA_ELEMENT_NAME : **Outcome of the Prior Aid**

NEMESIS_ELEMENT_ID : E09_03

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0541

FIELD_END_POSITION : 0544

MULTIPLE_ENTRY : No

TAB_NAME : Times & Situation

ALLOWED VALUES : **1220** - Improved
1225 - Unchanged
1230 - Worse
-10 - Unknown
 May be blank.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #39 (Prior Aid) is value "Unknown if Prior Aid was provided" or "Prior Aid was not provided".
 2. Must be **blank** if Element #3 (Type of Service Requested) is value "ED-to-ED Transfer".

DATA_ELEMENT_NUMBER : **042**

DATA_ELEMENT_NAME : **Injury Present**

NEMESIS_ELEMENT_ID : E09_04

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0545

FIELD_END_POSITION : 0547

MULTIPLE_ENTRY : No

TAB_NAME : Create/Edit Record

ALLOWED VALUES : **0** - No
1 - Yes
-10 - Unknown
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. May be value "Unknown" if Element #74 (Incident Disposition) is value "No Treatment Required" or "Patient Refused Care".
 3. Must be value "Yes" if Element #67 (Procedures) contains any of the following:
 a. Value "Chest Decompression".
 b. Value "MAST".
 c. Value "Spinal Immobilization".
 d. Value "Splinting".
 e. Value "Splinting - traction".
 f. Value "Wound Care".
 4. Must be value "Yes" if Element #45 (Primary Symptom) is value "Wound".
 5. Must be value "Yes" if Element #47 (Provider's Primary Impression) is one of the following:
 a. Value "Electrocution".
 b. Value "Sexual Assault / Rape".
 c. Value "Traumatic Injury".

DATA_ELEMENT_NUMBER : **043**

DATA_ELEMENT_NAME : **Complaint Anatomic Location**

NEMESIS_ELEMENT_ID : E09_11

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0548

FIELD_END_POSITION : 0551

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **1305** - Abdomen
1310 - Back
1315 - Chest
1320 - Extremity-Lower
1325 - Extremity-Upper
1330 - General/Global/Whole Body
1335 - Genitalia
1340 - Head
1345 - Neck
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. May NOT be value "Not Applicable" if Element #24 (Unit Left Scene for Hospital) is answered.

DATA_ELEMENT_NUMBER : **044**

DATA_ELEMENT_NAME : **Complaint Organ System**

NEMESIS_ELEMENT_ID : E09_12

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0552

FIELD_END_POSITION : 0555

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **1350** - Cardiovascular
1355 - CNS/Neurologic
1360 - Endocrine/Metabolic
1365 - Gastrointestinal
1370 - Global/Whole Body
1375 - Musculoskeletal
1380 - Obstetric/Gynecologic
1385 - Psychiatric
1390 - Pulmonary
1395 - Renal
1400 - Skin
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. May NOT be value "Not Applicable" if Element #24 (Unit Left Scene for Hospital) is answered.
 3. If value "Obstetric/Gynecologic" then Element #29 (Gender) must be value "Female".

DATA_ELEMENT_NUMBER : **045**

DATA_ELEMENT_NAME : **Primary Symptom**

NEMESIS_ELEMENT_ID : E09_13

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0556

FIELD_END_POSITION : 0559

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **1405** - Bleeding
1410 - Breathing Problem
1415 - Change in Responsiveness
1420 - Choking
1425 - Death
1430 - Device/Equipment Problem
1435 - Diarrhea
1440 - Drainage/Discharge
1445 - Fever
1450 - Malaise (General, non-specific feeling of illness)
1455 - Mass/Lesion
1460 - Mental/Psychiatric
1465 - Nausea/Vomiting
1470 - None
1475 - Pain
1480 - Palpitations
1485 - Rash/Itching
1490 - Swelling
1500 - Weakness
1505 - Wound
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. May NOT be value "Not Applicable" if Element #24 (Unit Left Scene for Hospital) is answered.
 3. If value "Wound" then Element #42 (Injury Present) must be value "Yes".
 4. If value "None" then Element #46 (Other Associated Symptoms) must also be value "Not applicable".
 5. NHTSA-2 value "Transport only" not accepted.

DATA_ELEMENT_NUMBER : **046**

DATA_ELEMENT_NAME : **Other Associated Symptoms**

NEMSIS_ELEMENT_ID : E09_14

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0560

FIELD_END_POSITION : 0579

MULTIPLE_ENTRY : Yes, 05

TAB_NAME : Assessment

ALLOWED VALUES : **1510** - Bleeding
1515 - Breathing Problem
1520 - Change in Responsiveness
1525 - Choking
1530 - Death
1535 - Device/Equipment Problem
1540 - Diarrhea

1545 - Drainage/Discharge

1550 - Fever

1555 - Malaise (General, non-specific feeling of illness)

1560 - Mass/Lesion

1565 - Mental/Psychiatric

1570 - Nausea/Vomiting

1575 - None

1580 - Pain

1585 - Palpitations

1590 - Rash/Itching

1595 - Swelling

1605 - Weakness

1610 - Wound

-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS :

1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
2. If value "Wound" then Element #42 (Injury Present) must be value "Yes".
3. Must be value "Not applicable" if Element #45 (Primary Symptom) is value "None".
4. NHTSA-2 value "Transport only" not accepted.
5. Must NOT have repeated values.

DATA_ELEMENT_NUMBER : **047**

DATA_ELEMENT_NAME : **Provider's Primary Impression**

NEMESIS_ELEMENT_ID : E09_15

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0580

FIELD_END_POSITION : 0583

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **1615** - Abdominal pain / problems

1620 - Airway obstruction

1625 - Allergic reaction

1630 - Altered level of consciousness

1635 - Behavioral / psychiatric disorder

1640 - Cardiac arrest

1645 - Cardiac rhythm disturbance

1650 - Chest pain / discomfort

1655 - Diabetic symptoms

1660 - Electrocution

1688 - General medical, not otherwise listed

1665 - Hyperthermia

1670 - Hypothermia

1675 - Hypovolemia / shock

1680 - Inhalation injury (toxic gas)

1685 - Obvious death

1690 - Poisoning / drug ingestion

1695 - Pregnancy / OB delivery

1700 - Respiratory distress

1705 - Respiratory arrest

1710 - Seizure

1715 - Sexual assault / rape
1720 - Smoke inhalation
1725 - Stings / venomous bites
1730 - Stroke / CVA
1735 - Syncope / fainting
1740 - Traumatic injury
1744 - Non-traumatic bleeding
1745 - Vaginal hemorrhage
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. May be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Treatment Required" or "Patient Refused Care".
 3. May NOT be value "Not Applicable" if Element #24 (Unit Left Scene for Hospital) is answered.
 4. Element #29 (Gender) must be value "Female" if the following are used:
 a. Value "Pregnancy / OB delivery".
 b. Value "Vaginal hemorrhage".
 5. Element #42 (Injury Present) must be value "Yes" if the following are used:
 a. Value "Electrocution".
 b. Value "Sexual Assault / Rape".
 c. Value "Traumatic Injury".

DATA_ELEMENT_NUMBER : **048**

DATA_ELEMENT_NAME : **Provider's Secondary Impression**

NEMESIS_ELEMENT_ID : E09_16

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0584

FIELD_END_POSITION : 0587

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **1750** - Abdominal pain / problems
1755 - Airway obstruction
1760 - Allergic reaction
1765 - Altered level of consciousness
1770 - Behavioral / psychiatric disorder
1775 - Cardiac arrest
1780 - Cardiac rhythm disturbance
1785 - Chest pain / discomfort
1790 - Diabetic symptoms
1795 - Electrocution
1798 - General Medical, not otherwise listed
1800 - Hyperthermia
1805 - Hypothermia
1810 - Hypovolemia / shock
1815 - Inhalation injury (toxic gas)
1816 - None
1820 - Obvious death
1825 - Poisoning / drug ingestion
1830 - Pregnancy / OB delivery
1835 - Respiratory distress

1840 - Respiratory arrest

1845 - Seizure

1850 - Sexual assault / rape

1855 - Smoke inhalation

1860 - Stings / venomous bites

1865 - Stroke / CVA

1870 - Syncope / fainting

1875 - Traumatic injury

1879 - Non-traumatic bleeding

1880 - Vaginal hemorrhage

-25 - Not Applicable

May be blank.

VALIDATIONS AND CROSSCHECKS :

1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
2. May be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Treatment Required" or "Patient Refused Care".
3. Element #29 (Gender) must be value "Female" if the following are used:
 - a. Value "Pregnancy / OB delivery".
 - b. Value "Vaginal hemorrhage".
4. Element #42 (Injury Present) must be value "Yes" if the following are used:
 - a. Value "Electrocution".
 - b. Value "Sexual Assault / Rape".
 - c. Value "Traumatic Injury".

DATA_ELEMENT_NUMBER : **049**

DATA_ELEMENT_NAME : **Cause of Injury**

NEMESIS_ELEMENT_ID : E10_01

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0588

FIELD_END_POSITION : 0591

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **1885** - Bites (E906.0)

9500 - Aircraft related accident (E84X.0)

9505 - Bicycle Accident (E826.0)

9515 - Chemical poisoning (E86X.0)

9520 - Child battering (E967.0)

9525 - Drowning (E910.0)

9530 - Drug poisoning (E85X.0)

9535 - Electrocution (non-lightning) (E925.0)

9540 - Excessive Cold (E901.0)

9545 - Excessive Heat (E900.0)

9550 - Falls (E88X.0)

9555 - Fire and Flames (E89X.0)

9560 - Firearm (assault) (E965.0)

9565 - Firearm injury (accidental) (E985.0)

9570 - Firearm (self-inflicted) (E955.0)

9575 - Lightning (E907.0)

9580 - Machinery accidents (E919.0)

9585 - Mechanical Suffocation (E913.0)

9590 - Motor Vehicle non-traffic accident (E82X.0)

9595 - Motor Vehicle traffic accident (E81X.0)
9600 - Motorcycle Crash (E81X.1)
9605 - Non-Motorized Vehicle Crash (E848.0)
9607 - Overexertion / Strenuous movements (E927)
9610 - Pedestrian traffic accident (E814.0)
9615 - Radiation exposure (E926.0)
9620 - Rape (E960.1)
9625 - Smoke Inhalation (E89X.2)
9630 - Stabbing/Cutting Unintentional (E986.0)
9635 - Stabbing/Cutting Assault (E966.0)
9640 - Struck by Blunt/Thrown Object (E968.2)
9645 - Venomous stings (plants, animals) (E905.0)
9650 - Water Transport accident (E83X.0)
-25 - Not Applicable
-10 - Unknown

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. May NOT be value "Not Applicable" if Element #42 (Injury Present) is value "Yes".

DATA_ELEMENT_NUMBER : **050**

DATA_ELEMENT_NAME : **Injury Type**

NEMESIS_ELEMENT_ID : E10_03

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0592

FIELD_END_POSITION : 0595

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **2035** - Blunt
2050 - Penetrating
2040 - Burns
2045 - Other
-25 - No Injury Present

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. May NOT be value "Not Applicable" if Element #42 (Injury Present) is value "Yes".
 3. Must be value "Other" if Element #49 (Cause of Injury) is one of the following:
 a. Value "Drug poisoning".
 b. Value "Chemical poisoning".
 c. Value "Excessive cold".
 4. Must be value "Burns" if Element #49 (Cause of Injury) is one of the following:
 a. Value "Fire & flames".
 b. Value "Electrocution".

DATA_ELEMENT_NUMBER : **051**

DATA_ELEMENT_NAME : **Protective Devices Used**

NEMESIS_ELEMENT_ID : E10_08

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0596

FIELD_END_POSITION : 0611

MULTIPLE_ENTRY : Yes, 04

TAB_NAME : Assessment

ALLOWED VALUES : **2170** - Child Restraint
2175 - Eye Protection
2180 - Helmet Worn
2185 - Lap Belt
2187 - None
2190 - Other
2195 - Personal Floatation Device
2200 - Protective Clothing
2205 - Protective Non-Clothing Gear
2210 - Shoulder Belt
-10 - Not Known
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required if Element #42 (Injury Present) is value "Yes".
 2. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 3. May NOT be value "Not Applicable" if Element #42 (Injury Present) is value "Yes".

DATA_ELEMENT_NUMBER : **052**

DATA_ELEMENT_NAME : **Airbag Deployment**

NEMESIS_ELEMENT_ID : E10_09

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0612

FIELD_END_POSITION : 0623

MULTIPLE_ENTRY : Yes, 03

TAB_NAME : Assessment

ALLOWED VALUES : **2215** - No Airbag Present
2220 - No Airbag Deployed
2225 - Airbag Deployed Front
2230 - Airbag Deployed Side
2235 - Airbag Deployed Other (knee, air belt, etc.)
-10 - Not Known
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required if Element #49 (Cause of Injury) is value "Motor vehicle traffic crash" or "Motor vehicle non-traffic crash (off-road motor vehicle)".
 2. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 3. May NOT be value "Not Applicable" if Element #49 (Cause of Injury) is:
 a. Value "Motor vehicle traffic crash".
 b. Value "Motor vehicle non-traffic crash".

DATA_ELEMENT_NUMBER : **053**

DATA_ELEMENT_NAME : **Cardiac Arrest**

NEMSIS_ELEMENT_ID : E11_01

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0624

FIELD_END_POSITION : 0627

MULTIPLE_ENTRY : No

TAB_NAME : Create/Edit Record

ALLOWED VALUES : **2240** - Yes, Prior to EMS Arrival

2245 - Yes, After EMS Arrival

0 - No

-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. Must be either value "Yes, Prior" or value "Yes, After" if Element #39 (Prior Aid) contains:
 a. Value "CPR".
 b. Value "Defibrillation - Automated".
 c. Value "Defibrillation - Manual".
 3. Must be either value "Yes, Prior" or value "Yes, After" if Element #67 (Intervention/Procedure) contains:
 a. Value "CPR".
 b. Value "Defibrillation - Automated".
 c. Value "Defibrillation - Manual".

DATA_ELEMENT_NUMBER : **054**

DATA_ELEMENT_NAME : **Cause of Cardiac Arrest**

NEMSIS_ELEMENT_ID : E11_02

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0628

FIELD_END_POSITION : 0631

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : **2250** - Presumed Cardiac

2255 - Trauma

2260 - Drowning

2265 - Respiratory

2270 - Electrocution

2275 - Other

-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. Must be value "Not Applicable" if Element #53 (Cardiac Arrest) is value "No".
 3. May NOT be value "Not Applicable" if Element #39 (Prior Aid) contains:
 a. Value "CPR".
 b. Value "Defibrillation - Automated".
 c. Value "Defibrillation - Manual".
 4. May NOT be value "Not Applicable" if Element #67 (Intervention/Procedure) contains:

- a. Value "CPR".
- b. Value "Defibrillation - Automated".
- c. Value "Defibrillation - Manual".

DATA_ELEMENT_NUMBER : **055**

DATA_ELEMENT_NAME : **Resuscitation Attempted**

NEMESIS_ELEMENT_ID : E11_03

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0632

FIELD_END_POSITION : 0643

MULTIPLE_ENTRY : Yes, 03

TAB_NAME : Assessment

ALLOWED VALUES : **2280** - Attempted Defibrillation
2285 - Attempted Ventilation
2290 - Initiated Chest Compressions
2295 - Not Attempted-Considered Futile / DOA
2300 - Not Attempted-DNR Orders
2305 - Not Attempted-Signs of Circulation
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required if Element #53 (Cardiac Arrest) is value "Yes, Prior to EMS Arrival" or "Yes, After EMS Arrival".
2. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
3. Must be value "Not Applicable" if Element #53 (Cardiac Arrest) is value "No".
4. May NOT be value "Not Applicable" if Element #39 (Prior Aid) contains:
a. Value "CPR".
b. Value "Defibrillation - Automated".
c. Value "Defibrillation - Manual".
5. May NOT be value "Not Applicable" if Element #67 (Intervention/Procedure) contains:
a. Value "CPR".
b. Value "Defibrillation - Automated".
c. Value "Defibrillation - Manual".
6. Must include Attempted Defibrillation if Element #67 (Intervention/Procedures) contains:
a. Value "Defibrillation - Automated".
b. Value "Defibrillation - Manual".
7. Must include Initiated Chest Compressions if Procedures (Element #67) includes:
a. Value "CPR".

DATA_ELEMENT_NUMBER : **056**

DATA_ELEMENT_NAME : **Barriers to Standard Patient Care**

NEMESIS_ELEMENT_ID : E12_01

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0644

FIELD_END_POSITION : 0659

MULTIPLE_ENTRY : Yes, 04

TAB_NAME : Assessment

ALLOWED VALUES : **2600** - Developmentally Impaired
2601 - Morbid Obesity
2605 - Hearing Impaired
2610 - Language
2615 - None
2620 - Physically Impaired
2625 - Physically Restrained
2630 - Speech Impaired
2635 - Unattended or Unsupervised (including minors)
2640 - Unconscious
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required.
 2. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

DATA_ELEMENT_NUMBER : **057**

DATA_ELEMENT_NAME : **Alcohol/Drug Use Indicators**

NEMESIS_ELEMENT_ID : E12_19

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0660

FIELD_END_POSITION : 0675

MULTIPLE_ENTRY : Yes, 04

TAB_NAME : Assessment

ALLOWED VALUES : **2985** - Smell of Alcohol on Breath
2990 - Patient Admits to Alcohol Use
2995 - Patient Admits to Drug Use
3000 - Alcohol and/or Drug Paraphernalia at Scene
3001 - No Indicators of Alcohol/Drug Use
-10 - Unknown
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. At least one value is required.
 2. Must be value "Not Applicable" if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

DATA_ELEMENT_NUMBER : **058**

DATA_ELEMENT_NAME : **Initial Systolic Blood Pressure**

NEMESIS_ELEMENT_ID : E14_04

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0676

FIELD_END_POSITION : 0678

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : Any positive numeric value less than 300.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. Must be between 0 and 299.

3. Must be equal to or higher than Element #59 (Initial Diastolic Blood Pressure).

DATA_ELEMENT_NUMBER : **059**

DATA_ELEMENT_NAME : **Initial Diastolic Blood Pressure**

NEMESIS_ELEMENT_ID : E14_05

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0679

FIELD_END_POSITION : 0681

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : Any positive numeric value less than 200.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. Must be between 0 and 199.
 3. Must be equal to or lower than Element #58 (Initial Systolic Blood Pressure).

DATA_ELEMENT_NUMBER : **060**

DATA_ELEMENT_NAME : **Initial Pulse Rate**

NEMESIS_ELEMENT_ID : E14_07

FIELD_TYPE : Numeric

FIELD_LENGTH : 0003

FIELD_START_POSITION : 0682

FIELD_END_POSITION : 0684

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : Any positive numeric value less than 300.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. Must be between 0 and 299.

DATA_ELEMENT_NUMBER : **061**

DATA_ELEMENT_NAME : **Initial Respiratory Rate**

NEMESIS_ELEMENT_ID : E14_11

FIELD_TYPE : Numeric

FIELD_LENGTH : 0002

FIELD_START_POSITION : 0685

FIELD_END_POSITION : 0686

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : Any positive numeric value.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. Must be between 0 and 99.

DATA_ELEMENT_NUMBER : **062**

DATA_ELEMENT_NAME : **Initial Glasgow Coma Score - Eye Opening**

NEMESIS_ELEMENT_ID : E14_15

FIELD_TYPE : Numeric

FIELD_LENGTH : 0001

FIELD_START_POSITION : 0687

FIELD_END_POSITION : 0687

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : All ages

- 1 - None
 - 2 - To pain
 - 3 - To voice
 - 4 - Spontaneous
- May be blank.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

DATA_ELEMENT_NUMBER : **063**

DATA_ELEMENT_NAME : **Initial Glasgow Coma Score - Verbal Response**

NEMESIS_ELEMENT_ID : E14_16

FIELD_TYPE : Numeric

FIELD_LENGTH : 0001

FIELD_START_POSITION : 0688

FIELD_END_POSITION : 0688

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : Patients >5 years old

- 1 - None
 - 2 - Incomprehensible sounds
 - 3 - Inappropriate words
 - 4 - Confused
 - 5 - Oriented
- Patients 2-5 years old
- 1 - No response
 - 2 - Incomprehensible sounds (agitated, inconsolable)
 - 3 - Inappropriate cries (inconsistently consolable, moaning)
 - 4 - Confused (cries but is consolable, inappropriate interaction)
 - 5 - Oriented (smiles, oriented to sounds, follows objects, interacts)

Patients <2 year old

- 1 - No response
 - 2 - Moans to pain
 - 3 - Cries to pain
 - 4 - Irritable cries
 - 5 - Coos, babbles
- May be blank.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

DATA_ELEMENT_NUMBER : **064**

DATA_ELEMENT_NAME : Initial Glasgow Coma Score - Motor Response

NEMSIS_ELEMENT_ID : E14_17

FIELD_TYPE : Numeric

FIELD_LENGTH : 0001

FIELD_START_POSITION : 0689

FIELD_END_POSITION : 0689

MULTIPLE_ENTRY : No

TAB_NAME : Assessment

ALLOWED VALUES : Patients >5 years old**1** - None**2** - Extensor posturing in response to painful stimulation**3** - Flexor posturing in response to painful stimulation**4** - Withdraws from painful stimulation**5** - Localizes painful stimulation**6** - Obeys commandsPatients 0 to 5 years old**1** - None**2** - Abnormal extension**3** - Abnormal flexion**4** - Withdraws from pain**5** - Localizes pain**6** - Normal spontaneous movement

May be blank.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".DATA_ELEMENT_NUMBER : **065**DATA_ELEMENT_NAME : **Medication Given**

NEMSIS_ELEMENT_ID : E18_03

FIELD_TYPE : String

FIELD_LENGTH : 0005

FIELD_START_POSITION : 0690

FIELD_END_POSITION : 0814

MULTIPLE_ENTRY : Yes, 25

TAB_NAME : Medications

ALLOWED VALUES : **70021** - Activated Charcoal**50005** - Acetaminophen**50080** - Adenosine**70359** - Albuterol**51380** - Albuterol/Ipratropium**50210** - Aminophylline**50223** - Amiodarone**50280** - Amyl Nitrate**56360** - Anistreplase**50410** - Aspirin**50420** - Atropine**05418** - Calcium Chloride**05430** - Calcium Gluconate**41875** - Captopril**51150** - Chlorpromazine**51275** - Clonidine

99033 - Clopidogrel
51635 - Dexamethasone
51647 - Dextran
51675 - Dextrose
51695 - Diazepam
51780 - Digoxin
51803 - Diltiazem
51810 - Dimenhydrinate
51860 - Diphenhydramine
51930 - Dobutamine
51945 - Dopamine
52040 - Epinephrine
11548 - Epi-Pen
52188 - Etomidate
52225 - Fentanyl
56435 - Flumazenil
52385 - Furosemide
52420 - Glucagon
52425 - Glucose
52520 - Haloperidol
52540 - Heparin
70207 - Hetastarch
52630 - Hydralazine
52655 - Hydrocortisone
15005 - Hydromorphone
52680 - Hydroxocobalamin
52790 - Insulin
52870 - Ipecac
52883 - Ipratropium
52900 - Isoetharine
52930 - Isoproterenol
93220 - Ketoralac
93203 - Labetalol
60800 - Lactated Ringer's
70040 - Levalbuterol
53070 - Lidocaine
53145 - Lorazepam
70398 - Magnesium Sulfate
53245 - Mannitol
53335 - Meperidine
53450 - Metaproterenol
53445 - Metoprolol
53660 - Methylprednisolone
53716 - Midazolam
53760 - Morphine
53855 - Nalbuphine
53865 - Naloxone
53880 - Naproxen
91039 - Nifedipine
53945 - Nitroglycerin
53950 - Nitrous Oxide
53960 - Norepinephrine
92141 - Ondansetron
96109 - Oxycodone
54115 - Oxygen
22323 - Oxymetazoline

54155 - Oxytocin
54170 - Pancuronium
54470 - Phenytoin
54490 - Physostigmine
54550 - Plasma Protein Fraction
56585 - Potassium Chloride
54750 - Pralidoxime, 2-PAM
54810 - Procainamide
25220 - Prochlorperazine
54860 - Promethazine
25485 - Proparacaine
54865 - Propranolol
99144 - Racemic Epinephrine
53688 - Reglan
98027 - Retavase
57172 - Rocuronium
55280 - Sodium Bicarbonate
57236 - Sodium Nitrite
55370 - Sodium Nitroprusside
55425 - Sodium Thiosulfate
55495 - Streptokinase
55510 - Succinylcholine
70451 - Tenecteplase
55670 - Terbutaline
55715 - Tetracaine
55755 - Thiamine
80002 - Tissue Plasminogen Activator
53155 - Vasopressin
56162 - Vecuronium
56163 - Verapamil
99112 - 5% Dextrose in Water
08315 - 10% Dextrose in Water
42800 - 0.9% Sodium Chloride

May be blank.

NOTE: Codes are taken from the CDC's Ambulatory Care Drug Database System.

- VALIDATIONS AND CROSSCHECKS :**
1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. If value "Airway - Rapid Sequence Induction" is reported in Element #67 (Intervention/Procedures) then one of the following must be given:
 - a. "etomidate"
 - b. "pancuronium"
 - c. "rocuronium"
 - d. "succinylcholine"
 - e. "vecuronium"
 3. Element #29 (Gender) must be value "Female" if "oxytocin" is given.

DATA_ELEMENT_NUMBER : **066**

DATA_ELEMENT_NAME : **Medication Complication**

NEMESIS_ELEMENT_ID : E18_08

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 0815

FIELD_END_POSITION : 0914

MULTIPLE_ENTRY : Yes, 25

TAB_NAME : Medications

ALLOWED VALUES : **4390** - None
4395 - Altered Mental Status
4400 - Apnea
4405 - Bleeding
4410 - Bradycardia
4415 - Diarrhea
4420 - Extravasation / Infiltration
4425 - Hypertension
4430 - Hyperthermia
4435 - Hypotension
4440 - Hypoxia
4445 - Injury
4450 - Itching/Urticaria
4455 - Nausea
4460 - Other
4465 - Respiratory Distress
4470 - Tachycardia
4475 - Vomiting

VALIDATIONS AND CROSSCHECKS : 1. Mandatory for each value given in Element #65 (Medication Given).

DATA_ELEMENT_NUMBER : **067**

DATA_ELEMENT_NAME : **Intervention / Procedure**

NEMESIS_ELEMENT_ID : E19_03

FIELD_TYPE : Numeric (Decimal)

FIELD_LENGTH : 0007

FIELD_START_POSITION : 0915

FIELD_END_POSITION : 1089

MULTIPLE_ENTRY : Yes, 25

TAB_NAME : Interventions

ALLOWED VALUES : **89.820** - 12 Lead ECG
99.612 - CPR-Start Rescue Breathing without Compressions
797.00 - Joint Reduction/Relocation
89.590 - Orthostatic Blood Pressure Measurement
89.599 - Patient Monitoring of Pre-existing Devices, Equipment or Ongoing Medications
93.350 - Patient Warming (Hot Pack, etc.)
93.930 - Airway-Bagged (via tube)
93.931 - Airway-Bagged (via BVMask)
96.702 - Airway-BiPAP
97.230 - Airway-Change Tracheostomy Tube
98.130 - Airway-Cleared, Opened, or Heimlich
96.051 - Airway-Combitube
93.900 - Airway-CPAP
31.420 - Airway-Direct Laryngoscopy
96.041 - Airway-Endotracheal Intubation, Nasal
96.040 - Airway-Endotracheal Intubation, Oral
98.131 - Airway-Foreign Body Removal
96.991 - Airway-Intubation Confirm CO2
96.992 - Airway-Intubation Confirm Esophageal bulb
97.231 - Airway-Intubation of Existing Tracheostomy Stoma

96.053 - Airway-King LT Blind Insertion Airway Device
96.052 - Airway-Laryngeal Mask
96.010 - Airway-Nasopharyngeal
31.110 - Airway-Needle Cricothyrotomy
96.020 - Airway-Oropharyngeal
96.790 - Airway-PEEP
96.042 - Airway-Rapid Sequence Induction
98.150 - Airway-Suctioning
31.120 - Airway-Surgical Cricothyrotomy
96.700 - Airway-Ventilator
38.910 - Arterial Access/Blood Draw
89.610 - Arterial Line Maintenance
38.995 - Blood Glucose Analysis
89.391 - Capnography
89.392 - Pulse Oximetry
89.510 - 3 Lead ECG
99.623 - Cardioversion
99.640 - Carotid Massage
93.520 - Cervical Collar
34.041 - Chest Decompression
73.590 - Childbirth
101.500 - Contact Medical Control
1.181 - CNS Catheter-Epidural Maintenance
1.182 - CNS Catheter-Intraventricular Maintenance
99.600 - CPR
99.811 - Hypothermia, induced, post-arrest
99.601 - CPR-Automatic Compression Device
99.611 - CPR-Start Compressions only without Ventilation
99.990 - Impedance Threshold Device
99.615 - CPR-Stop
86.280 - Decontamination
99.621 - Defibrillation-Automated (AED)
99.622 - Defibrillation-Manual
99.625 - Defibrillation-Placement for Monitoring/Analysis
99.624 - External Cardiac Pacing
100.200 - Extrication
96.071 - Gastric Tube Insertion-Inserted Orally
93.580 - MAST
96.070 - Nasogastric Tube Insertion
-25 - None
100.100 - Rescue
99.841 - Restraints-Pharmacological
99.810 - Patient Cooling (Cold Pack, etc.)
99.842 - Restraints-Physical
101.101 - Specialty Center Activation - Adult Trauma
101.103 - Specialty Center Activation - Cardiac Arrest
101.104 - Specialty Center Activation - STEMI
101.105 - Specialty Center Activation - Stroke
101.102 - Specialty Center Activation - Pediatric Trauma
93.591 - Spinal Immobilization
93.540 - Splinting
93.450 - Splinting-Traction
89.703 - Temperature Measurement
99.69 - Vagal Maneuver
99.641 - Vagal Maneuver Valsalva or Other Vagal Maneuver (Not Carotid Massage)

38.990 - Venous Access-Blood Draw

39.997 - Venous Access-Discontinue

38.991 - Venous Access-Existing Catheter

38.993 - Venous Access-External Jugular Line

38.992 - Venous Access-Extremity

38.994 - Venous Access-Femoral Line

39.995 - Venous Access-Internal Jugular Line

41.920 - Venous Access-Intraosseous Adult

41.921 - Venous Access-Intraosseous Pediatric

89.620 - Venous Access-Maintain Central Line

39.996 - Venous Access-SubclavianLine

89.640 - Venous Access-Swan Ganz Maintain

93.057 - Wound Care

93.059 - Wound Care - Hemostatic Agent

93.058 - Wound Care - Irrigation

93.055 - Wound Care - Taser Barb Removal

93.056 - Wound Care - Tourniquet

May be blank.

NOTE: Code values are taken from NEMSIS demographic element D04_04.

- VALIDATIONS AND CROSSCHECKS :**
1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".
 2. If value "Airway - Rapid Sequence Induction" is used then one of the following values must be given in Element #65 (Medication Given):
 - a. "etomidate"
 - b. "pancuronium"
 - c. "rocuronium"
 - d. "succinylcholine"
 - e. "vecuronium"
 3. If value "Restraints-Pharmacological" is used then one of the following values must be given in Element #65 (Medication Given):
 - a. "diazepam"
 - b. "etomidate"
 - c. "fentanyl"
 - d. "haloperidol"
 - e. "lorazepam"
 - f. "midazolam"
 - g. "morphine"
 - h. "nalbuphine"
 - i. "pancuronium"
 - j. "rocuronium"
 - k. "succinylcholine"
 - l. "vecuronium"
 4. Element #29 (Gender) must be value "Female" if value "Childbirth" is used.
 5. Element #42 (Injury Present) must be value "Yes" if this Element contains any of the following:
 - a. Value "Chest Decompression".
 - b. Value "MAST".
 - c. Value "Spinal Immobilization".
 - d. Value "Splinting".
 - e. Value "Splinting - traction".
 - f. Value "Wound Care".
 6. If value "None" is used, no other value may be used.

DATA_ELEMENT_NUMBER : **068**

DATA_ELEMENT_NAME : **Date/Time Procedure Performed Successfully**

NEMESIS_ELEMENT_ID : E19_01

FIELD_TYPE : DateTime

FIELD_LENGTH : 0014

FIELD_START_POSITION : 1090

FIELD_END_POSITION : 1439

MULTIPLE_ENTRY : Yes, 25

TAB_NAME : Interventions

ALLOWED VALUES : Any valid date/time after 'Arrival at Patient'

VALIDATIONS AND CROSSCHECKS : 1. If given, it MUST be in MMDDYYYYHH24MISS format.
2. May NOT be **blank** if Element #70 (Procedure Successful) is value "Yes".

DATA_ELEMENT_NUMBER : **069**

DATA_ELEMENT_NAME : **Number of Procedure Attempts**

NEMESIS_ELEMENT_ID : E19_05

FIELD_TYPE : Numeric

FIELD_LENGTH : 0001

FIELD_START_POSITION : 1440

FIELD_END_POSITION : 1464

MULTIPLE_ENTRY : Yes, 25

TAB_NAME : Interventions

ALLOWED VALUES : Any valid number

VALIDATIONS AND CROSSCHECKS : 1. Any number equal to or greater than 1.
2. Mandatory for each value given in Element #67 (Intervention / Procedure).

DATA_ELEMENT_NUMBER : **070**

DATA_ELEMENT_NAME : **Procedure Successful**

NEMESIS_ELEMENT_ID : E19_06

FIELD_TYPE : Numeric

FIELD_LENGTH : 0001

FIELD_START_POSITION : 1465

FIELD_END_POSITION : 1489

MULTIPLE_ENTRY : Yes, 25

TAB_NAME : Interventions

ALLOWED VALUES : **0** - No
1 - Yes

VALIDATIONS AND CROSSCHECKS : 1. Mandatory for each value given in Element #67 (Intervention / Procedure).
2. Must be blank if Element #67 (Intervention / Procedure) is blank.

DATA_ELEMENT_NUMBER : **071**

DATA_ELEMENT_NAME : **Procedure Complication**

NEMESIS_ELEMENT_ID : E19_07

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1490

FIELD_END_POSITION : 1589

MULTIPLE_ENTRY : Yes, 25

TAB_NAME : Interventions

ALLOWED VALUES : **4500** - None

4505 - Altered Mental Status

4510 - Apnea

4515 - Bleeding

4520 - Bradycardia / Slow heart rate

4525 - Diarrhea

4530 - Esophageal Intubation-immediately detected

4535 - Esophageal Intubation-other

4540 - Extravasation / Infiltration

4545 - Hypertension

4550 - Hyperthermia

4555 - Hypotension

4560 - Hypoxia

4565 - Injury

4570 - Itching/Urticaria

4575 - Nausea

4580 - Other

4585 - Respiratory Distress

4590 - Tachycardia / Fast heart rate

4595 - Vomiting

May be blank.

VALIDATIONS AND CROSSCHECKS : 1. Mandatory for each value given in Element #67 (Intervention / Procedure).

DATA_ELEMENT_NUMBER : **072**

DATA_ELEMENT_NAME : **Advanced Directives**

NEMESIS_ELEMENT_ID : E12_07

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1590

FIELD_END_POSITION : 1597

MULTIPLE_ENTRY : Yes, 02

TAB_NAME : Incident & Patient

ALLOWED VALUES : **2645** - State/EMS DNR Form

-10 - Unknown

2650 - Other Healthcare DNR Form

2655 - Living Will

2660 - Family/Guardian request DNR (but no documentation)

2665 - Other

2670 - None

May be blank.

VALIDATIONS AND CROSSCHECKS : 1. Must be **blank** if Element #74 (Incident Disposition) is value "No Patient Found" or "Cancelled".

DATA_ELEMENT_NUMBER : **073**

DATA_ELEMENT_NAME : **Destination**

NEMESIS_ELEMENT_ID : E20_02

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1598

FIELD_END_POSITION : 1601

MULTIPLE_ENTRY : No

TAB_NAME : Disposition

ALLOWED VALUES : Any valid ODH Hospital Code (see Appendix B).
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.
2. Must be value "Not Applicable" if Element #74 (Incident Disposition) is:
 a. Value "Cancelled"
 b. Value "Dead at Scene"
 c. Value "No Patient Found"
 d. Value "No Treatment Required"
 e. Value "Patient Refused Care"
 f. Value "Treated and Released"
 g. Value "Treated, Transferred Care"
 h. Value "Treated, Transported by Law Enforcement"
 i. Value "Treated, Transported by Private Vehicle"
3. Must be a valid ODH Hospital Code (see Appendix B).

DATA_ELEMENT_NUMBER : **074**

DATA_ELEMENT_NAME : **Incident / Patient Disposition**

NEMESIS_ELEMENT_ID : E20_10

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1602

FIELD_END_POSITION : 1605

MULTIPLE_ENTRY : No

TAB_NAME : Create/Edit Record

ALLOWED VALUES : **4815** - Cancelled
4820 - Dead at Scene
4825 - No Patient Found
4830 - No Treatment Required
4835 - Patient Refused Care
4840 - Treated and Released
4845 - Treated, Transferred Care
4850 - Treated, Transported by EMS
4855 - Treated, Transported by Law Enforcement
4860 - Treated, Transported by Private Vehicle

VALIDATIONS AND CROSSCHECKS : 1. May NOT be null or blank.

DATA_ELEMENT_NUMBER : **075**

DATA_ELEMENT_NAME : **Transport Mode from the Scene**

NEMESIS_ELEMENT_ID : E20_14

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1606

FIELD_END_POSITION : 1609

MULTIPLE_ENTRY : No

TAB_NAME : Disposition

ALLOWED VALUES : **4955** - Initial Lights and Sirens, Downgraded to No Lights or Sirens.
4960 - Initial No Lights or Sirens, Upgraded to Lights and Sirens.
4965 - Lights and Sirens.
4970 - No Lights or Sirens.
-25 - Not Applicable: no transport.

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Initial Lights and Sirens, Downgraded to No Lights or Sirens", "Initial No Lights or Sirens, Upgraded to Lights and Sirens", "Lights and Sirens", or "No Lights or Sirens" if Element #74 (Incident Disposition) is value "Treated and Transported by EMS".
 2. Must be value "Not Applicable" if Element #73 (Destination) is value "Not Applicable".
 3. Must be value "Not Applicable" if Element #74 (Incident Disposition) is:
 a. Value "Cancelled"
 b. Value "Dead at Scene"
 c. Value "No Patient Found"
 d. Value "No Treatment Required"
 e. Value "Patient Refused Care"
 f. Value "Treated and Released"
 g. Value "Treated, Transferred Care"
 h. Value "Treated, Transported by Law Enforcement"
 i. Value "Treated, Transported by Private Vehicle"

DATA_ELEMENT_NUMBER : 076

DATA_ELEMENT_NAME : Reason for Choosing Destination

NEMESIS_ELEMENT_ID : E20_16

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1610

FIELD_END_POSITION : 1613

MULTIPLE_ENTRY : No

TAB_NAME : Disposition

ALLOWED VALUES : **4990** - Closest Facility (none below)
4995 - Diversion
5000 - Family Choice
5005 - Insurance Status
5010 - Law Enforcement Choice
-25 - Not Applicable: no transport
5015 - On-Line Medical Direction
5020 - Other
5025 - Patient Choice
5030 - Patient's Physician's Choice
5035 - Protocol
5040 - Specialty Resource Center

VALIDATIONS AND CROSSCHECKS : 1. Can NOT be value "Not Applicable" if Element #74 (Incident Disposition) is value "Treated and Transported by EMS".
 2. Must be value "Not Applicable" if Element #73 (Destination) is value "Not Applicable".
 3. Must be value "Not Applicable" if Element #74 (Incident Disposition) is:
 a. Value "Cancelled"
 b. Value "Dead at Scene"

c. Value "No Patient Found"

d. Value "No Treatment Required"

e. Value "Patient Refused Care"

f. Value "Treated and Released"

g. Value "Treated, Transferred Care"

h. Value "Treated, Transported by Law Enforcement"

i. Value "Treated, Transported by Private Vehicle"

DATA_ELEMENT_NUMBER : **077**

DATA_ELEMENT_NAME : **Trauma Triage Criteria**

NEMSIS_ELEMENT_ID : E23_09

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1614

FIELD_END_POSITION : 1633

MULTIPLE_ENTRY : Yes, 05

TAB_NAME : Assessment

ALLOWED VALUES : **9870** - Glasgow Coma Score less than or equal to 13

9875 - Loss of Consciousness for 5 minutes or more

9880 - Deteriorating Level of Consciousness

9885 - Failure to Localize to Pain / Glasgow Coma Score Motor component of 4 or less

9890 - Respiration less than 10 or greater than 29 (Adults only)

9895 - Evidence of respiratory distress or failure (Pediatrics only)

9900 - Evidence of poor perfusion (Pediatrics only)

9910 - Patient requires intubation (Adults only)

9915 - Relief of tension pneumothorax (Adults only)

9920 - Pulse rate greater than 120 with signs of hemorrhagic shock (Adults only)

9925 - Systolic B/P less than 90, or absent radial pulse with carotid pulse present (Adults only)

9930 - Penetrating trauma to head, neck, or torso

9935 - Significant penetrating trauma to the extremities proximal to knee or elbow with evidence of neurovascular compromise

9940 - Injuries to head, neck or torso with visible crush injury

9945 - Injuries to torso with abdominal tenderness, distention or "seatbelt sign"

9950 - Injuries to the torso with evidence of pelvic fracture, except isolated hip fracture

9955 - Injuries to the torso with flail chest

9960 - Amputation proximal to wrist and/or ankle

9965 - Injuries to the extremities with visible crush injury

9970 - Two or more proximal long bone (humerus or femur) fractures

9975 - Injuries to the extremities with evidence of neurovascular compromise

9980 - Signs or symptoms of spinal cord injury

9985 - 2nd or 3rd degree burns greater than 10% Total Body Surface Area or other significant burns involving the face, feet, hands, genitalia or airway.

9990 - Mechanism of Injury

9995 - Special Considerations

-10 - No triage criteria met

May be blank.

VALIDATIONS AND CROSSCHECKS : 1. May NOT be **blank** if Element #74 (Incident Disposition) is value "Treated and Transported by EMS" and Element #42 (Injury Present) is value "Yes".
 2. Must NOT have repeated values.

DATA_ELEMENT_NUMBER : **078**

DATA_ELEMENT_NAME : **Type of Destination**

NEMESIS_ELEMENT_ID : E20_17

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1634

FIELD_END_POSITION : 1637

MULTIPLE_ENTRY : No

TAB_NAME : Disposition

ALLOWED VALUES : **5050** - Hospital ED, OR, or L & D
5075 - Other EMS Responder (air)
5080 - Other EMS Responder (ground)
-25 - Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. NHTSA-2 values **5045, 5055, 5060, 5065, and 5085** not accepted.
 2. Must be value "Other EMS Responder (air)" or "Other EMS Responder (ground)" if Element #74 (Incident/Patient Disposition) is value "Treated, Transferred Care".

DATA_ELEMENT_NUMBER : **079**

DATA_ELEMENT_NAME : **Emergency Department Disposition**

NEMESIS_ELEMENT_ID : E22_01

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1638

FIELD_END_POSITION : 1641

MULTIPLE_ENTRY : No

TAB_NAME : Disposition

ALLOWED VALUES : **5335** - Admitted to Hospital Floor
5340 - Admitted to Hospital ICU
5345 - Death
5350 - Not Applicable (Transported to L&D or OR)
5355 - Released
5360 - Transferred to another hospital
-25 - Unknown / Not Applicable (Non-transport)

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is:
 a. Value "Cancelled"
 b. Value "Dead at Scene"
 c. Value "No Patient Found"
 d. Value "No Treatment Required"
 e. Value "Patient Refused Care"
 f. Value "Treated and Released"
 g. Value "Treated, Transferred Care"
 h. Value "Treated, Transported by Law Enforcement"
 i. Value "Treated, Transported by Private Vehicle"

DATA_ELEMENT_NUMBER : **080**

DATA_ELEMENT_NAME : **Hospital Disposition**

NEMESIS_ELEMENT_ID : E22_02

FIELD_TYPE : Numeric

FIELD_LENGTH : 0004

FIELD_START_POSITION : 1642

FIELD_END_POSITION : 1645

MULTIPLE_ENTRY : No

TAB_NAME : Disposition

ALLOWED VALUES : **5365** - Death

5370 - Discharged

5375 - Transfer to Hospital

5380 - Transfer to Nursing Home

5385 - Transfer to Other

5390 - Transfer to Rehabilitation Facility

-25 - Unknown / Not Applicable

VALIDATIONS AND CROSSCHECKS : 1. Must be value "Not Applicable" if Element #74 (Incident Disposition) is:

a. Value "Cancelled"

b. Value "Dead at Scene"

c. Value "No Patient Found"

d. Value "No Treatment Required"

e. Value "Patient Refused Care"

f. Value "Treated and Released"

g. Value "Treated, Transferred Care"

h. Value "Treated, Transported by Law Enforcement"

i. Value "Treated, Transported by Private Vehicle"

- Administration
- Bureau of Motor Vehicles
- Emergency Management Agency
- **Emergency Medical Services**
- Office of Criminal Justice Services
- Ohio Homeland Security
- Ohio Investigative Unit
- Ohio State Highway Patrol



Emergency Medical Services
1970 West Broad Street
P.O. Box 182073
Columbus, Ohio 43218-2073
(614) 466-9447 • (800) 233-0785
www.ems.ohio.gov

EMS Division
Policy Number EMS-888.03
Ohio Trauma Registry Data Submission Deadlines

Purpose

To provide data and analysis that enables the EMS and Trauma communities to evaluate and improve patient care and enhance system development. The Office of Research and Analysis (ORA) is charged with maintenance and oversight of the data systems created in Ohio Revised Code §4765.06.

To ensure data systems receive medical record information in a timely and uniform manner.

Policy

A. Applicability

This policy applies to all hospitals and in-patient rehabilitation facilities required to submit data to the Ohio Trauma Registry (OTR).

B. Authority

1. ORC §4765.06(B) requires the state Board of Emergency Medical Services to “establish a state trauma registry to be used for the collection of information regarding the care of adult and pediatric trauma victims in this state.”
2. OAC Chapter 4765-4-7 allows the state Board of Emergency Medical Services to “develop policies for granting extensions to the submission deadlines.”

C. Deadlines

1. All records shall be submitted to the Ohio Trauma Registry no later than 90 days after the end of the calendar quarter in which the patient was discharged.
2. Calendar quarters are defined as follows:
 - 1st Quarter: January, February, March
 - 2nd Quarter: April, May, June
 - 3rd Quarter: July, August, September
 - 4th Quarter: October, November, December

Mission Statement

“to save lives, reduce injuries and economic loss, to administer Ohio’s motor vehicle laws and to preserve the safety and well being of all citizens with the most cost-effective and service-oriented methods available.”

- Administration
- Bureau of Motor Vehicles
- Emergency Management Agency
- **Emergency Medical Services**
- Office of Criminal Justice Services
- Ohio Homeland Security
- Ohio Investigative Unit
- Ohio State Highway Patrol



Emergency Medical Services
1970 West Broad Street
P.O. Box 182073
Columbus, Ohio 43218-2073
(614) 466-9447 • (800) 233-0785
www.ems.ohio.gov

Procedure for OTR compliance determination

Definitions

Abbreviations used:

- ORA – Office of Research and Analysis, EMS Division, Ohio Department of Public Safety
- OTR – The Ohio Trauma Registry

Compliant: A hospital is considered to be compliant when it has submitted data to OTR which:

- Is submitted on or before the deadline approved by the EMS Board, and
- Contains an expected number of records, within a certain range for that facility based on historical data volumes submitted by the hospital in the past, or otherwise confirms that its data is accurate as set forth below.

Non-Compliance: Non-compliance with OTR data submission can occur in several different ways. The following categories of non-compliance will be used:

- **Category 1 Non-compliance:** No efforts were made to submit data to OTR.
- **Category 2 Non-compliance:** Efforts were made to submit data to OTR but no records were received or accepted by OTR. An example of Category 2 non-compliance includes when a hospital intends to upload its trauma data to OTR but mistakenly uploads the wrong data file.
- **Category 3 Non-compliance:** Based on the statistical analysis of historical data volumes submitted by the particular hospital in the past, records were received by OTR but the number of records was significantly fewer than expected, and the hospital could not verify that this volume of records was accurate.

Expected range of records: The number of records, within a certain range, projected to be received by OTR from each hospital during a submission period. This range is determined by statistical analysis of each facility's submission history.

Exceptions

There are two circumstances in which a hospital's compliance with the OTR submission requirements will not be subject to the procedure set forth in this document:

1. Hospitals that have applied to the State Board of Emergency Medical Services for, and have been granted, extensions on submission of OTR data will be excluded from this process until such time as the extension expires. After the extension expires, a hospital's compliance with the OTR reporting obligations will be subject to the procedures set forth in this policy and the hospital will be required to submit all of the relevant data for the period of time covered by the extension.
2. Hospitals that have notified ORA that they have had no patients that meet OTR inclusion criteria for that reporting period.

Procedure

On the first business day after the end of an OTR data submission period, ORA staff will take the following steps to determine the compliance status of each hospital in the state that is required to submit OTR data.

1. Compliance Analysis #1 (Activity) will be performed for the reporting period for all hospitals.
 - a. For hospitals that have not submitted any records for the reporting period:
 - i. If the hospital uses commercial trauma registry software or submits its data through a regional trauma registry and no trauma data file upload transactions

PUBLIC RECORD

Mission Statement

"to save lives, reduce injuries and economic loss, to administer Ohio's motor vehicle laws and to preserve the safety and well being of all citizens with the most cost-effective and service-oriented methods available."

- took place during the reporting period, the hospital will be declared as having a **Category 1 Non-compliance** status.
- ii. If the hospital uses commercial trauma registry software or submits its data through a regional trauma registry and file upload transactions did take place during the reporting period, but for whatever reason the data that is intended to be submitted is not properly uploaded to OTR, the hospital will be declared as having a **Category 2 Non-compliance** status.
 - iii. If the hospital uses direct, web-enabled data entry to report its trauma data directly to OTR, instead of through a regional trauma registry, the hospital will be declared as having a **Category 1 Non-compliance** status.
2. Compliance Analysis #2 (Quantitative) will be performed for hospitals that had records accepted into OTR for the reporting period:
- a. Hospitals that submit an amount of data such that they meet or exceed the expected range of records will be declared to be in compliance.
 - b. Hospitals that fall below the expected range of records will be declared as having a **Category 3 Non-compliance** status. If the hospital confirms that the data is accurate even though it falls outside the expected range, the hospital shall be deemed compliant with its OTR reporting obligations.
3. Hospitals with a non-compliance status will be notified of their status per the *Notification of Non-compliance* policy.

- Administration
- Bureau of Motor Vehicles
- Emergency Management Agency
- **Emergency Medical Services**
- Office of Criminal Justice Services
- Ohio Homeland Security
- Ohio Investigative Unit
- Ohio State Highway Patrol



Emergency Medical Services
1970 West Broad Street
P.O. Box 182073
Columbus, Ohio 43218-2073
(614) 466-9447 • (800) 233-0785
www.ems.ohio.gov

Policy on Notification of Non-compliance – Trauma Acute Care Registry

On the first business day after the end of a submission period the Office of Research and Analysis (ORA) shall determine which hospitals are not in compliance with submission requirements.

Except in response to public records requests, no deliberate public declaration of non-compliance will be made until all appropriate steps listed hereafter are followed.

1. For hospitals participating in regional trauma registries

- a. ORA staff shall contact the registrar of the regional trauma registry that has contracted with hospitals in its region to submit data on behalf of the non-compliant hospital(s). This contact can be made by telephone or e-mail, whichever is most convenient for ORA staff.
 - i. ORA staff will provide the registrar of the regional trauma registry the name(s) of the non-compliant hospital(s) and the nature of the non-compliance.
 - ii. A deadline of not less than two weeks after contact is made with the registrar of the regional trauma registry will be set for the regional registry to complete submission of outstanding data or to agree on an alternative solution that is mutually agreed to by the ORA staff and regional trauma registry.
- b. If the outstanding data is not received by the OTR by the deadline established in Section 1(a)(ii) of this policy, ORA staff will contact the chief executive of the regional trauma registry to inform them of the situation.
 - i. ORA staff will provide the chief executive of the regional trauma registry the name(s) of the non-compliant hospital(s) and the nature of non-compliance.
 - ii. A deadline of two weeks after contact is made with the chief executive of the regional trauma registry will be set for the regional registry to complete submission of outstanding data or to agree on an alternative solution that is mutually agreed to by the ORA staff and regional trauma registry.
 - iii. ORA staff will contact the non-compliant hospitals who report their trauma data to a regional trauma registry and inform them that their data still has not been submitted by the regional trauma registry.
- c. If the outstanding data is not received by the OTR by the deadline set forth in Section 1(b)(ii) of this policy, ORA staff will contact the Ohio Hospital Association for assistance in facilitation of obtaining the outstanding data.
 - i. A deadline will be set based on mutual agreement between ORA and OHA, based on OHA's and ORA's mutual assessment of the situation.
- d. If the outstanding data is not received by the deadline agreed to by ORA and OHA and established by Section 1(c)(i) of this policy, the following process will apply:
 - i. ORA staff will contact the chief executive officer and the governing board of the hospital via certified letters informing them of their non-compliance with the trauma registry reporting requirements of ORC §4765.06.
 - ii. Non-compliance will be noted on the EMS Division website
 - iii. The hospital will be declared ineligible to receive priority 2, 3 and 4 trauma research grants made available by the EMS Board under ORC §4765.07.

Mission Statement

"to save lives, reduce injuries and economic loss, to administer Ohio's motor vehicle laws and to preserve the safety and well being of all citizens with the most cost-effective and service-oriented methods available."

2. For Trauma Centers that report their trauma data directly to the OTR and not through a regional trauma registry

- a. ORA staff shall contact the trauma registrar of the non-compliant trauma center hospital. This contact can be made by telephone or e-mail, whichever is most convenient for ORA staff.
 - i. ORA staff will provide the trauma registrar of the non-compliant trauma center the nature of non-compliance.
 - ii. A deadline of two weeks after telephone contact is made with, or an e-mail is sent to, the trauma registrar of the non-compliant trauma center will be set for the non-compliant trauma center to complete submission of outstanding data or to agree on an alternative solution that is mutually agreed to by the ORA staff and non-compliant trauma center.
- b. If the outstanding data is not received by the OTR by the deadline set forth in Section 2(a)(ii) of this policy, ORA staff will contact the Trauma Program Manager and Trauma Medical Director of the non-compliant trauma center and inform them of the non-compliance.
 - i. ORA staff will inform the Trauma Program Manager and Trauma Medical Director of the nature of non-compliance.
 - ii. A deadline of one week after contact is made with the Trauma Program Manager and Trauma Medical Director of the non-compliant trauma center will be set for the non-compliant trauma center to complete submission of outstanding data or to agree on an alternative solution that is mutually agreed to by the ORA staff and the trauma center.
- c. If the outstanding data is not received by the deadline set forth in Section 2(b)(ii) of this policy, ORA staff will contact chief executive officer of the hospital and the Ohio Hospital Association (OHA) to request its assistance in obtaining the outstanding data from the non-compliant trauma center.
 - i. ORA staff will provide the OHA and the chief executive officer of the non-compliant trauma center with information regarding the nature of non-compliance and all attempts to secure the data from the non-compliant trauma center.
 - ii. A deadline of one week after contact is made with the OHA and the chief executive officer of the non-compliant trauma center will be set for complete submission of outstanding data or to agree on an alternative solution that is mutually agreed to by the ORA staff and the chief executive officer of the non-compliant trauma center.
- d. If the outstanding data is not received by the OTR by the deadline set forth in section 2(c)(ii):
 - i. Non-compliance will be noted on the EMS Division website.
 - ii. The hospital will be declared ineligible to receive priority 2, 3 and 4 trauma research grants made available by the EMS Board under ORC §4765.07.

3. For non-trauma facilities that submit their trauma data directly to the OTR and not through a regional trauma registry

- a. ORA staff shall contact the primary medical records contact of the non-compliant hospital. This contact can be made by telephone or e-mail, whichever is most convenient for ORA staff.
 - i. ORA staff will provide the primary medical records contact of the non-compliant hospital information regarding the nature of the hospital's non-compliance.
 - ii. A deadline of two weeks after telephone contact is made with, or an e-mail is sent to, the primary medical records contact of the non-compliant hospital will be set for complete submission of outstanding data or to agree on an alternative solution that is mutually agreed to by the ORA staff and the primary medical records contact of the non-compliant hospital.
- b. If the outstanding data is not received by the OTR by the deadline set forth in Section 3(a)(ii), ORA staff will contact the chief executive officer of the non-compliant hospital and the OHA to enlist its assistance in obtaining the outstanding data from the non-compliant hospital.
 - i. ORA staff will provide the OHA and the chief executive officer of the non-compliant hospital with information regarding the nature of non-compliance and all attempts to secure the data from the non-compliant hospital.

- ii. A deadline will be set based on mutual agreement between ORA, OHA, and the chief executive officer of the non-compliant hospital regarding the complete submission of outstanding data or to agree on an alternative solution that is mutually agreed upon by ORA, OHA, and the chief executive officer of the non-compliant hospital.
- c. If the outstanding data is not received by the OTR by the deadline set forth in Section 3(b)(ii), then the following will occur:
 - i. ORA staff will contact the OHA and the chief executive officer and the governing board of the non-compliant hospital via certified letters informing them of the hospital's non-compliance with ORC §4765.06.
 - ii. Non-compliance will be noted on the EMS Division website.
 - iii. The hospital will be declared ineligible to receive priority 2, 3 and 4 trauma research grants made available by the EMS Board under ORC §4765.07.

4. Documentation of Communications and Correspondence

- a. A record of all communications and correspondence with hospitals, regional trauma registries and the Ohio Hospital Association shall be maintained.
 - i. This record shall be maintained in accordance with the Ohio Department of Public Safety's record retention policies.
 - ii. Except in response to public records requests, no deliberate public release of this record will be made until all steps listed above have been followed.

- Administration
- Bureau of Motor Vehicles
- Emergency Management Agency
- **Emergency Medical Services**
- Office of Criminal Justice Services
- Ohio Homeland Security
- Ohio Investigative Unit
- Ohio State Highway Patrol



Emergency Medical Services
1970 West Broad Street
P.O. Box 182073
Columbus, Ohio 43218-2073
(614) 466-9447 • (800) 233-0785
www.ems.ohio.gov

EMS Board Policy

Approved August 22, 2002

Revised February 18, 2009 (updated OAC reference)

Requests for extension to deadlines for submission of data to the Ohio Trauma Registry

This policy is developed in accordance with section 4765-4-07(B) of the Ohio Administrative Code, which states that the board may develop policies for granting extensions to the deadlines for submission of trauma registry data.

Pursuant to this policy, the board hereby directs the Division of EMS (the “Division”) to determine whether a request for extension should be granted and, if so, the length of time for such extension.

Any entity wishing to obtain an extension must send a written request to the Division (Ohio Department of Public Safety, Division of EMS, 1970 W. Broad Street, Columbus, OH 43223) within 15 days prior to the submission deadline date, and include the following information in the request:

- (1) Justification for the extension;
- (2) Length of extension requested;
- (3) Specific plan for submission of the required trauma data within the length of time requested;
- (4) Signature of the chief executive officer.

If a request for extension is received after the submission deadline date, but no later than fifteen days after such date, the Division may grant an extension only if it determines that there are extenuating circumstances affecting either the submission of the request for extension in a timely manner, or the ability of the facility to comply with the data submission requirement. Any request for extension received more than fifteen days after the submission deadline date will not be granted.

Mission Statement

“to save lives, reduce injuries and economic loss, to administer Ohio’s motor vehicle laws and to preserve the safety and well being of all citizens with the most cost-effective and service-oriented methods available.”

PUBLIC RECORD

State of Ohio
Department of Public Safety
State Board of Emergency Medical Services

*Benchmark Data for EMS
Performance Improvement
With Regional Breakdown*

Calendar Year 2008

(Based on Records Received by November 17, 2009)



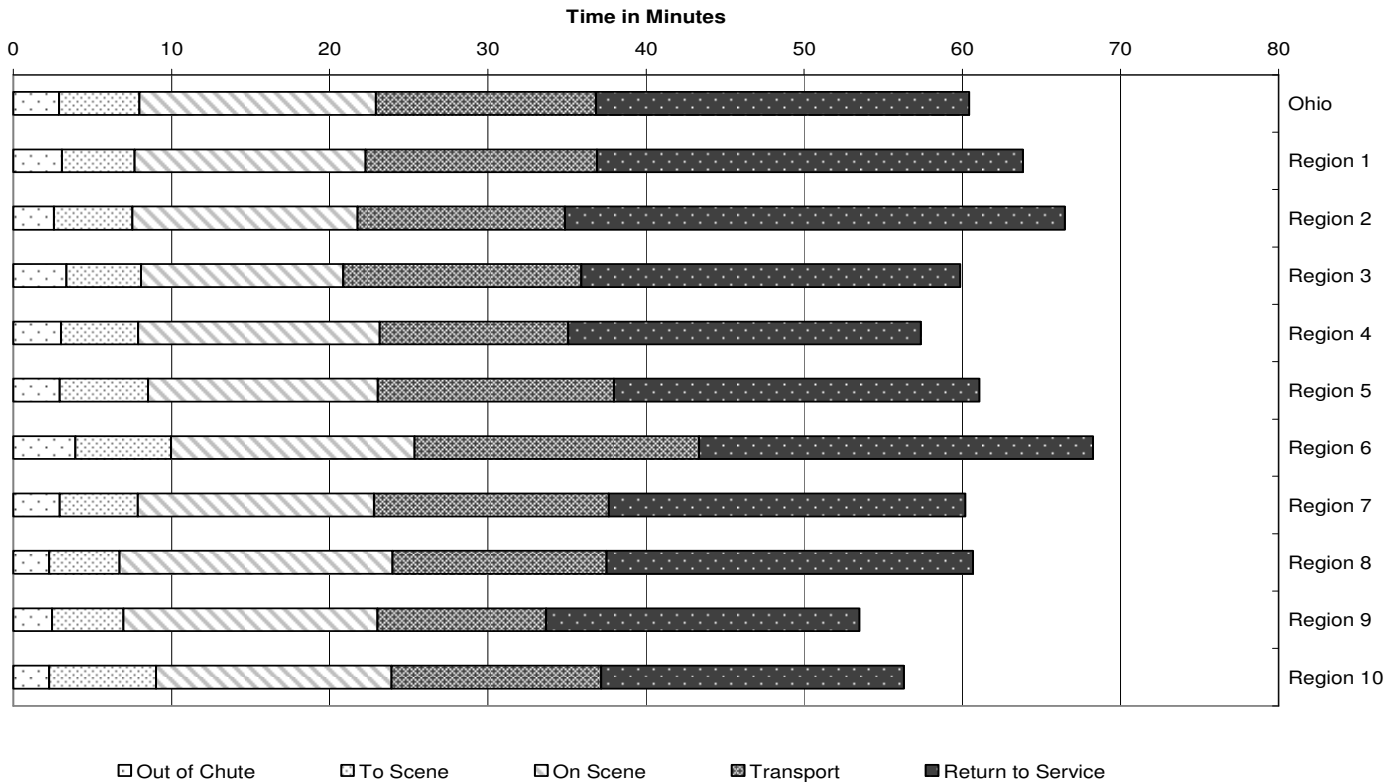
Table of Contents

Chart / Table	Page
EMS Regions Map	3
Elapsed Time Segments	4
Average Scene Time by Nature of Incident	5
Incidents by Month and Day	6
Average Scene Time for Trauma	7
Average Scene Time for Trauma by GCS	13
Procedure Performance Statistics – IV	19
Procedure Performance Statistics – Oral ET	20
Procedure Performance Statistics – Oral ET during Cardiac Arrest	21
Procedure Performance Statistics – Nasal ET	21
Pain Control	22
Volunteer Response Time by Hour of Day	23

EMS Regions



Average Elapsed Time Segments CY 2008



	Out of Chute	To Scene	On Scene	Transport	Return to Service	Total Time
Ohio	2.9	5.1	15.0	13.9	23.6	60.4
Region 01	3.1	4.6	14.6	14.6	26.9	63.8
Region 02	2.6	5.0	14.2	13.1	31.6	66.5
Region 03	3.4	4.7	12.8	15.1	23.9	59.9
Region 04	3.0	4.9	15.3	11.9	22.3	57.4
Region 05	2.9	5.6	14.5	15.0	23.1	61.1
Region 06	3.9	6.1	15.4	18.0	24.9	68.3
Region 07	2.9	4.9	14.9	14.9	22.5	60.2
Region 08	2.3	4.4	17.3	13.5	23.2	60.7
Region 09	2.4	4.5	16.1	10.7	19.8	53.5
Region 10	2.3	6.8	14.9	13.3	19.1	56.3

Time Segment Definitions

Out of Chute: from Time Unit Notified to Time Unit En Route

To Scene: from Time Unit En Route to Time Unit On Scene

On Scene: from Time Unit On Scene to Time Unit Departed Scene

Transport: from Time Unit Departed Scene to Time Unit Arrived At Hospital

Return to Service: from Time Unit Arrived At Hospital to Time Unit Back In Service

Total Time: from Time Unit Notified to Time Unit En Route

**Average Scene Time by Selected Natures of Incident
in minutes
CY 2008**

	Arrest	Cardiac	CVA	Pediatric	Respiratory
Ohio	10.4	11.2	10.8	9.1	10.6
Region 01	10.7	10.5	11.2	8.8	10.1
Region 02	11.1	10.7	10.6	8.0	9.8
Region 03	8.4	9.1	8.7	7.6	8.4
Region 04	10.1	11.3	11.1	8.8	10.5
Region 05	10.9	11.0	10.9	11.5	11.5
Region 06	12.0	11.3	11.4	9.8	11.3
Region 07	9.6	10.0	10.1	7.8	9.5
Region 08	10.3	12.1	11.2	9.2	11.0
Region 09	10.6	11.9	10.6	8.4	10.8
Region 10	10.6	11.2	10.7	8.9	11.1

How these categories are determined

Arrest – Patients with Provider Assessment codes 1801 through 1899

Cardiac – Patients with Provider Assessment codes 0301 through 0309

CVA – Patients with Provider Assessment codes 0401 or 0402

Pediatric – All patients less than 16 years old

Respiratory – Patients with Provider Assessment codes 1401 through 1414

Incidents by Month and Date

CY 2008

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	2,929	2,975	2,635	2,684	2,671	2,616	2,609	2,700	2,514	2,423	2,610	2,649	32,015
2	2,975	2,780	2,580	2,639	2,653	2,901	2,699	2,621	2,730	2,517	2,519	2,628	32,242
3	2,716	2,558	2,903	2,763	2,500	2,668	2,590	2,576	2,711	2,622	2,662	2,774	32,043
4	2,616	2,984	2,984	2,730	2,514	2,648	2,397	2,672	2,655	2,483	2,613	2,577	31,873
5	2,401	2,925	2,965	2,561	2,762	2,925	2,640	2,616	2,714	2,333	2,690	2,572	32,104
6	2,493	2,974	2,920	2,520	2,778	3,066	2,556	2,634	2,685	2,548	2,799	2,998	32,971
7	2,887	2,843	3,129	2,897	2,579	2,697	2,804	2,631	2,421	2,578	2,742	2,378	32,586
8	2,872	2,987	2,728	2,705	2,501	2,856	2,681	2,530	2,632	2,543	2,502	2,617	32,154
9	2,579	2,527	2,580	2,677	2,636	2,952	2,678	2,470	2,445	2,644	2,307	2,667	31,162
10	2,696	2,537	3,147	2,624	2,578	2,669	2,558	2,401	2,581	2,638	2,620	2,414	31,463
11	2,574	2,843	2,898	2,596	2,367	2,805	2,770	2,631	2,654	2,593	2,418	2,607	31,756
12	2,452	3,282	2,834	2,454	2,550	2,906	2,771	2,616	2,774	2,511	2,607	2,769	32,526
13	2,378	3,043	2,885	2,286	2,565	2,650	2,478	2,553	2,612	2,521	2,651	2,331	30,953
14	2,820	2,977	2,792	2,548	2,433	2,650	2,622	2,539	3,097	2,670	2,695	2,360	32,203
15	2,591	2,752	2,563	2,599	2,572	2,687	2,617	2,558	3,127	2,609	2,452	2,605	31,732
16	2,609	2,624	2,444	2,637	2,680	2,710	2,618	2,591	2,919	2,542	2,230	2,839	31,443
17	2,697	2,724	2,644	2,806	2,463	2,589	2,698	2,531	2,819	2,478	2,726	2,749	31,924
18	2,624	2,873	2,631	2,864	2,487	2,549	2,751	2,656	2,790	2,311	2,568	2,602	31,706
19	2,373	2,864	2,728	2,536	2,650	2,486	2,599	2,446	2,785	2,272	2,504	2,656	30,899
20	2,319	2,807	2,774	2,378	2,458	2,799	2,587	2,625	2,773	2,587	2,590	2,432	31,129
21	2,579	2,866	2,600	2,691	2,624	2,561	2,607	2,780	2,454	2,332	2,636	2,402	31,132
22	2,762	3,049	2,369	2,722	2,654	2,435	2,608	2,885	2,655	2,397	2,331	2,621	31,488
23	2,597	2,788	2,295	2,642	2,627	2,763	2,529	2,747	2,570	2,482	2,362	3,559	31,961
24	2,602	2,561	2,623	2,654	2,609	2,659	2,634	2,489	2,590	2,530	2,793	2,888	31,632
25	2,721	2,838	2,604	2,804	2,641	2,666	2,580	2,593	2,637	2,387	2,520	2,161	31,152
26	2,519	2,761	2,621	2,566	2,674	2,800	2,599	2,552	2,667	2,229	2,429	2,732	31,149
27	2,504	2,741	2,561	2,388	2,682	2,749	2,477	2,418	2,499	2,500	2,269	2,618	30,406
28	2,887	2,827	2,645	2,532	2,449	2,644	2,572	2,437	2,402	2,349	2,418	2,378	30,540
29	2,774	2,825	2,510	2,394	2,571	2,469	2,604	2,754	2,717	2,341	2,454	2,681	31,094
30	2,650		2,369	2,295	2,732	2,535	2,536	2,682	2,464	2,454	2,494	2,532	27,743
31	2,519		2,697		2,689		2,418	2,510		2,540		2,292	17,665
Total	81,715	82,135	83,658	78,192	80,349	81,110	80,887	80,444	80,093	76,964	76,211	81,088	962,846

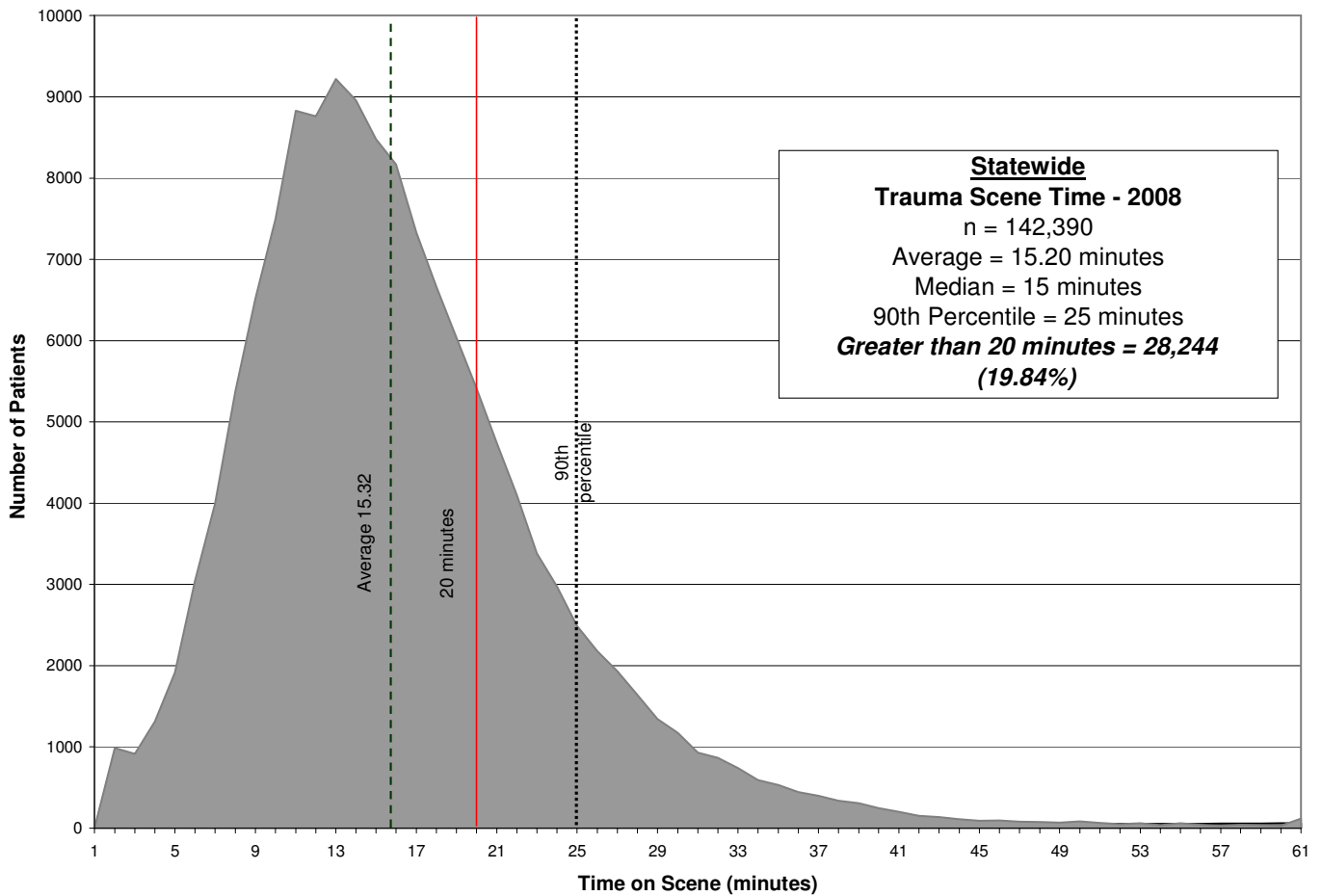
Trauma Scene Time Distribution

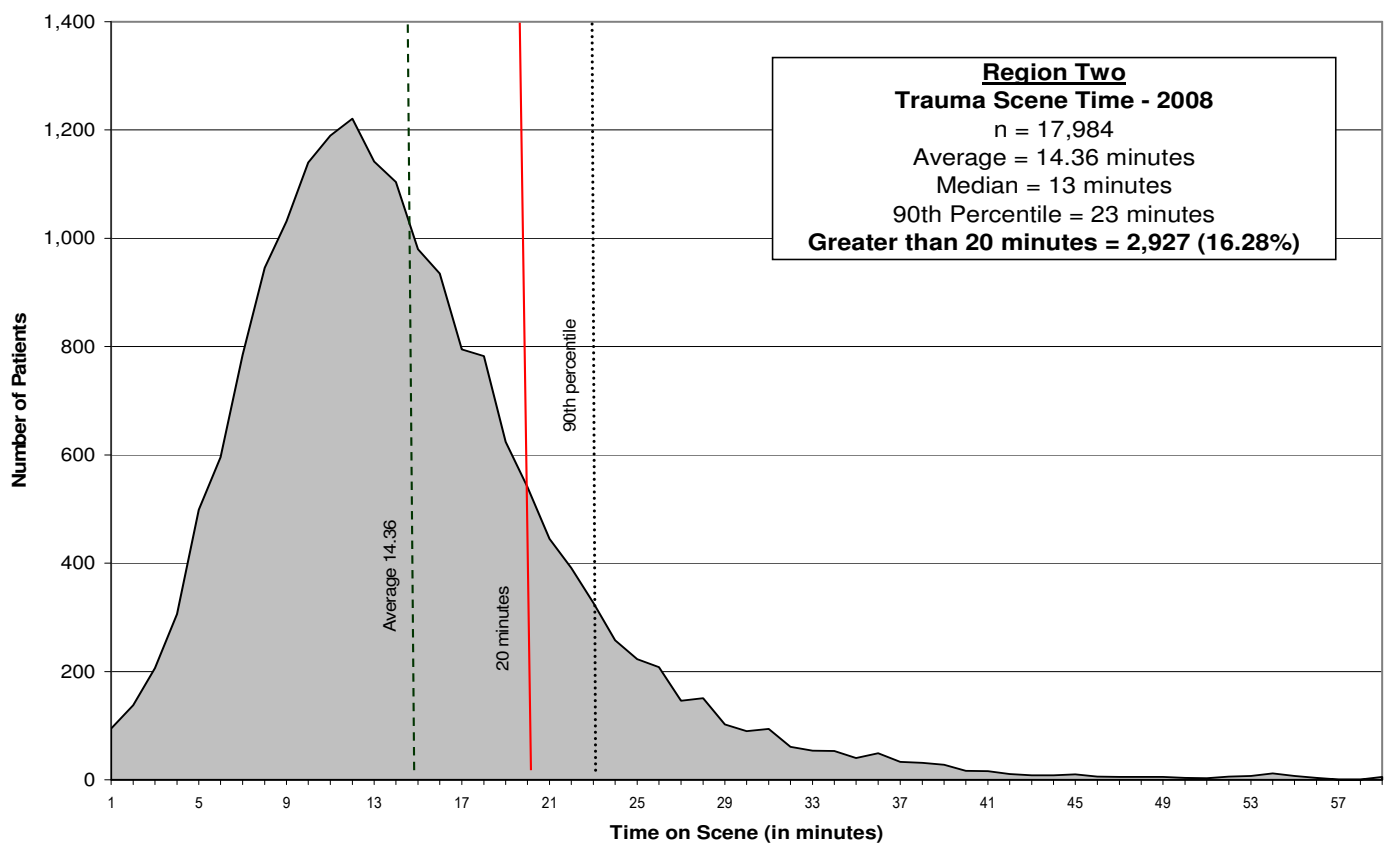
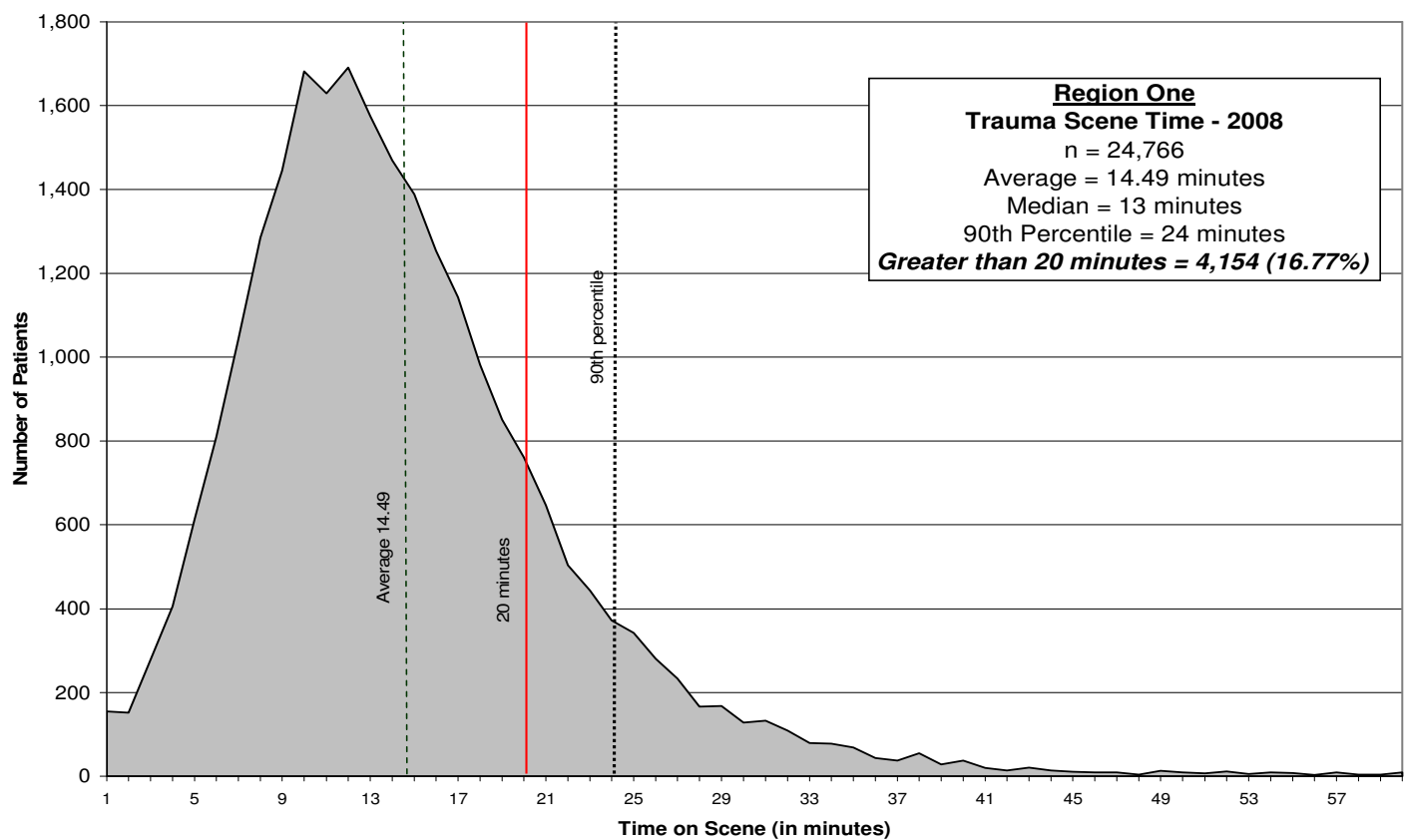
Inclusion Criteria:

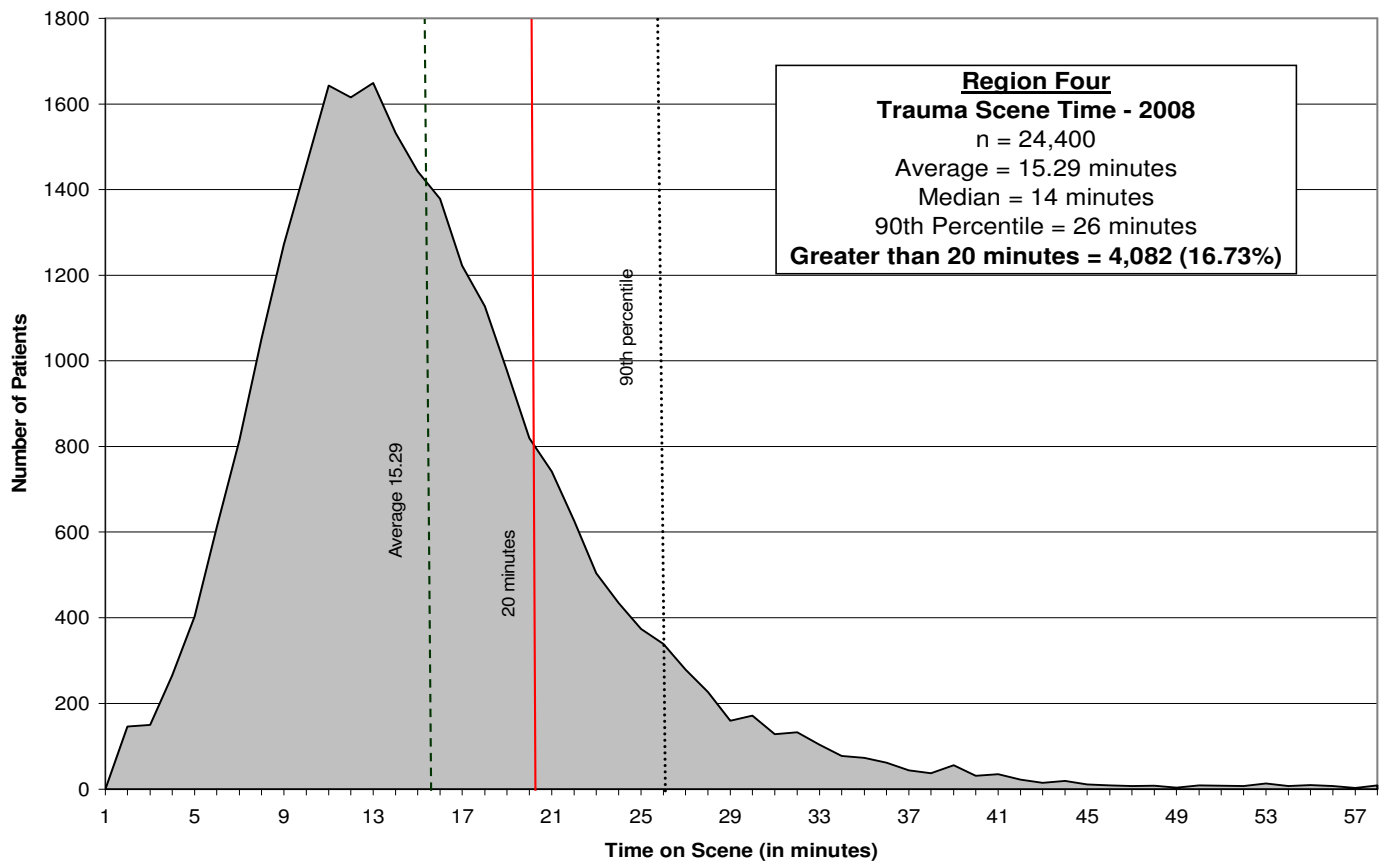
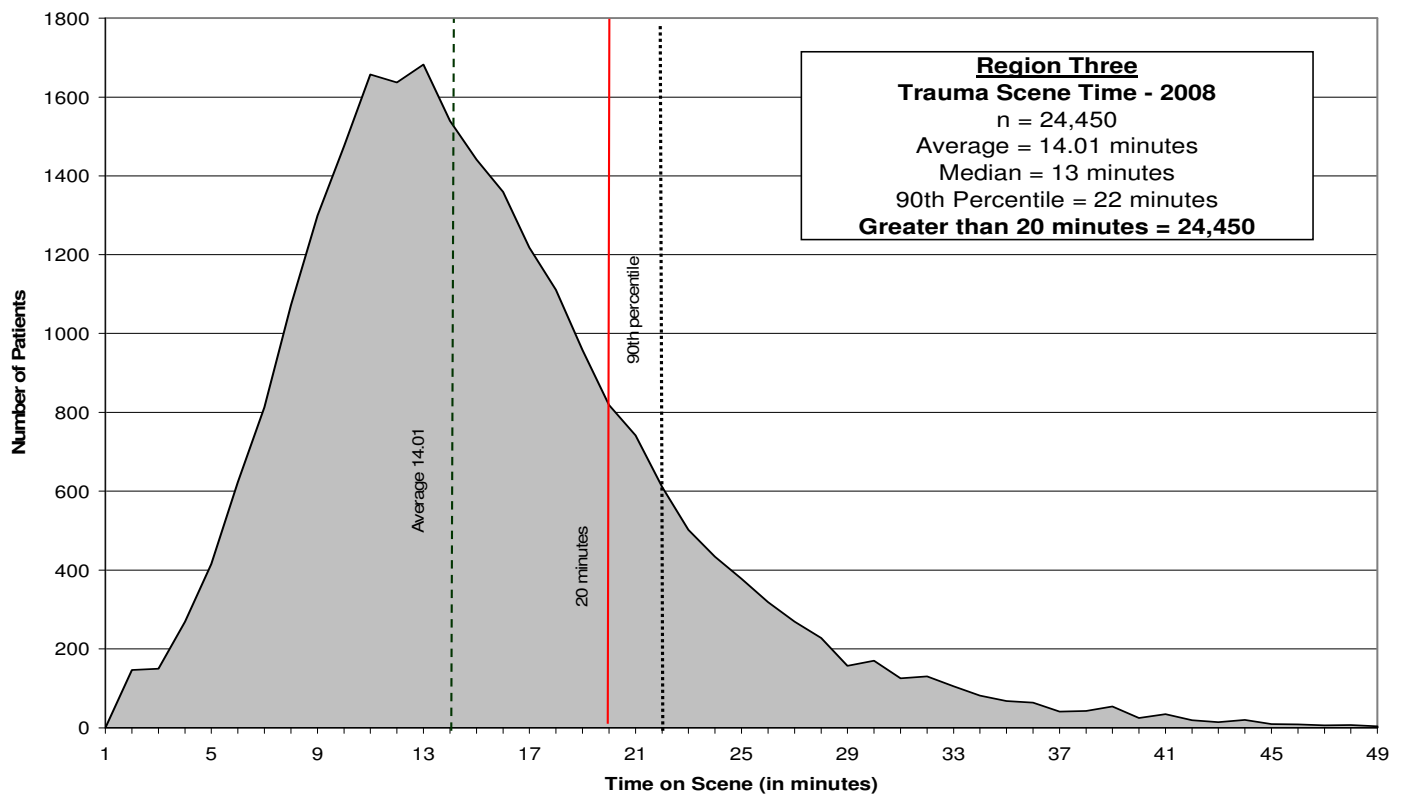
- Incidents with valid mechanism of injury (indicating a trauma incident)
- 'At Scene' time known and valid
- 'Departed Scene' time known and valid

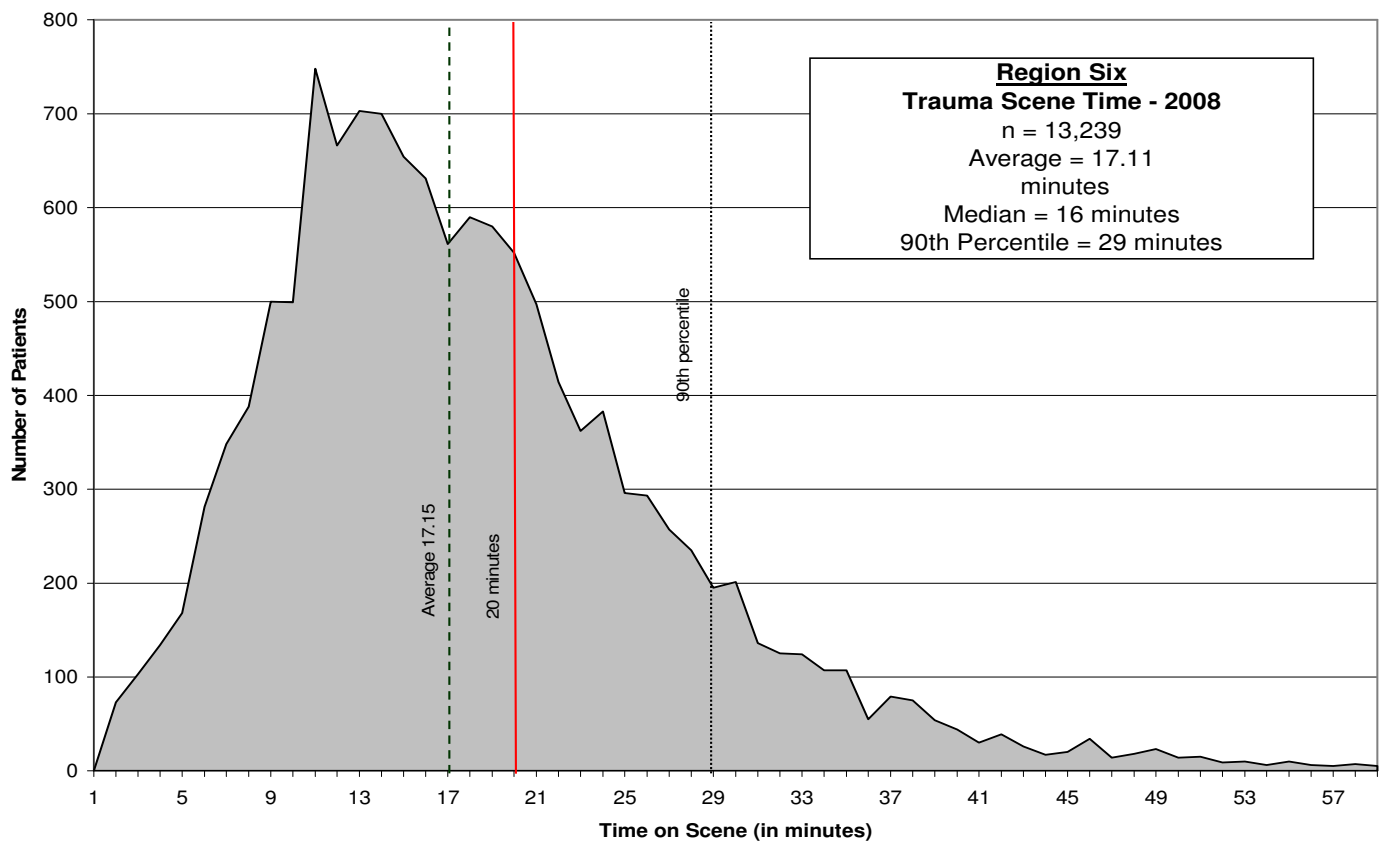
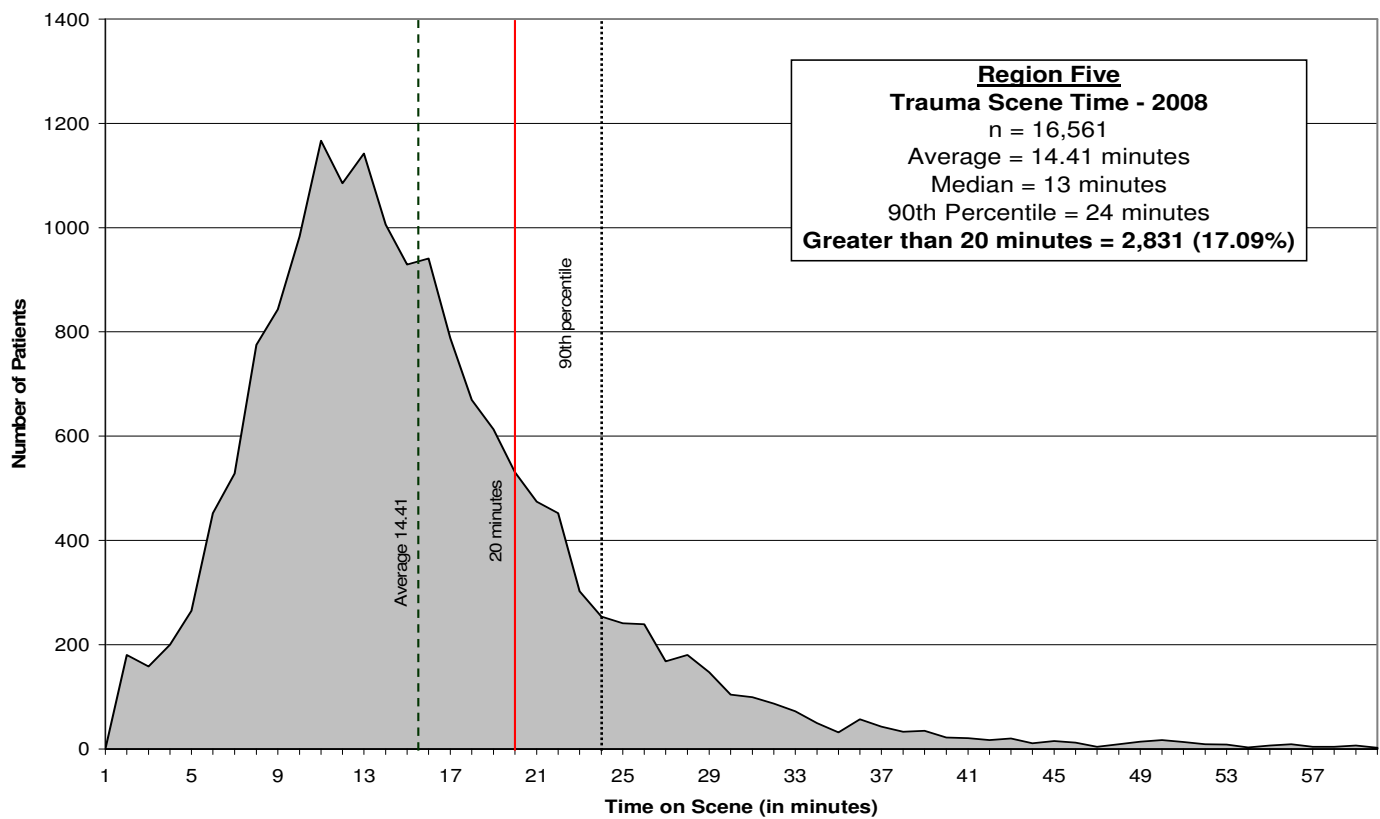
Exclusion Criteria:

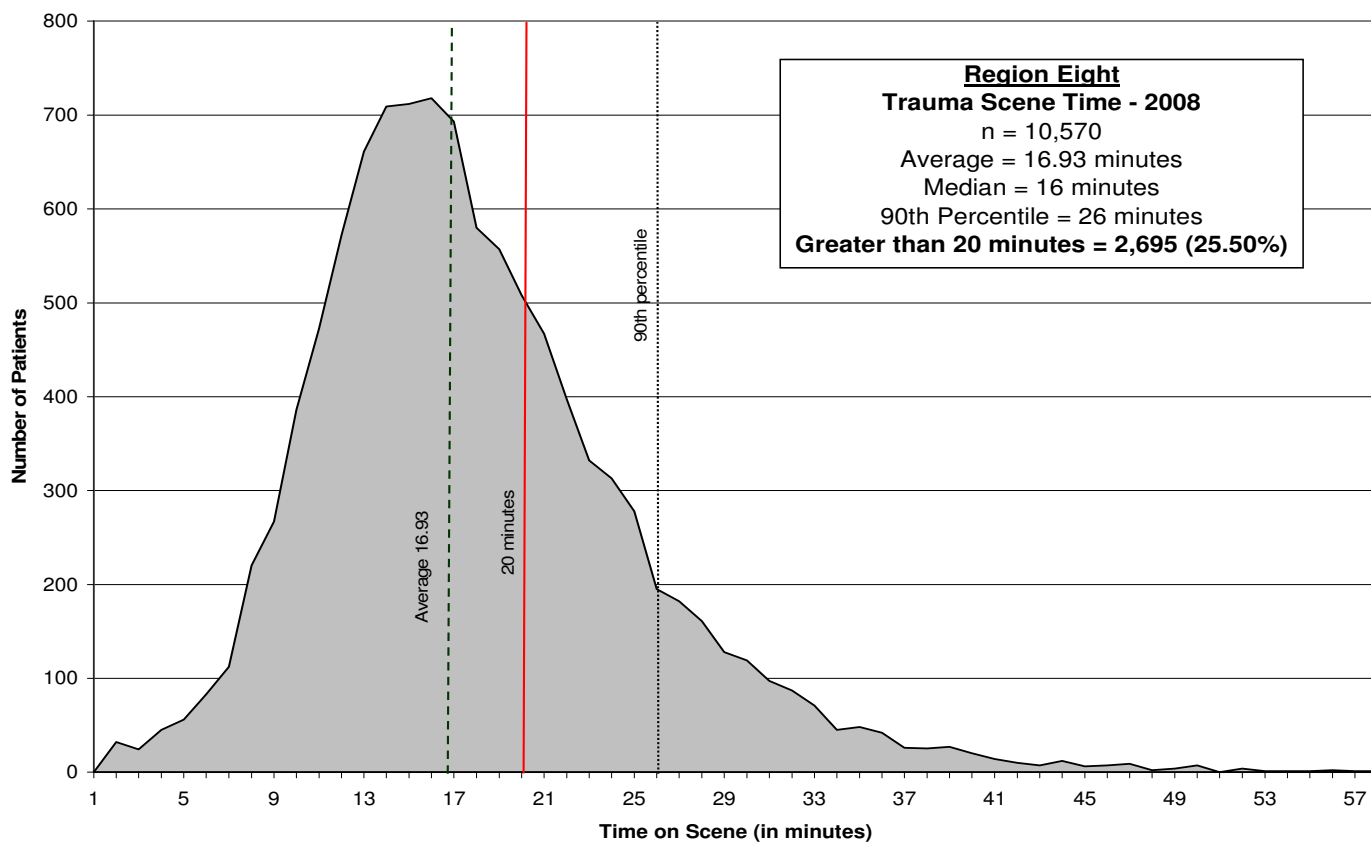
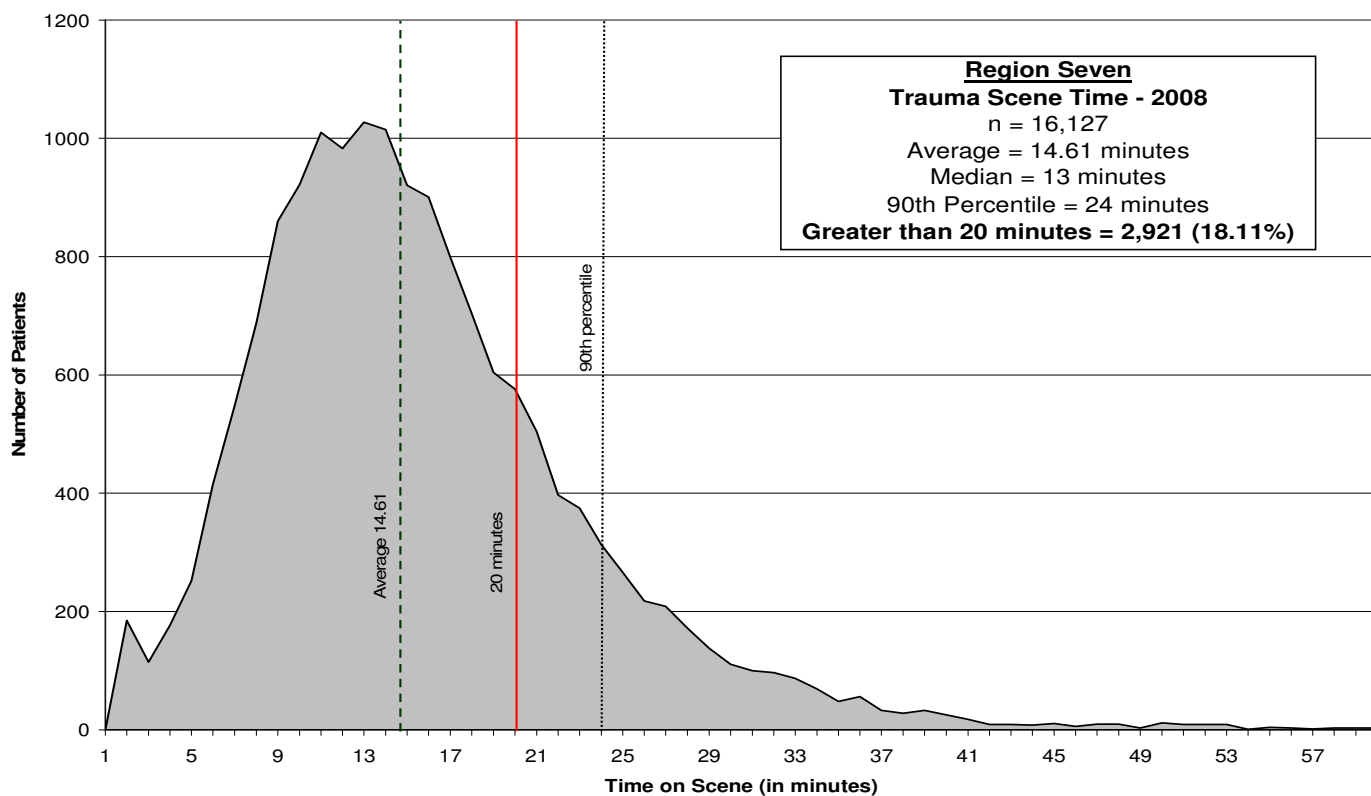
- Incidents without valid mechanism of injury
- 'At Scene' time not documented or invalid
- 'Departed Scene' time not documented or invalid
- Extrication or other factor extending scene time reported
- Scene times less than 1 minute or greater than 60 minutes
- Transport by air ambulance

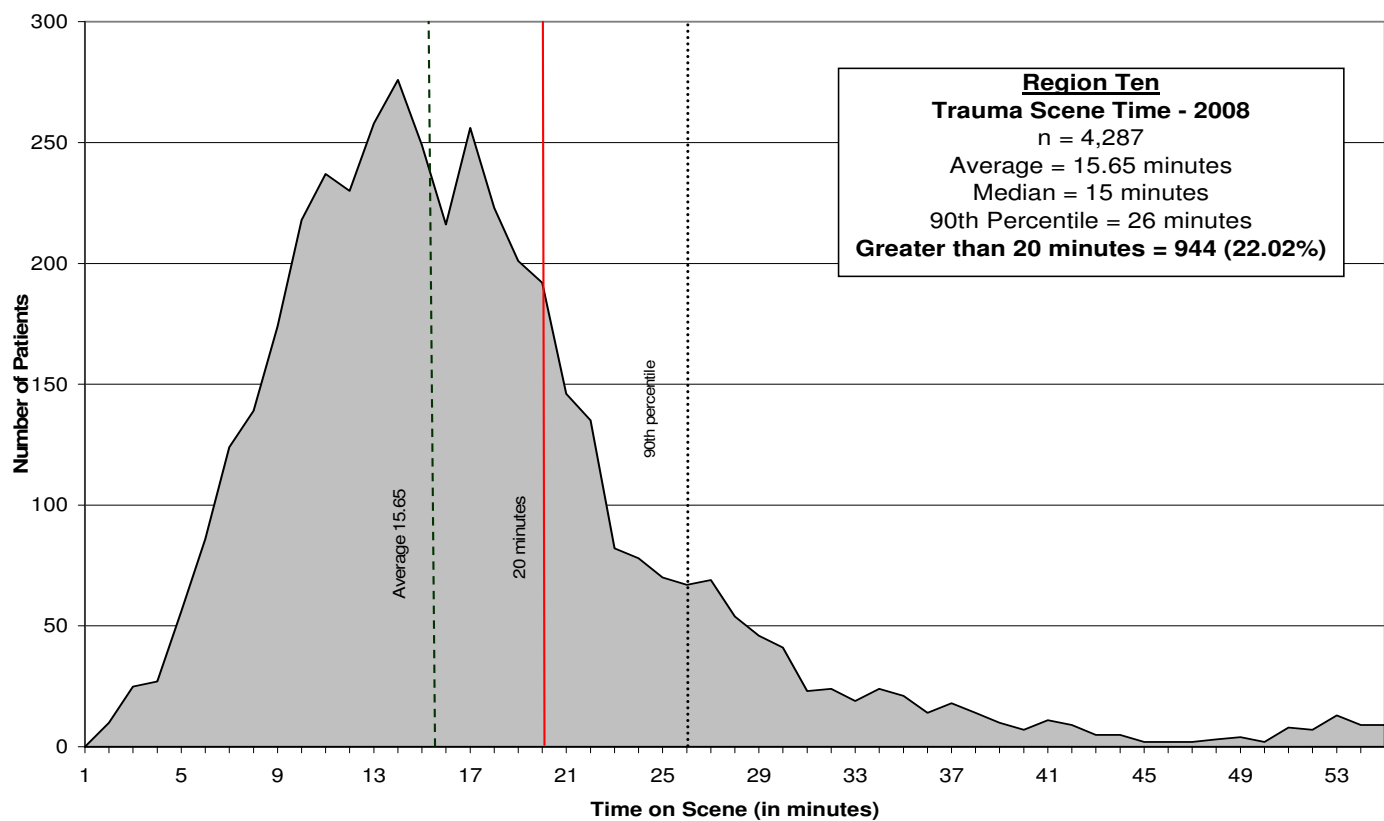
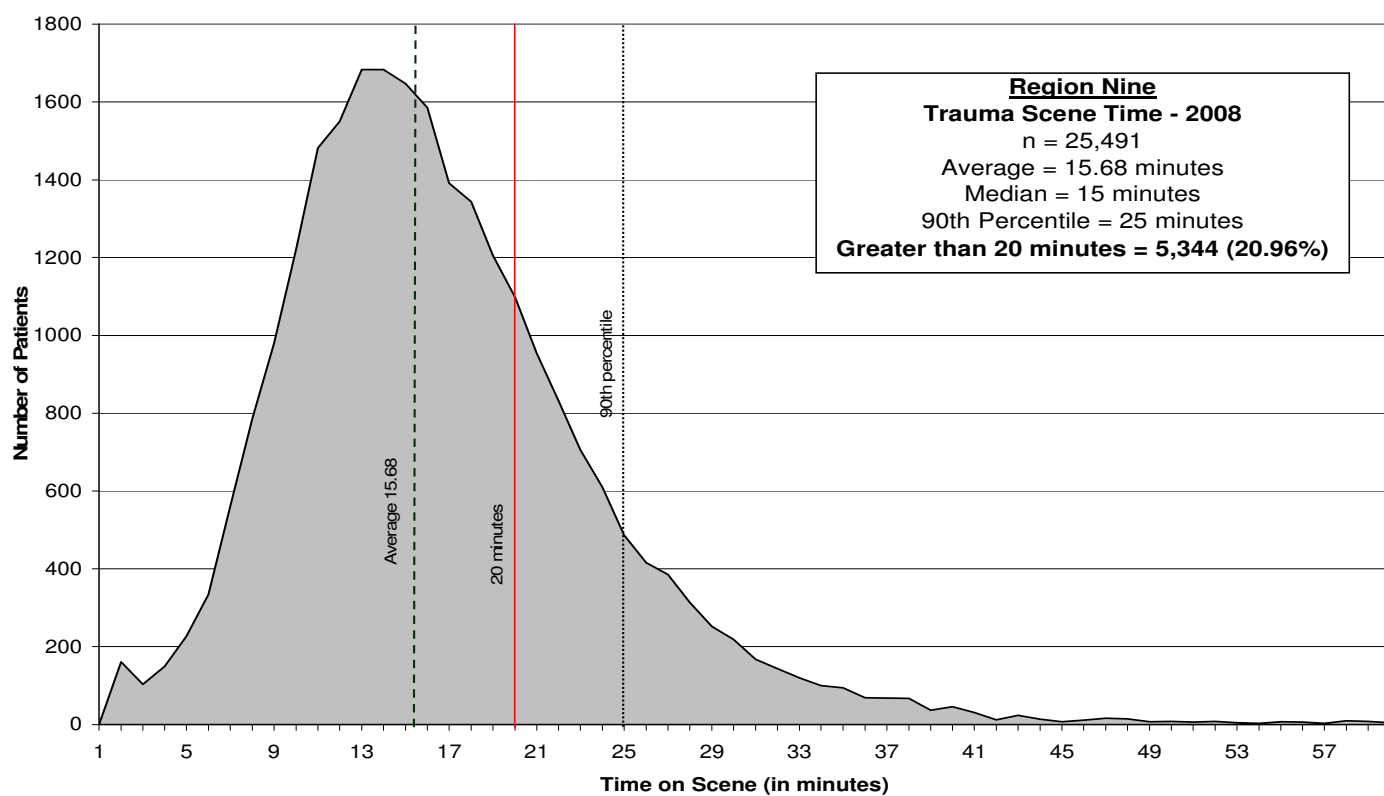












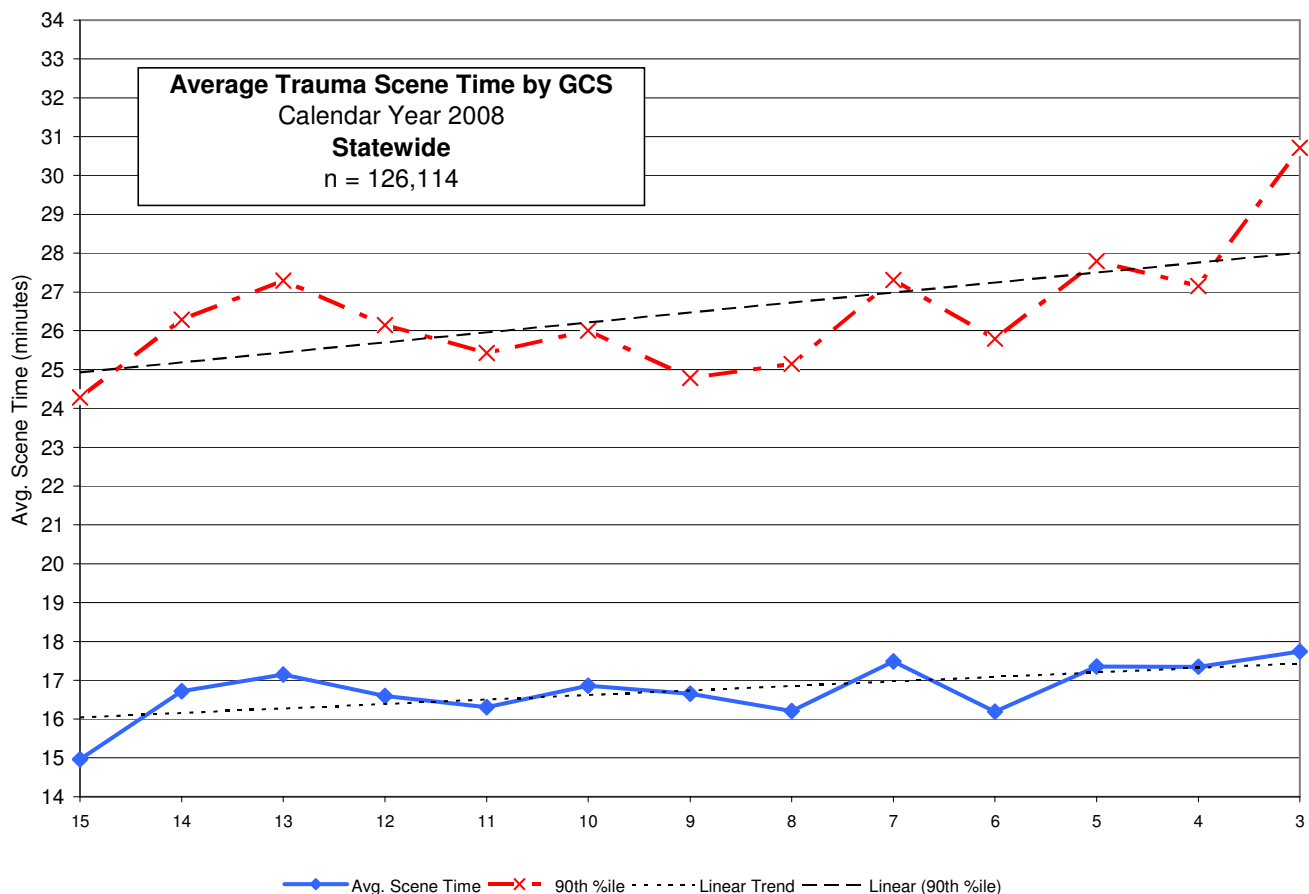
Average Trauma Scene Time by GCS

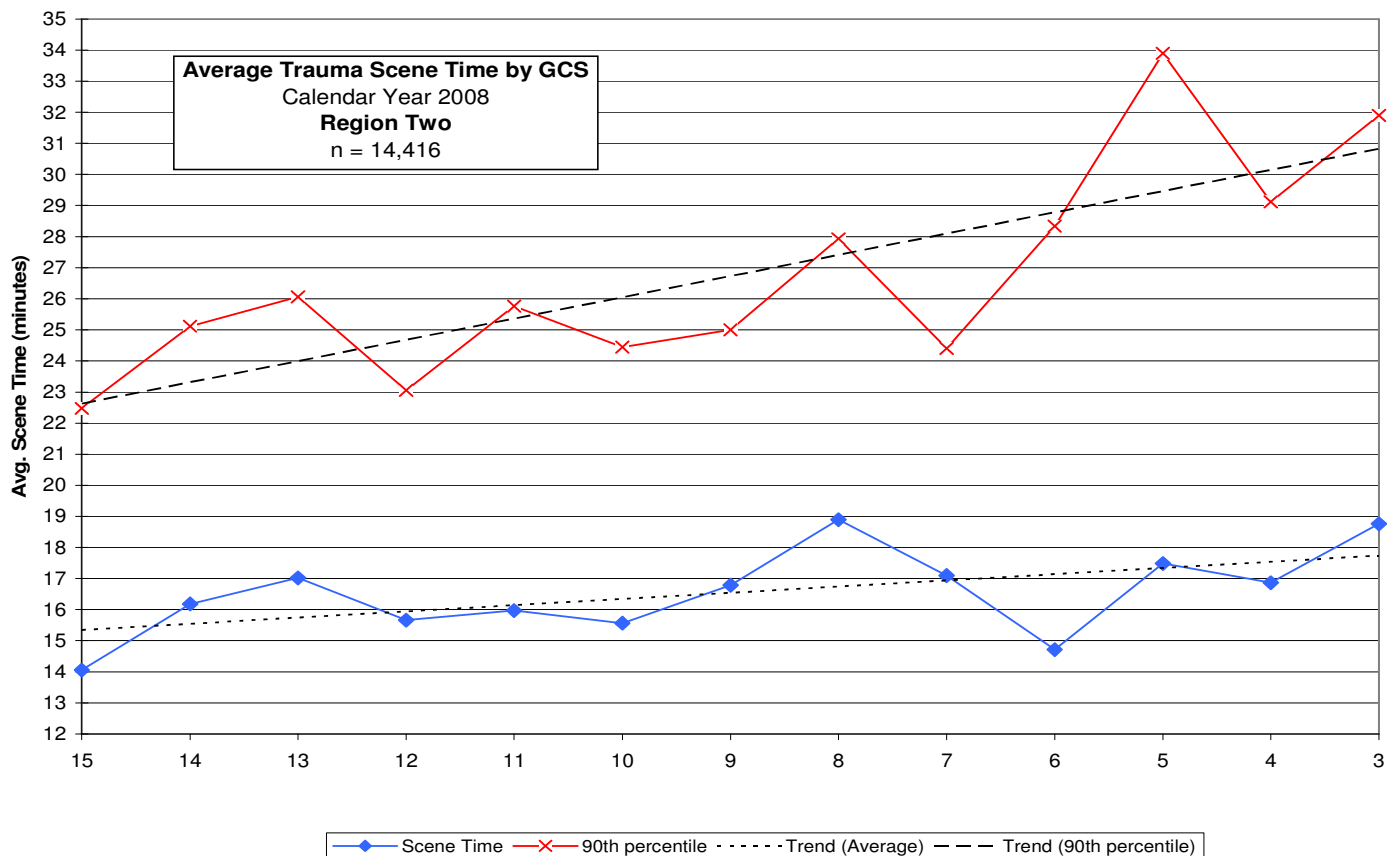
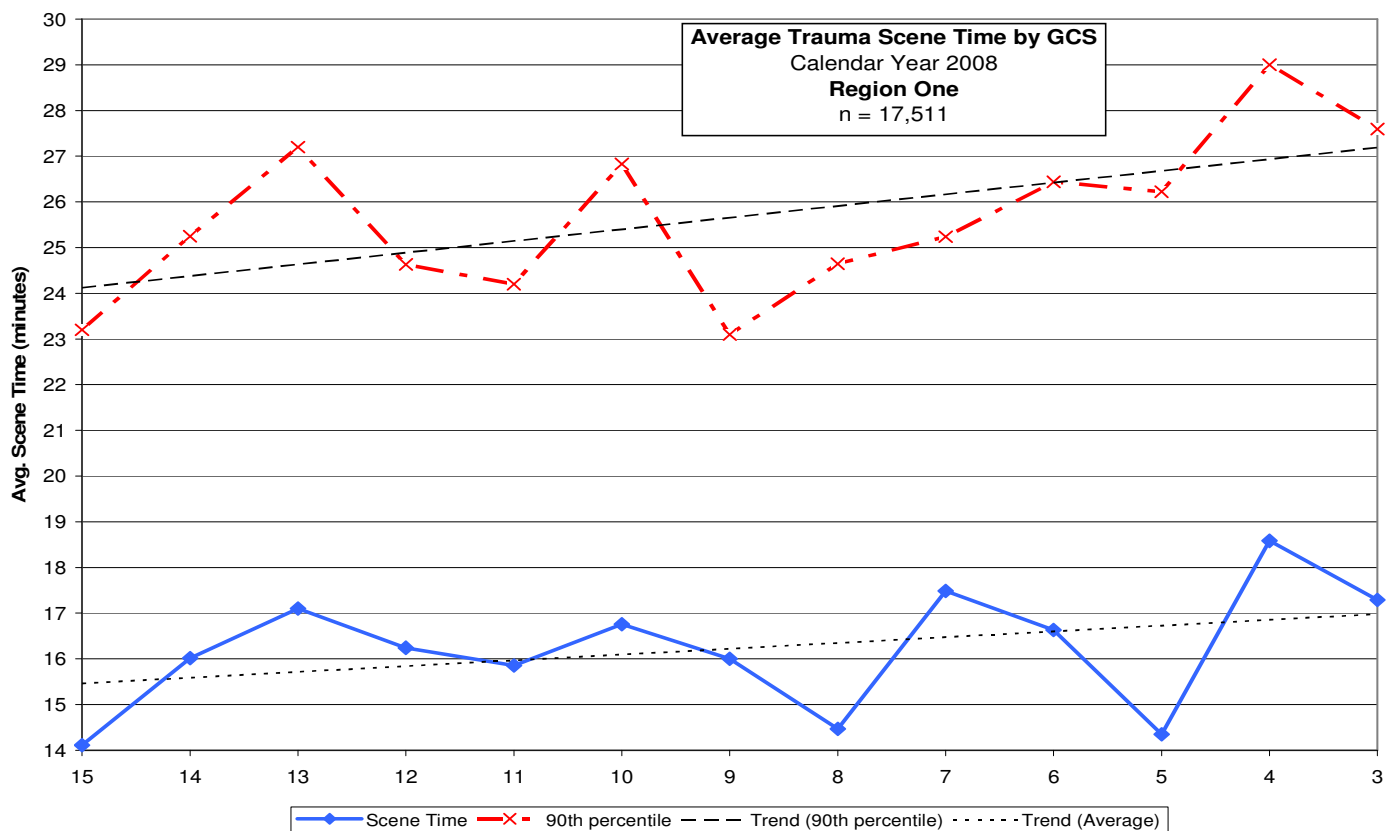
Inclusion Criteria:

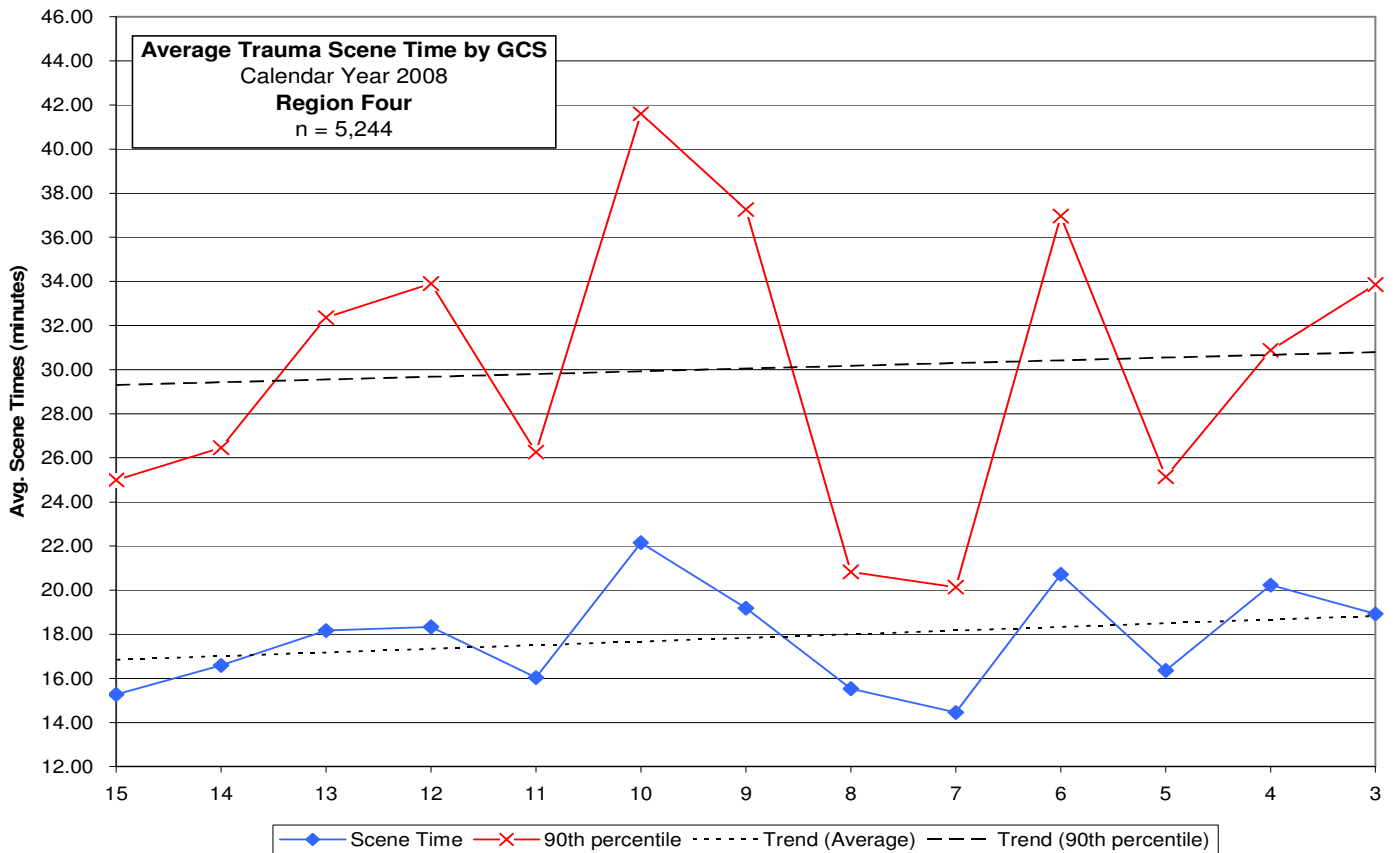
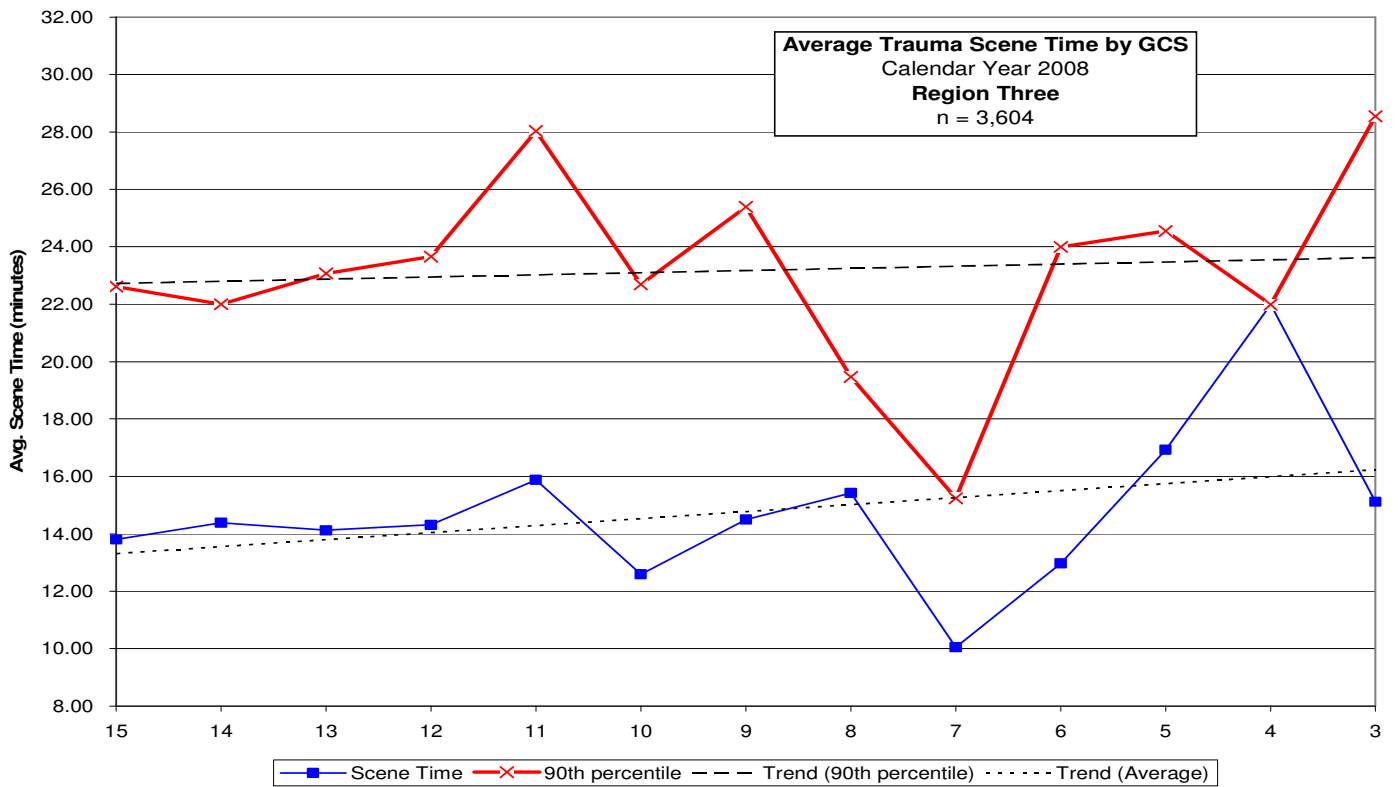
- Incidents with valid mechanism of injury (indicating a trauma incident)
- 'At Scene' time known and valid
- 'Departed Scene' time known and valid
- Incidents with GCS between 3 and 15

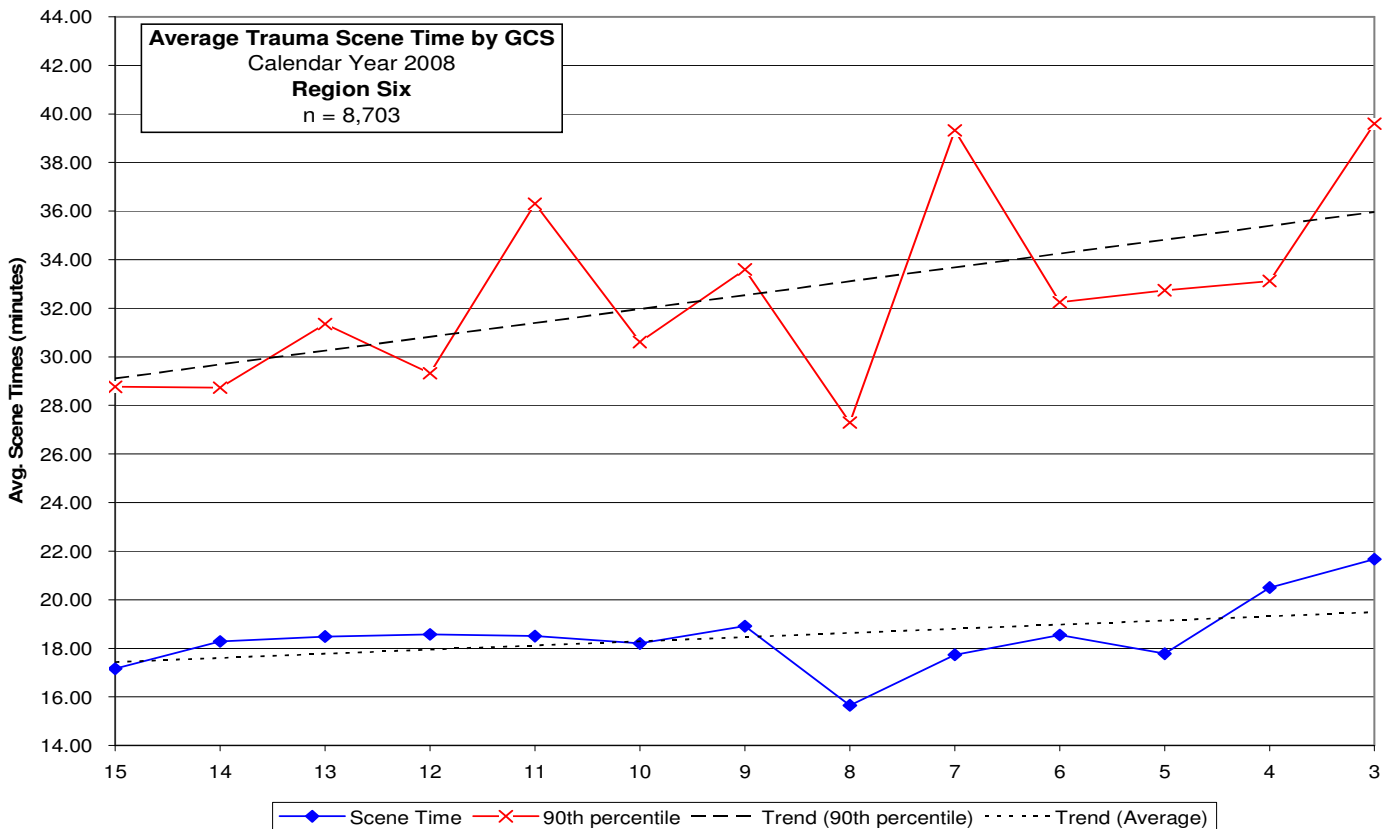
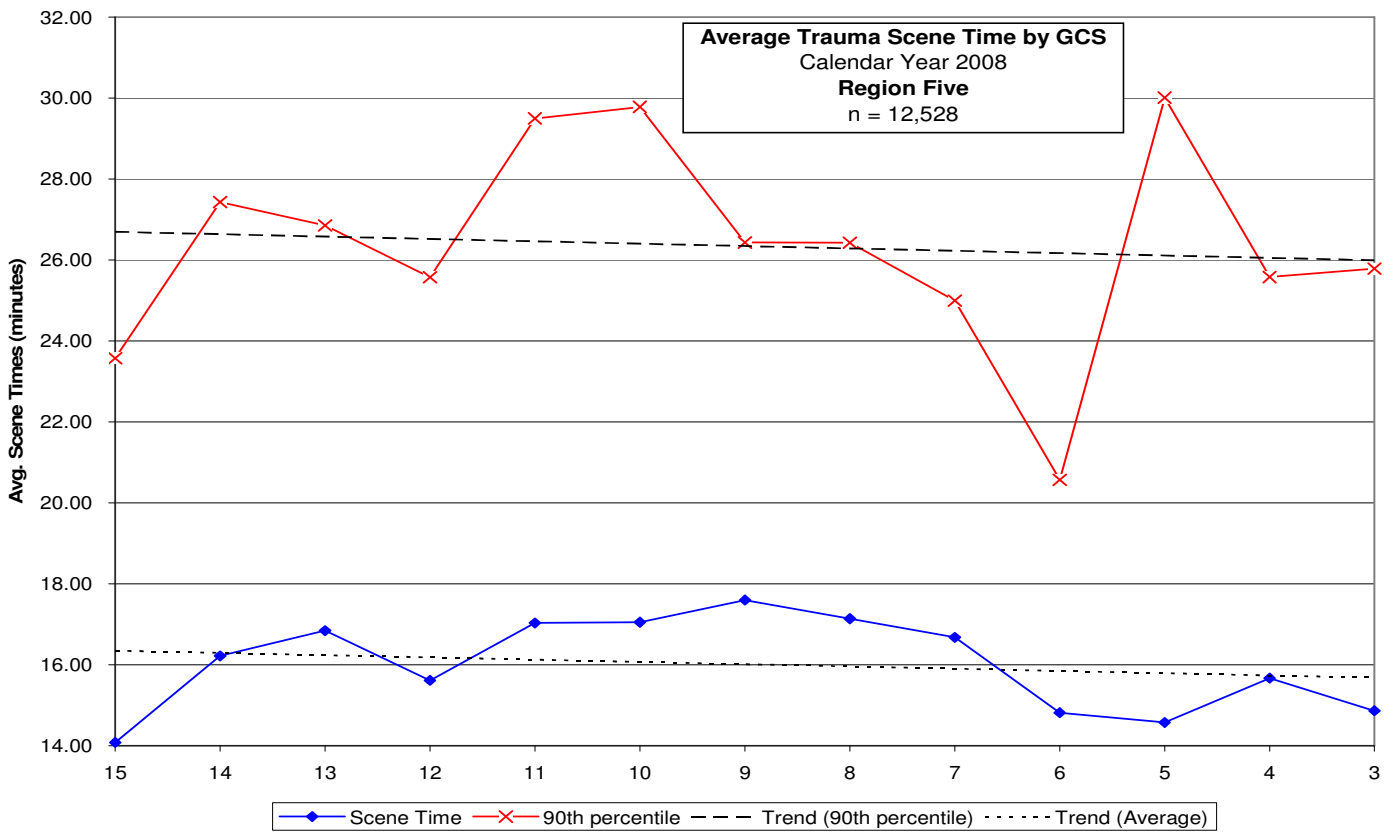
Exclusion Criteria:

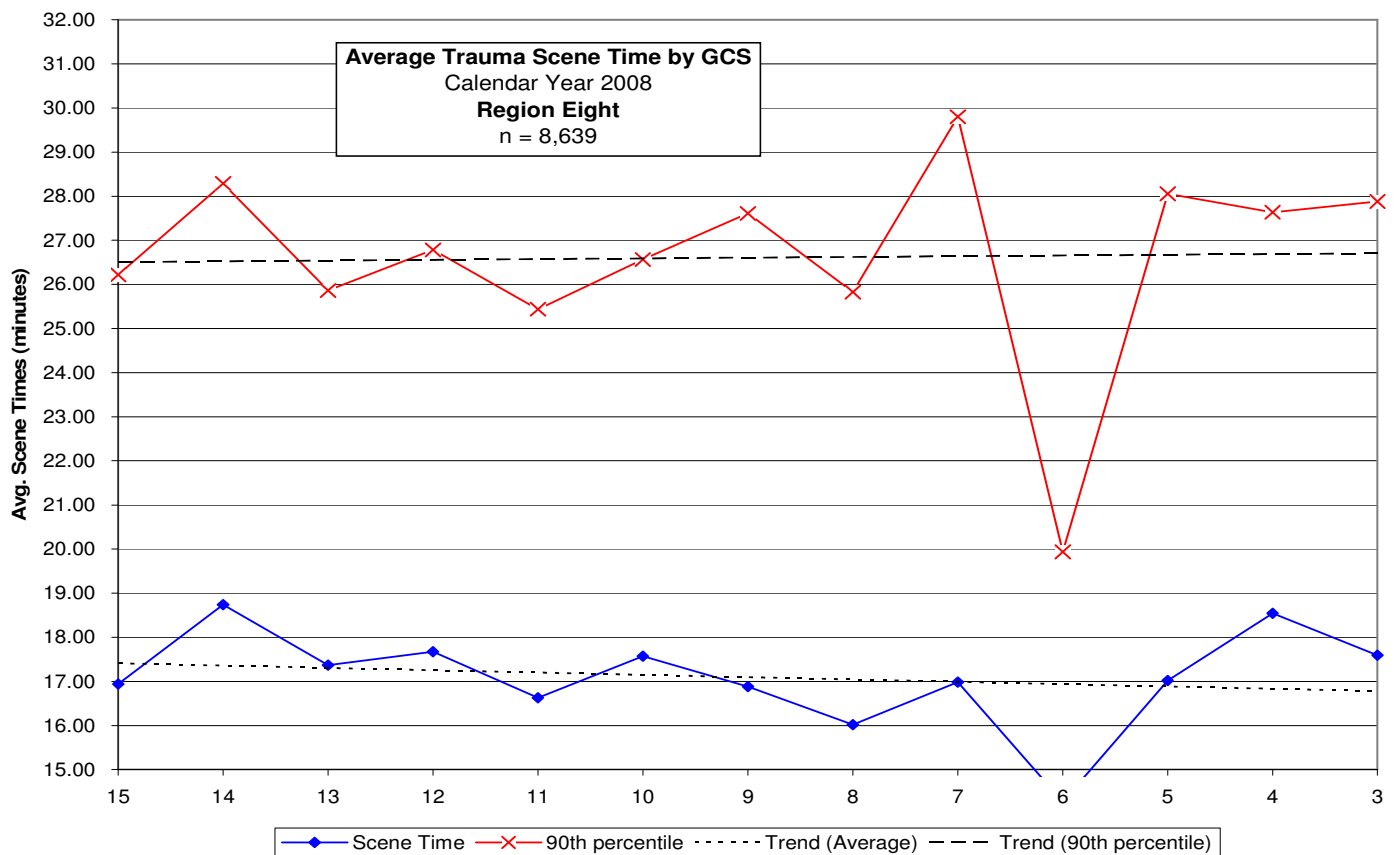
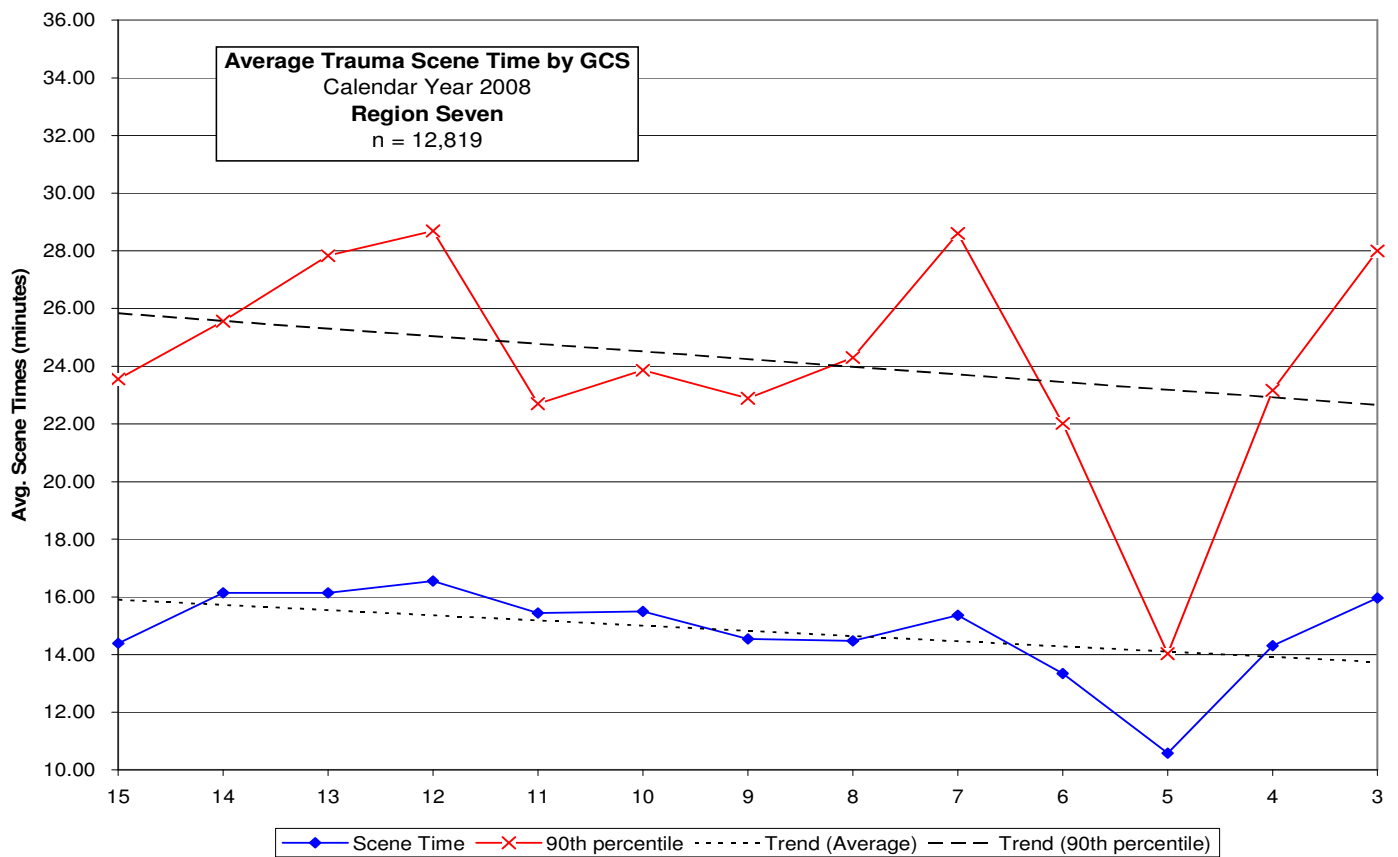
- Incidents without valid mechanism of injury
- 'At Scene' time not documented or invalid
- 'Departed Scene' time not documented or invalid
- Extrication or other factor extending scene time reported
- Scene times less than 1 minute or greater than 60 minutes
- Incidents with any GCS component score (eye, verbal, or motor) not documented
- Transport by air ambulance

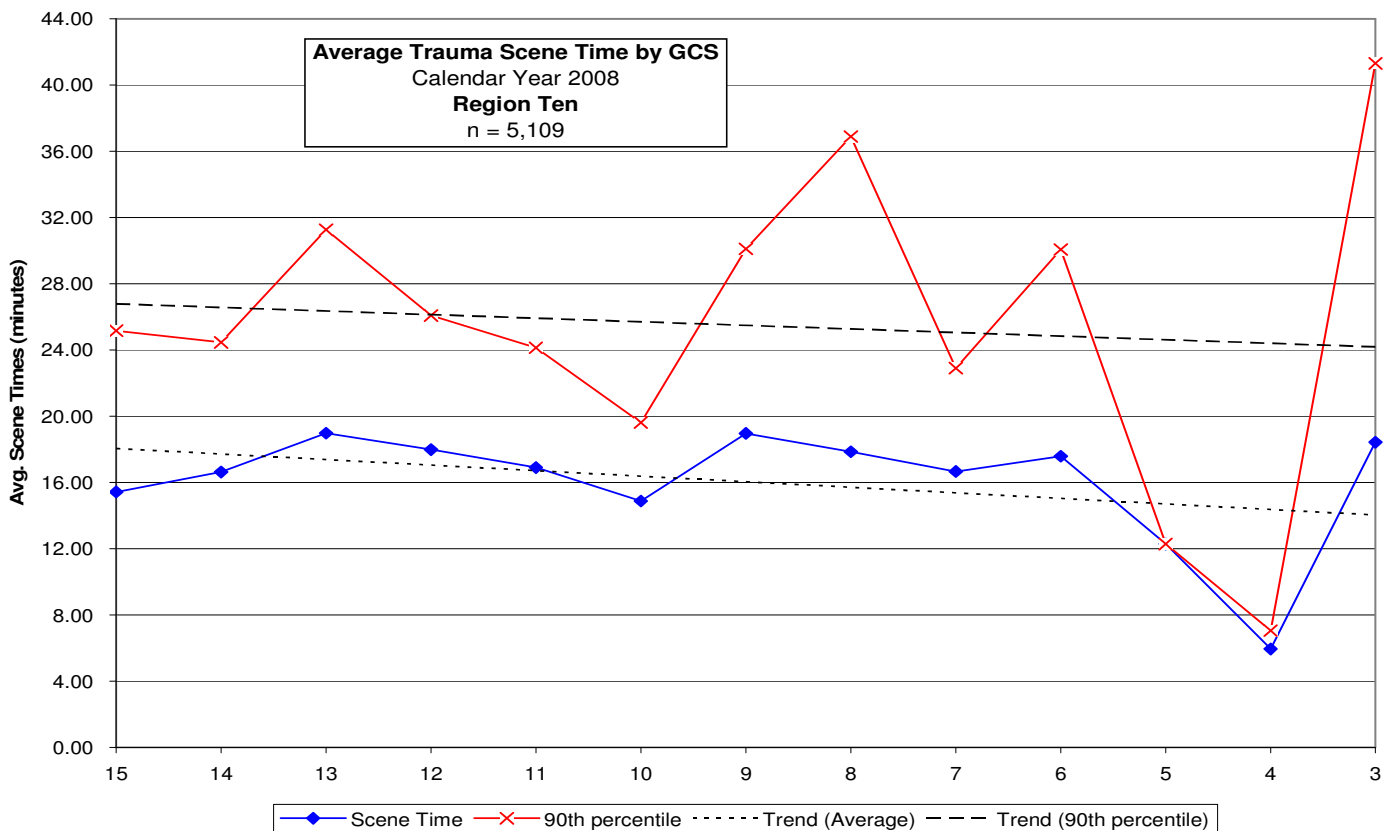
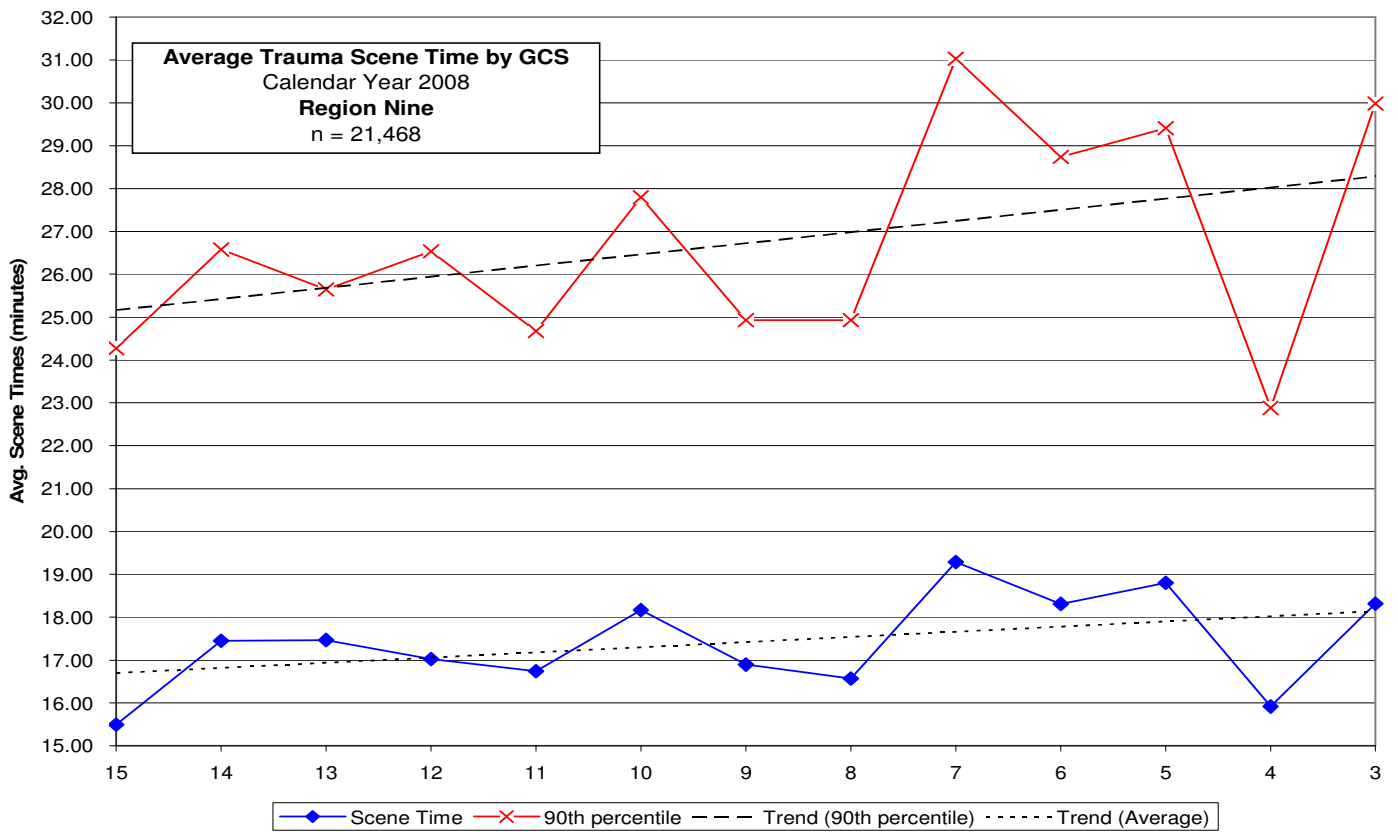












Performance Statistics
IV Placement
CY 2008

ALL*			
Region	# of patients w/ IV attempt	# of patients w/ IV placed	% of patients w/ IV placed
Statewide	269,060	227,228	0.84
Region 01	31,837	26,359	0.83
Region 02	28,856	22,971	0.80
Region 03	9,004	7,613	0.85
Region 04	13,409	11,326	0.84
Region 05	37,705	32,911	0.87
Region 06	21,366	18,053	0.84
Region 07	30,720	25,816	0.84
Region 08	14,779	12,647	0.86
Region 09	64,424	54,783	0.85
Region 10	16,960	14,749	0.87

ADULT			
Region	# of patients w/ IV attempt	# of patients w/ IV placed	% of patients w/ IV placed
Statewide	256,028	216,110	0.84
Region 01	30,468	25,213	0.83
Region 02	27,253	21,612	0.79
Region 03	8,655	7,301	0.84
Region 04	12,234	10,228	0.84
Region 05	35,611	31,100	0.87
Region 06	20,735	17,528	0.85
Region 07	29,721	24,972	0.84
Region 08	14,145	12,084	0.85
Region 09	61,021	51,986	0.85
Region 10	16,185	14,086	0.87

PEDIATRIC			
Region	# of patients w/ IV attempt	# of patients w/ IV placed	% of patients w/ IV placed
Statewide	5,613	4,651	0.83
Region 01	627	502	0.80
Region 02	510	405	0.79
Region 03	214	180	0.84
Region 04	268	227	0.85
Region 05	986	874	0.89
Region 06	494	401	0.81
Region 07	648	536	0.83
Region 08	294	255	0.87
Region 09	1,242	1,007	0.81
Region 10	330	264	0.80

* Not all patients have a calculable age, therefore adult totals plus pediatric totals will not equal all patients.

Performance Statistics
Oral ET Intubation
CY 2008

ALL*			
Region	# of patients w/ ET attempt	# of patients intubated	% of patients intubated
Statewide	4,870	3,832	0.79
Region 01	814	640	0.79
Region 02	770	585	0.76
Region 03	201	166	0.83
Region 04	298	230	0.77
Region 05	712	572	0.80
Region 06	321	248	0.77
Region 07	406	307	0.76
Region 08	170	129	0.76
Region 09	895	712	0.80
Region 10	283	243	0.86
ADULTS			
Region	# of patients w/ ET attempt	# of patients intubated	% of patients intubated
Statewide	4,463	3,520	0.79
Region 01	756	594	0.79
Region 02	706	541	0.77
Region 03	191	157	0.82
Region 04	267	208	0.78
Region 05	636	518	0.81
Region 06	310	239	0.77
Region 07	375	284	0.76
Region 08	160	122	0.76
Region 09	801	633	0.79
Region 10	261	224	0.86
PEDIATRIC			
Region	# of patients w/ ET attempt	# of patients intubated	% of patients intubated
Statewide	131	87	0.66
Region 01	21	16	0.76
Region 02	13	6	0.46
Region 03	5	4	0.80
Region 04	10	5	0.50
Region 05	27	17	0.63
Region 06	9	7	0.78
Region 07	11	6	0.55
Region 08	6	5	0.83
Region 09	17	12	0.71
Region 10	12	9	0.75

* Not all patients have a calculable age, therefore adult totals plus pediatric totals will not equal all patients.

Performance Statistics
Oral ET Intubation during Cardiac Arrest
CY 2008

ALL			
Region	# of patients w/ ET attempt	# of patients intubated	% of patients intubated
Statewide	3,170	2,598	0.82
Region 01	523	413	0.79
Region 02	468	368	0.79
Region 03	106	90	0.85
Region 04	207	165	0.80
Region 05	419	358	0.85
Region 06	197	162	0.82
Region 07	294	233	0.79
Region 08	115	85	0.74
Region 09	639	544	0.85
Region 10	202	180	0.89

Performance Statistics
Nasal ET Intubation
CY 2008

ALL			
Region	# of patients w/ ET attempt	# of patients intubated	% of patients intubated
Statewide	1,242	776	0.62
Region 01	126	80	0.63
Region 02	496	302	0.61
Region 03	16	12	0.75
Region 04	66	40	0.61
Region 05	306	186	0.61
Region 06	174	122	0.70
Region 07	14	8	0.57
Region 08	20	14	0.70
Region 09	14	6	0.43
Region 10	10	6	0.60

Performance Statistics

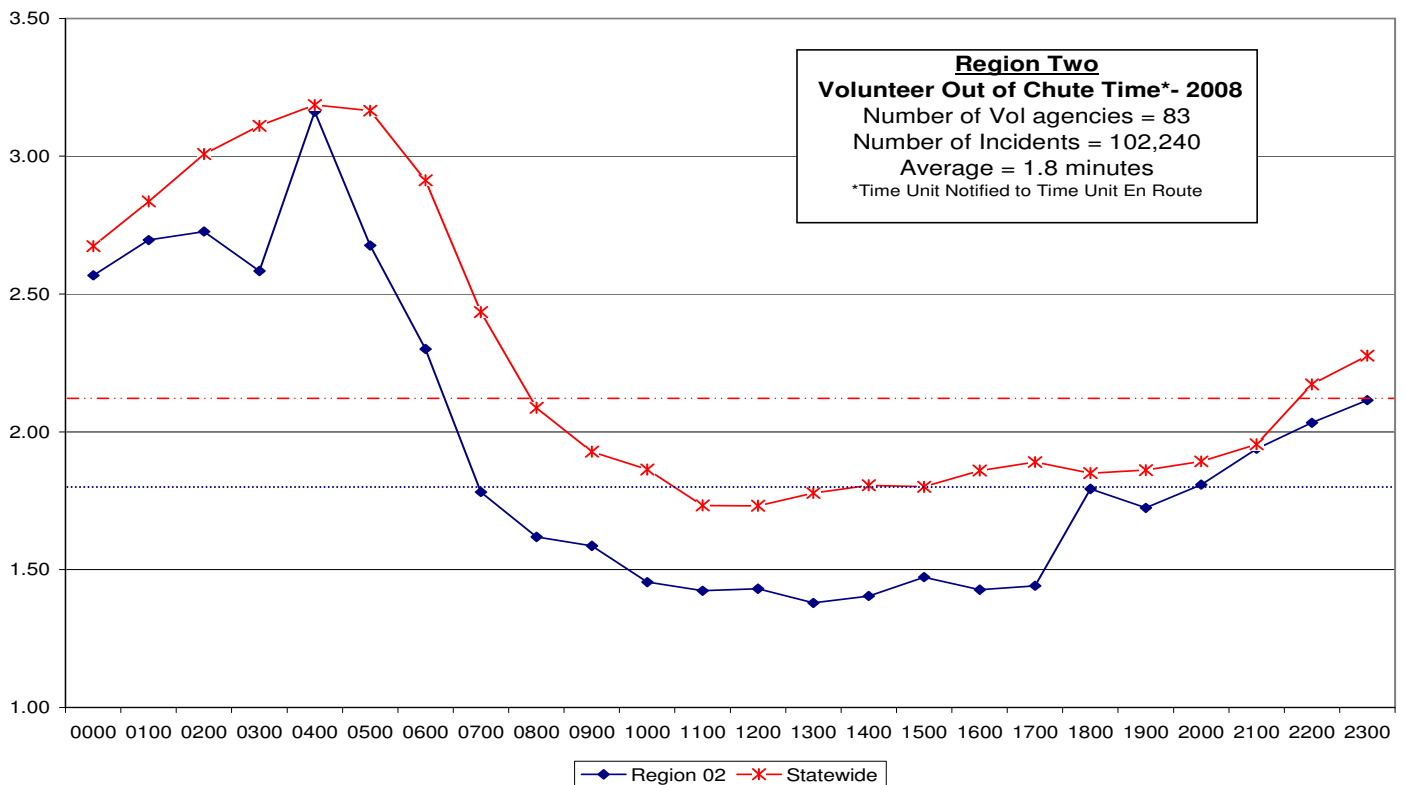
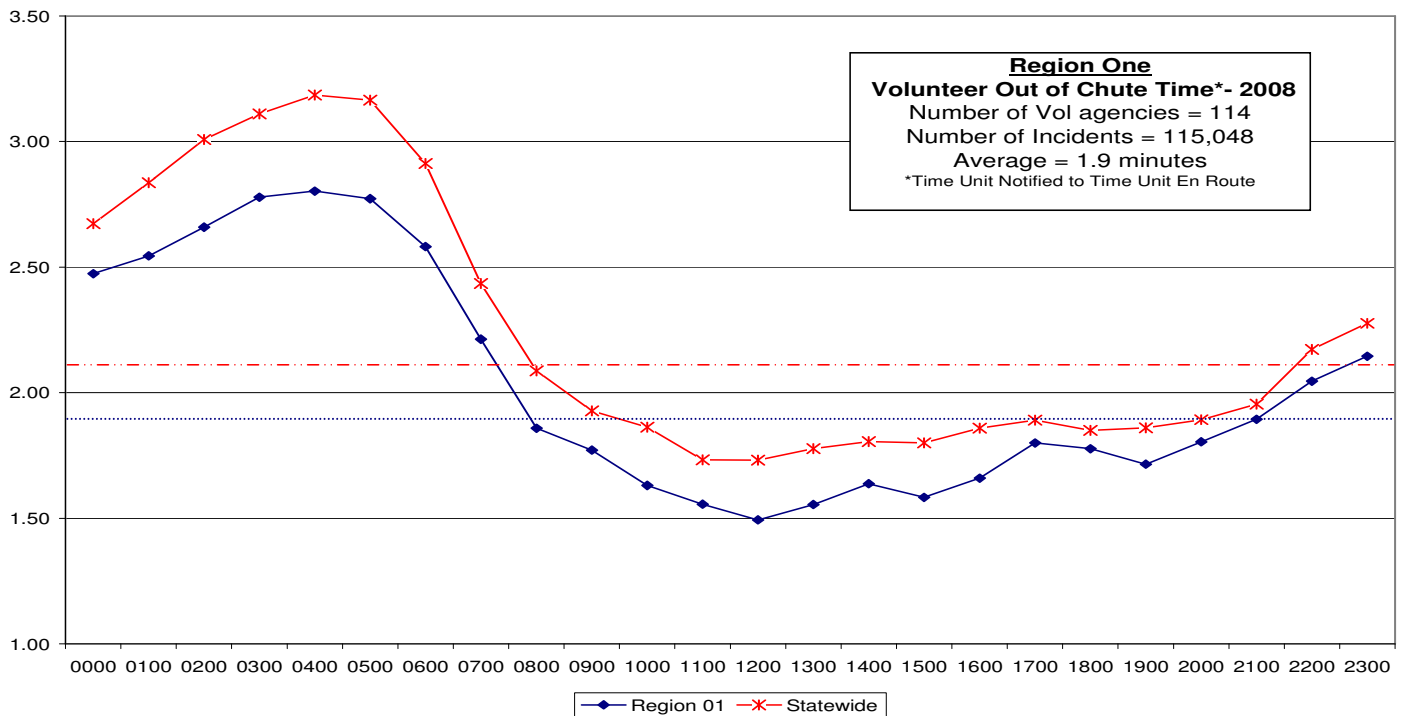
Pain Control

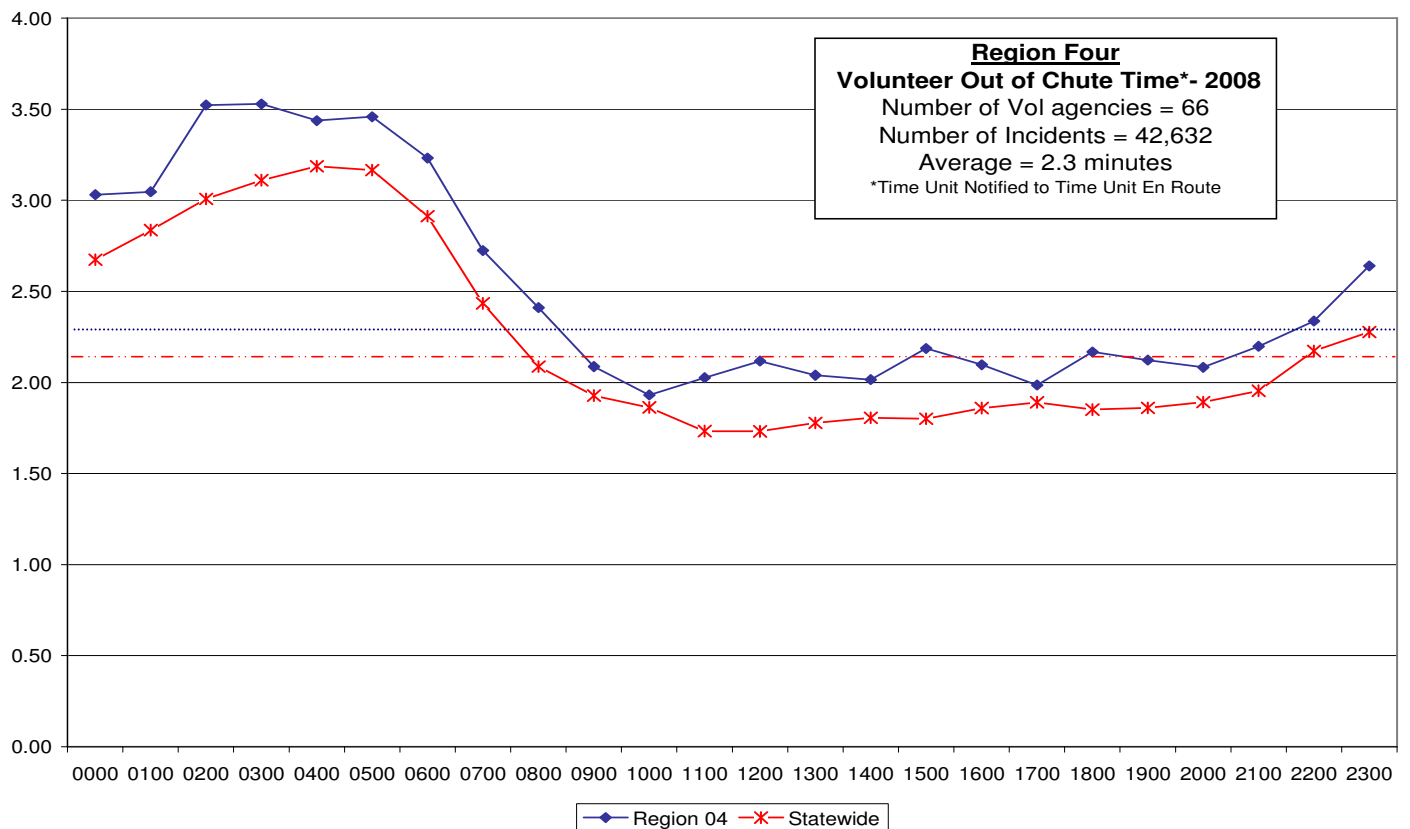
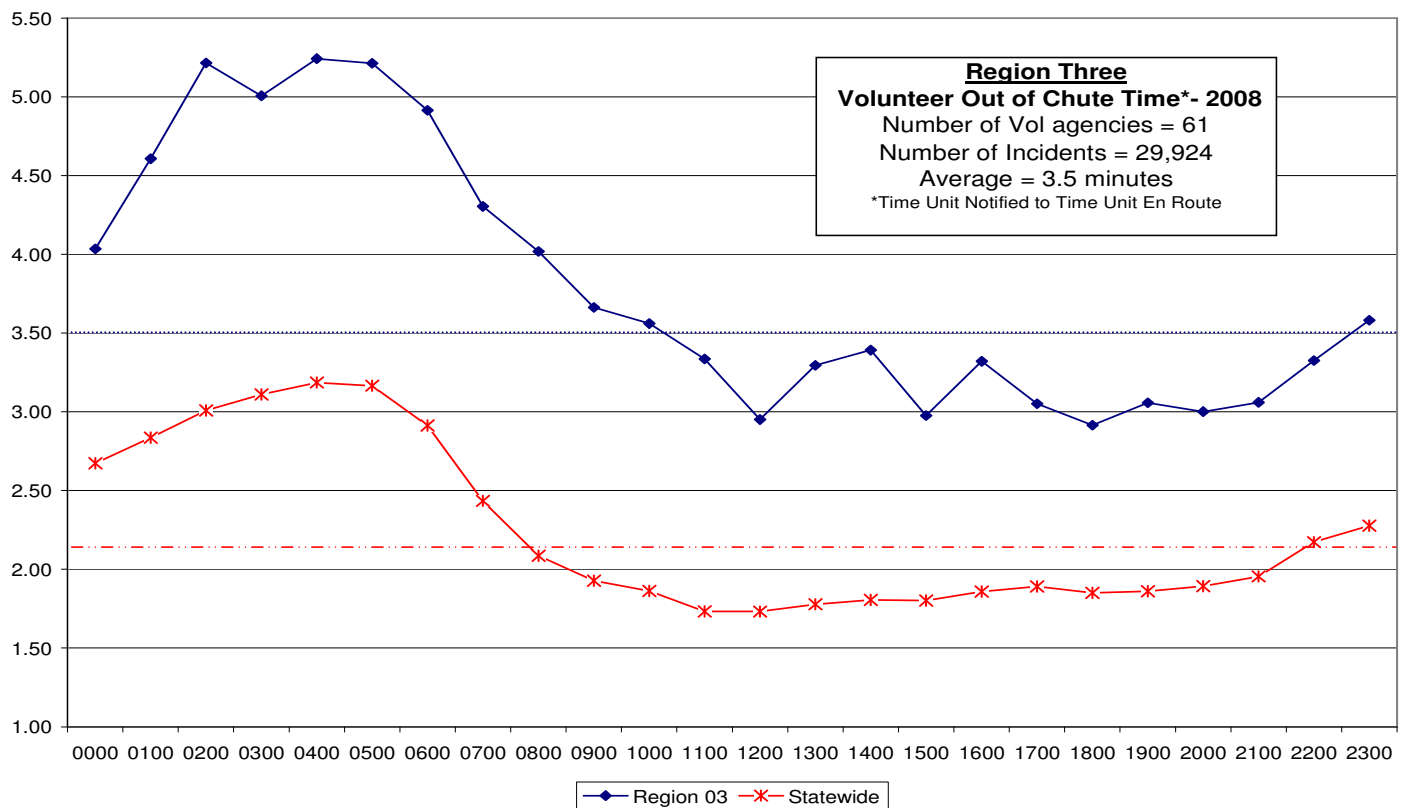
	<i>All ages *</i>			<i>Pediatric</i>			<i>Adult</i>		
	N=	# with pain Rx	% with pain Rx	N=	# with pain Rx	% with pain Rx	N=	# with pain Rx	% with pain Rx
Fractures									
Ohio	9,788	2,119	21.65%	963	208	21.60%	8,358	1,851	22.15%
Region 1	1,524	241	15.81%	186	25	13.44%	1,315	212	16.12%
Region 2	1,290	330	25.58%	117	20	17.09%	1,111	293	26.37%
Region 3	436	94	21.56%	45	16	35.56%	380	77	20.26%
Region 4	756	213	28.17%	64	21	32.81%	659	190	28.83%
Region 5	1,597	469	29.37%	200	66	33.00%	1,233	389	31.55%
Region 6	771	146	18.94%	63	15	23.81%	675	131	19.41%
Region 7	768	101	13.15%	57	4	7.02%	700	97	13.86%
Region 8	1,244	179	14.39%	111	12	10.81%	1,094	164	14.99%
Region 9	1,105	305	27.60%	106	25	23.58%	955	266	27.85%
Region 10	297	41	13.80%	14	4	28.57%	236	32	13.56%
Dislocations									
Ohio	3,026	886	29.28%	259	76	29.34%	2,645	790	29.87%
Region 1	561	90	16.04%	55	8	14.55%	494	81	16.40%
Region 2	385	136	35.32%	23	12	52.17%	339	117	34.51%
Region 3	69	35	50.72%	9	10	111.11%	56	23	41.07%
Region 4	216	72	33.33%	12	4	33.33%	196	67	34.18%
Region 5	541	217	40.11%	49	11	22.45%	455	204	44.84%
Region 6	146	41	28.08%	15	8	53.33%	124	31	25.00%
Region 7	199	46	23.12%	21	5	23.81%	178	41	23.03%
Region 8	342	78	22.81%	30	8	26.67%	304	69	22.70%
Region 9	516	161	31.20%	43	10	23.26%	457	147	32.17%
Region 10	51	10	19.61%	2	0	0.00%	42	10	23.81%
Burns									
Ohio	1,345	328	24.39%	294	31	10.54%	1,002	290	28.94%
Region 1	308	73	23.70%	74	6	8.11%	226	65	28.76%
Region 2	149	23	15.44%	38	5	13.16%	107	18	16.82%
Region 3	32	9	28.13%	7	2	28.57%	22	7	31.82%
Region 4	58	18	31.03%	11	0	0.00%	45	18	40.00%
Region 5	228	74	32.46%	46	9	19.57%	169	62	36.69%
Region 6	94	33	35.11%	15	1	6.67%	77	32	41.56%
Region 7	86	23	26.74%	12	1	8.33%	71	22	30.99%
Region 8	126	23	18.25%	28	1	3.57%	92	21	22.83%
Region 9	243	43	17.70%	59	6	10.17%	179	36	20.11%
Region 10	21	9	42.86%	4	0	0.00%	14	9	64.29%

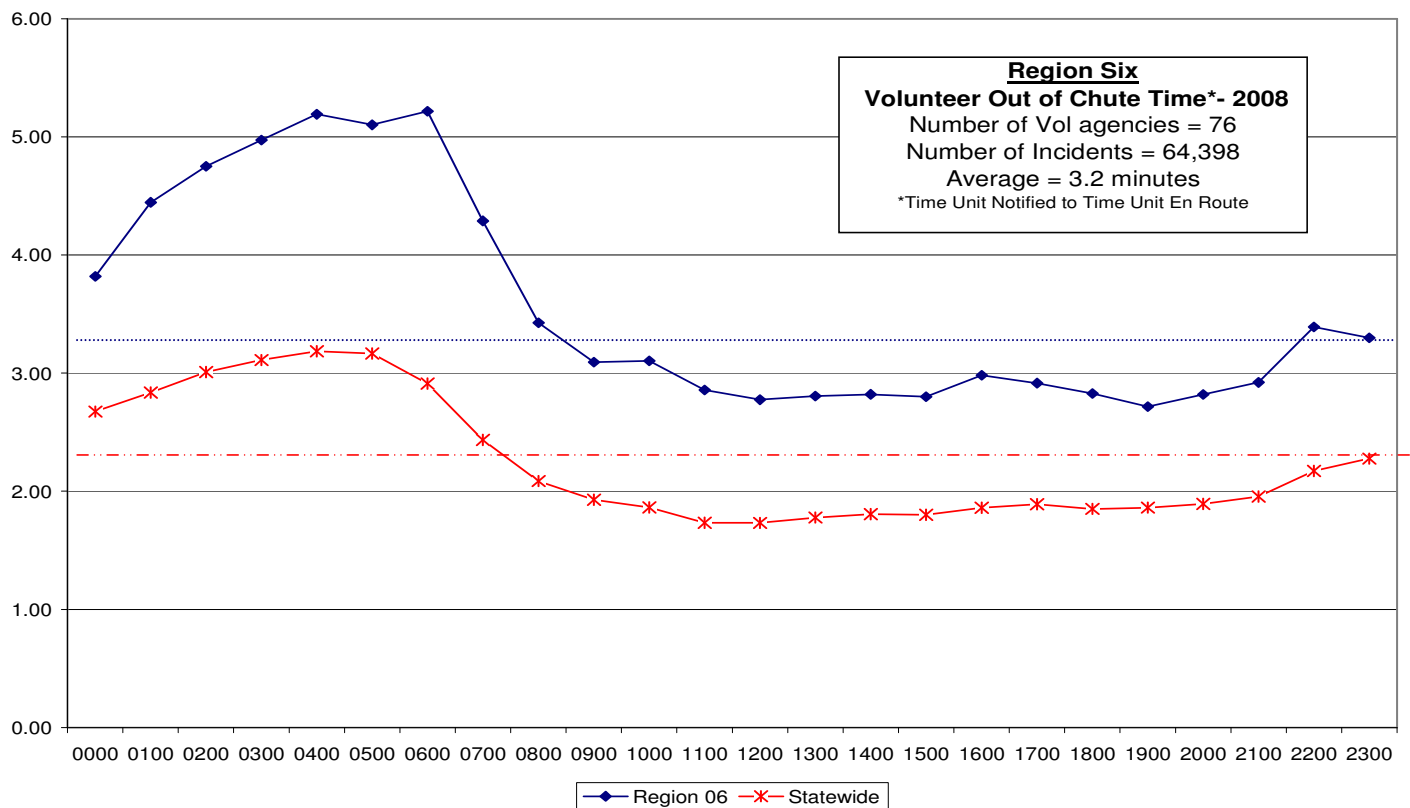
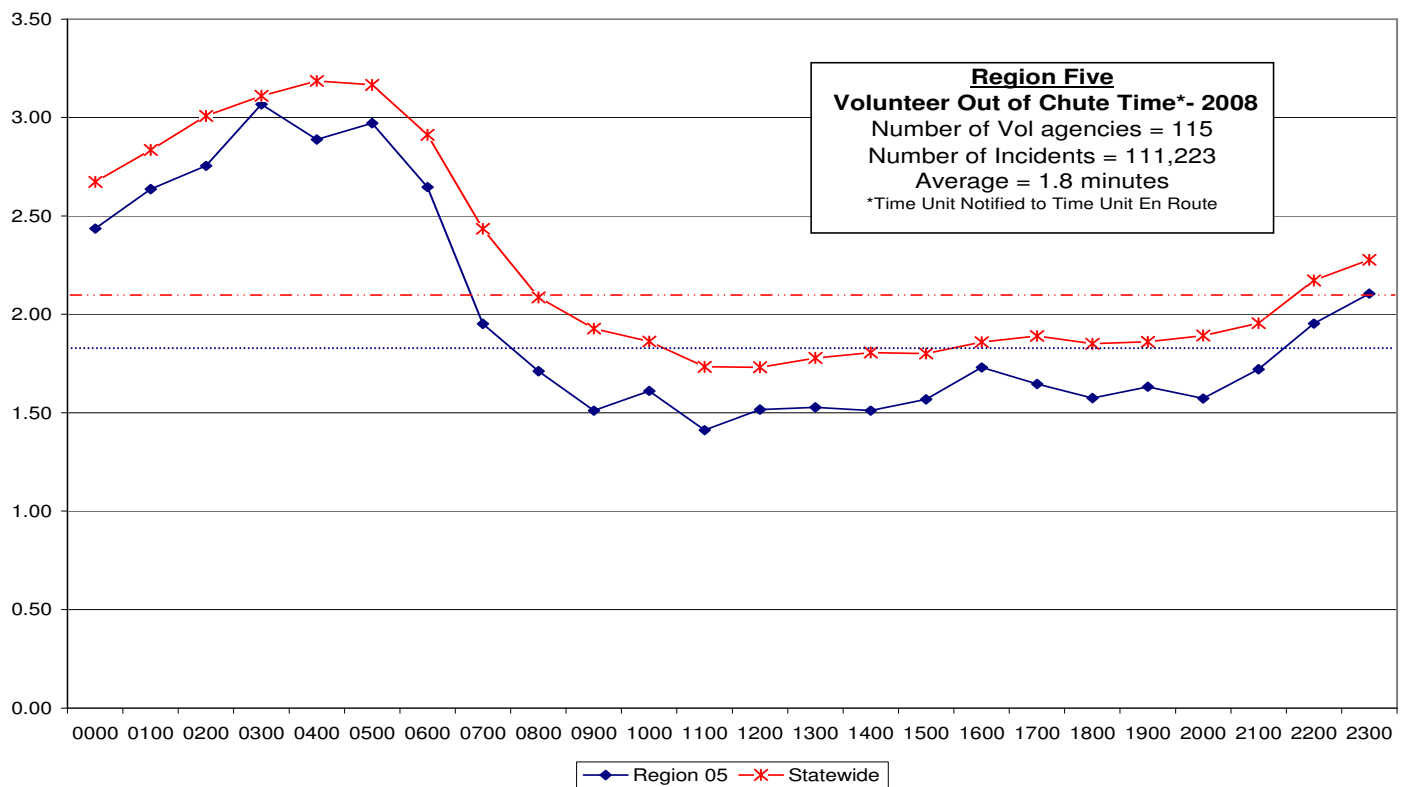
* Not all patients have a calculable age, therefore pediatric statistics plus adult statistics will *not* equal "All".

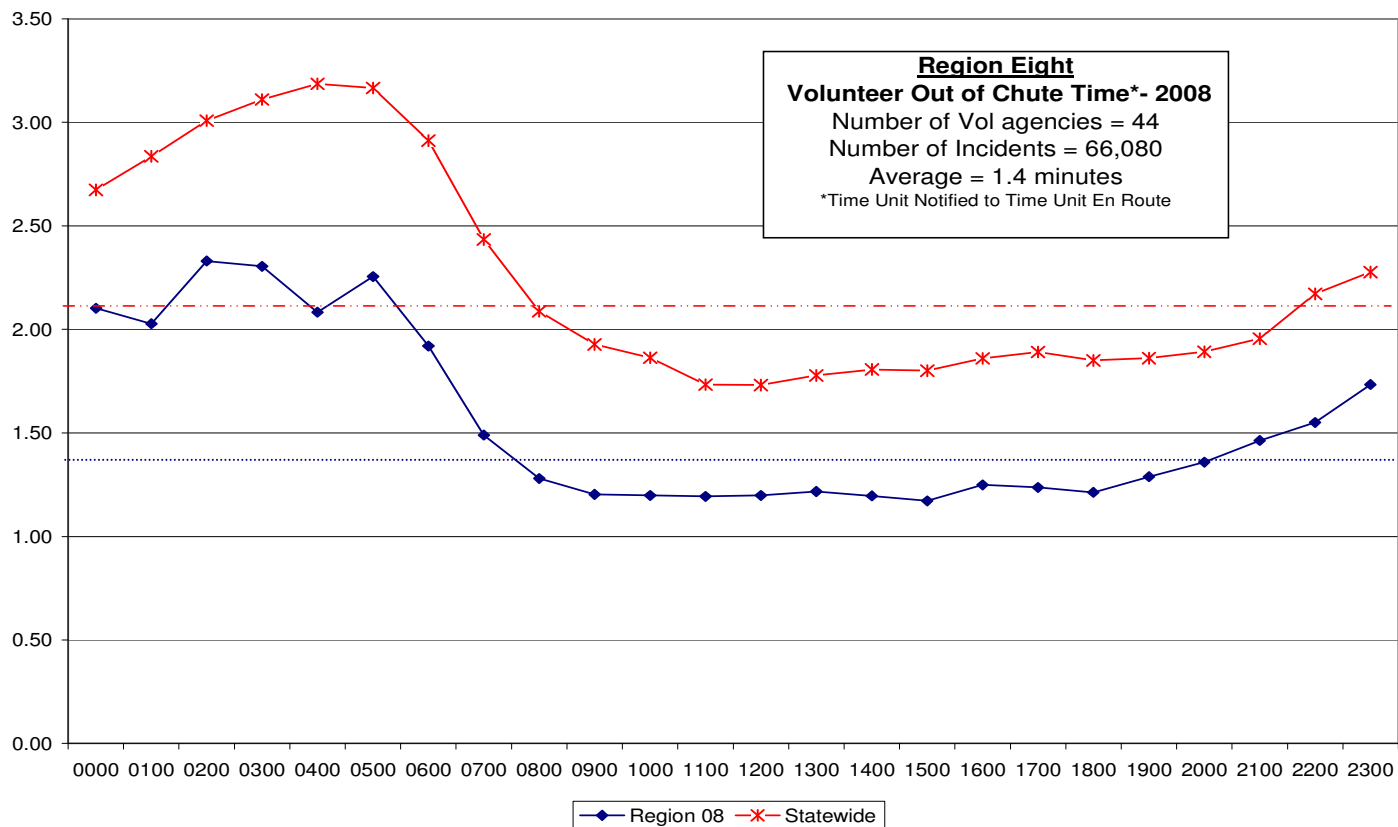
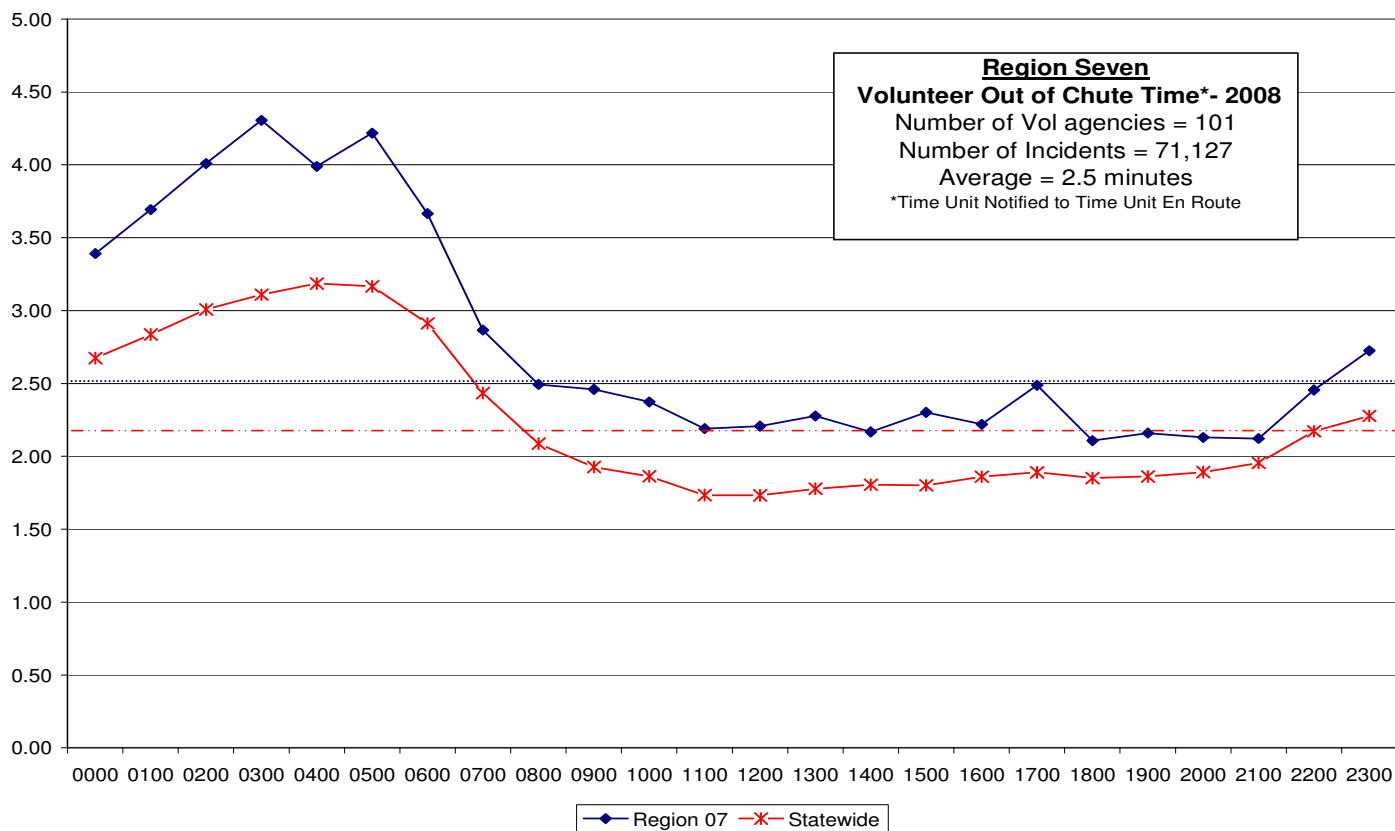
Performance Statistics

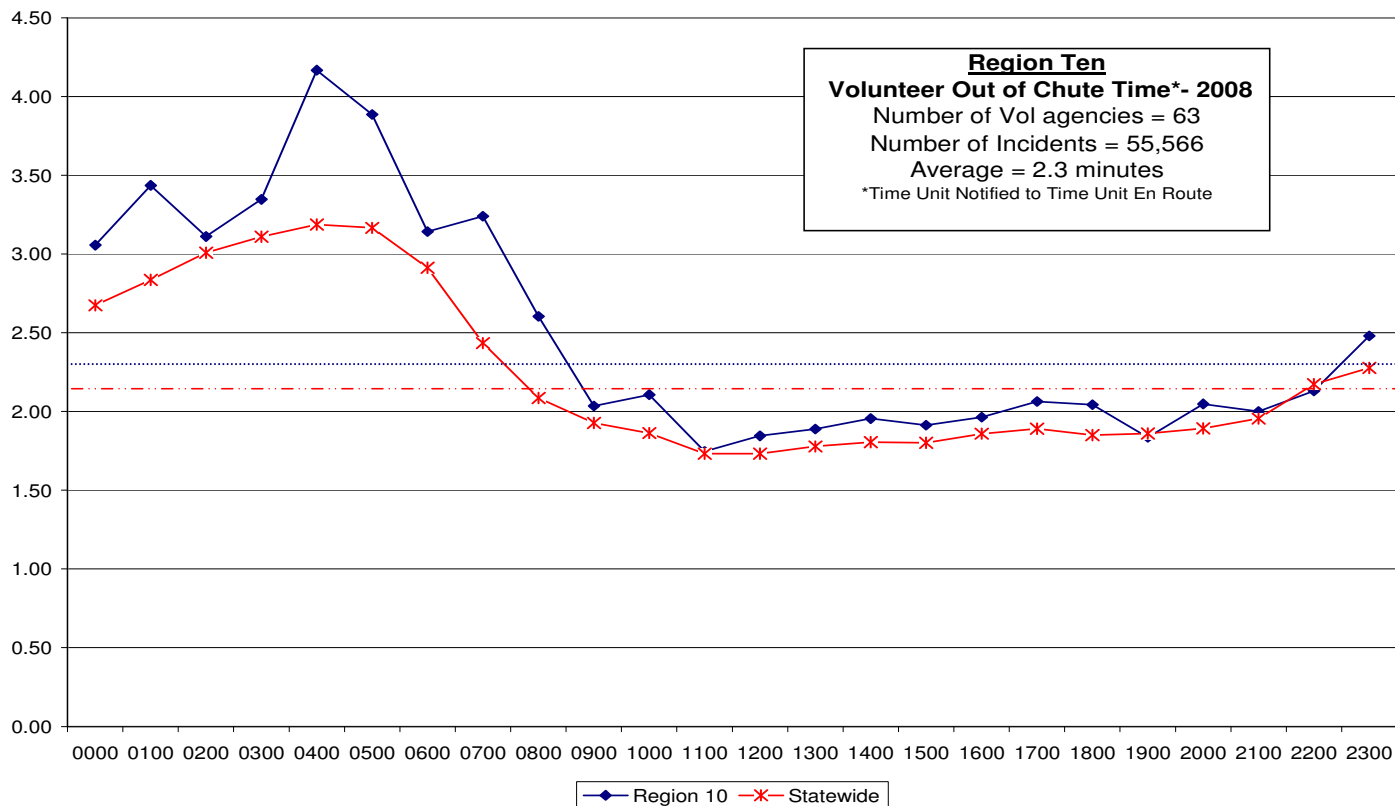
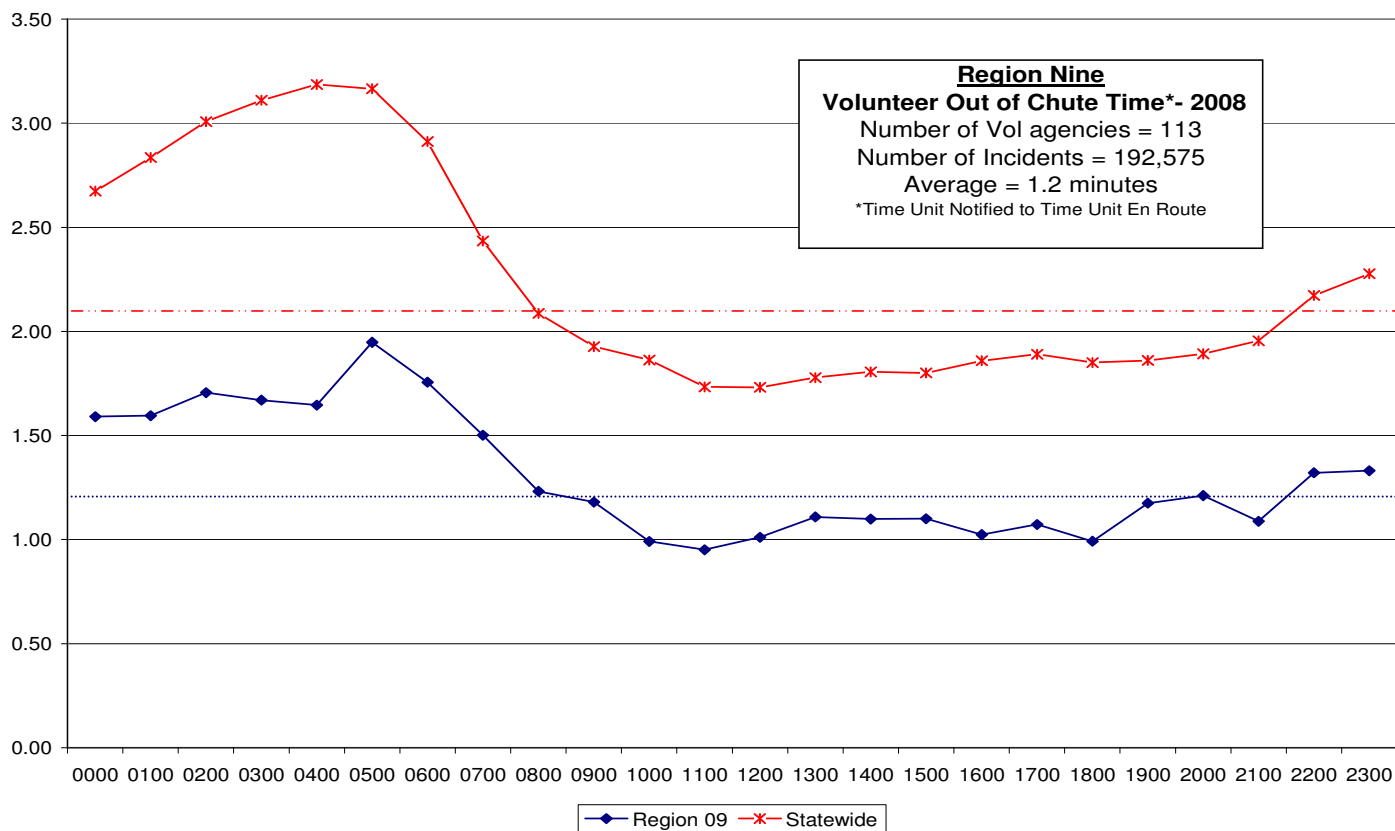
Volunteer Out of Chute Time













Evaluation of Pediatric Trauma Triage Criteria for Highest Activation

Final Report for Ohio EMS Injury Prevention Research Grant EMS Funding Priority 4 2010-2011

Principal Investigator: Richard A. Falcone, Jr., M.D., M.P.H

Co-Investigators:

Lynn Haas RN, MSN, CNP
Suzanne Moody, MPA
Margie Koehn, CSTR
Taunya Kessler CCS

Data Contributors:

Anne Moss RN, Akron Children's Hospital
Christine McKenna RN, Children's Hospital of Pittsburgh
Cinda Werner RN, Children's Hospital of Wisconsin
Lisa Schwing RN, Dayton Children's Hospital
Deb Brown RN, Dell Medical Center of Central Texas
Kathy Haley RN, Nationwide Children's Hospital
Laura Cizmar RN, Rainbow Babies & Children's
Rochelle Armola RN, Toledo Children's Hospital

Acknowledgements

We would like to acknowledge the nine hospitals that actively participated in this study and commend them on their willingness and dedication to help improve care for the injured child.

Table of Contents

Information / Qualifications: Principal and Co-Investigators.....	Pg. 3
Executive Summary.....	Pg. 4
Review of Literature.....	Pg. 6
Methodology.....	Pg. 8
Analysis of Research Findings:	
Patient Characteristics.....	Pg. 10
Over-Triage and Under-Triage: Relationship of Criteria with Resources...	Pg. 15
Predictive Value of Six ACS COT Mandated Criteria.....;	Pg. 17
Under-Triage.....	Pg. 20
Discussion.....	Pg. 21
Challenges / Limitations.....	Pg. 27
Conclusion.....	Pg. 28
References.....	Pg. 29
Appendix.....	Pg. 31

Information /Qualifications: Principal and Co-Investigators

All investigators are members of Trauma Services within the Division of Pediatric and Thoracic Surgery at Cincinnati Children's Hospital Medical Center.

The principal investigator, **Richard A. Falcone, Jr., M.D., M.P.H.**, is the Director Trauma Service at Cincinnati Children's Hospital. His extensive knowledge and experience in pediatric trauma management, along with Dr. Falcone's Masters of Public Health from Harvard University specializing in Outcomes Research, provides a strong foundation for development of quality research studies.

Lynn Haas RN, MSN, CNP has been the Trauma Program Manager at Cincinnati Children's Hospital for the past 21 years. Ms. Haas has extensive experience as a pediatric trauma program manager and has been involved in numerous performance improvement initiatives and clinical research projects.

Suzanne Moody, MPA is the Research Coordinator at Cincinnati Children's for the past year. Her previous experience includes trauma project management at the Greater Cincinnati Health Council.

Margie Koehn, CSTR, has had oversight over the trauma registry at Cincinnati Children's for the past 18 years and is a recognized expert in trauma data management. Ms. Koehn is a member of the Ohio Trauma Registry Advisory Subcommittee (TRAS) and past president of the Ohio Alliance of Trauma Registrars (AOTR). Her expertise assisted in the development of the web-based database and exporting of data.

Taunya Kessler, CCS is the current Trauma Registrar at Cincinnati Children's and has extensive knowledge in coding and quality monitoring of registry data. Ms. Kessler is the current vice-president of the AOTR and a member of the Tri-State Trauma Coalition (TSTC) Performance Improvement Committee.

Executive Summary

The goal of this study was to prospectively evaluate the correlation of triage criteria, including those mandated by the ACS, with the need for immediate resources provided by a trauma resuscitation team. Two consensus lists were developed: 1) pre-hospital activation criteria and 2) Emergency Department (ED) high level resources requiring full team trauma activation. Inclusion criteria included any traumatically injured child evaluated by the Trauma Service in the ED who met either an activation criterion or used a specific resource. Drowning and suffocation victims were excluded.

A total of 656 patients were entered into this study from 9 verified Level I / II pediatric trauma centers over a one-year study period. Forty-five percent (N=296) of the patients utilized at least one high level resource. Gun-shot to the abdomen (92%), blood given prior to arrival (83%), traumatic arrest (83%) and tachycardia with poor perfusion (83%) were most predictive of utilizing a high level resource at least once. Definitions of appropriate triage (i.e. criteria with ED resource use), over-triage (i.e. criteria without ED resource use) and under-triage (i.e. no criteria with ED resource use) were developed and were the basis for the study conclusions. Of the 656 enrolled patients, 55% would have been over-triaged while 9% would have been under-triaged.

All activation criteria were ordered in priority according to the percentage of time a resource was utilized. Over-triage and under-triage were re-calculated with the sequential addition of one criterion. After the addition of the 9th criteria, there is a point where the addition of more criteria only increases the over-triage rate but has minimal impact on the under-triage rate. The six mandated ACS COT criteria (ACS-6) were evaluated for effectiveness. Within the study population, 350 (53%) patients met at least one ACS-6 criteria. Utilizing the ACS-6, 24% would have been over-triaged and 16% would have been under-triaged. It is significant that the under-triage is only 16% with the use of 6 criteria but only decreases to 9% with the presence of all 23 criteria. Overall, the ACS-6 performed well in the context of over-triage and under-triage rates. The inclusion of additional criteria had little impact on under-triage but instead, continued to increase the over-triage rate.

On specific analysis, five of the 6 ACS-6 criteria were consistently listed within the top 10 criteria within the ranking system that was utilized for this study. Only “GCS deterioration by 2” was consistently ranked lower than the other 5. With the deletion of the “GCS deterioration by 2” criterion, the addition of “tachycardia / poor perfusion” and “40 ml / kg bolus prior to arrival” (i.e. ACS-7) could potentially limit resource utilization for pediatric trauma resuscitations while continuing to maintain the acceptable over-triage and under-triage rates.

In conclusion, highly sensitive pediatric triage criteria are needed in order to appropriately initiate the highest level of trauma team activation. The ACS-6 mandated criteria performed well when evaluating this by over-triage and under-triage rates of the highest injured pediatric patients. It is generally accepted that some amount of over-triage is necessary to minimize the risk of under-triage. The inclusion of additional criteria beyond the ACS-6 had a small impact on under-triage yet continued to increase the over-triage rate significantly. Small revisions in the ACS-6 criteria for the pediatric population may potentially have some benefits.

Introduction

Verified trauma centers utilize the trauma resuscitation team concept to provide immediate care to the severely injured patient. The size and composition of a resuscitation team vary per hospital with some basic mandated components. In order to increase efficiency, most trauma centers utilize a tiered trauma resuscitation system, matching the personnel and resources of the resuscitation team to the immediacy of the patient's need for care. In many hospitals across the nation, a three-tiered system exists - highest level of activation for the most critical, mid-level activation for moderate injuries, and lowest tier evaluation for those with more minor injuries. Resources vary at each level, increasing as the level of activation increases.

The goal of distributing scarce resources in a safe and cost-effective manner is achieved through appropriate triage criteria for each tier of the trauma resuscitation. In May 2002, the Committee on Trauma of the American College of Surgeons (ACS COT) mandated 6 triage criteria for the highest level of activation for both adult and pediatric trauma centers.[1] Trauma centers were then encouraged to expand their triage criteria, eventually leading to each hospital developing their own unique grouping of activation criteria. A variety of triage criteria have been proposed and adopted, but a national consensus does not exist for the highest level of activation. The goal of this study was to prospectively evaluate the correlation of triage criteria, including those mandated by the ACS, with the need for immediate resources provided by a trauma resuscitation team. As resource utilization and acuity are highest for the most critically injured child, the findings of this study take an important first step toward improving the quality and timeliness of care in a fiscally responsible manner.

Review of Literature

It is estimated that 10-15% of traumatically injured children have life threatening injuries that demand a rapid and systematic approach to their treatment.[2] Even more significant is that the presence of a trauma resuscitation team can decrease mortality by 25% to 30% for the seriously injured child. [2]

With this knowledge, it remains imperative that accurate field and hospital pediatric triage criteria are defined and utilized for the highest level of trauma resuscitation activation.

Over the past decade, the benefits of tiered trauma resuscitation have included improved staff utilization and reduced costs while maintaining favorable outcomes in the area of safety, morbidity, and mortality.[3-15] Even with this positive clinical benefit, trauma clinicians quickly realized that the presence of a trauma resuscitation team in the Emergency Department consumed many hospital resources. In 2002, the ACS COT delineated six minimum triage criteria (ACS-6) for the initiation of adult / pediatric highest activation trauma resuscitations.[1] These include the following:

- age-specific hypotension
- respiratory compromise or obstruction
- transfer patients from another hospital who are receiving blood
- gunshot wound to the abdomen, neck or chest
- Glasgow Coma Scale (GCS) score of ≤ 8
- deterioration of Glasgow Coma Scale score by 2

In 2006, the ACS COT updated their publication “Resources for Optimal Care of the Injured Patient” to include these 6 triage criteria as requirements, along with the presence of key individuals and physician response time for highest level trauma activations.[1] After meeting these basic requirements, each trauma hospital can expand beyond these criteria to fit its needs. However, along with this freedom comes inconsistency, as each hospital has different triage criteria for the highest level of trauma team activation.

Trauma researchers now suggest that some common trauma triage criteria, currently utilized across the nation, can be eliminated so as to substantially decrease over-triage, or false positive results, without increasing under-triage, or false negatives results.[14, 16] More specifically, over-triage refers to unnecessary mobilization of a trauma resuscitation team for patients without significant injuries. When over-triage occurs, this leads to increased stress on resources and inefficiency. Conversely, under-triage refers to not mobilizing adequate resources available to treat an injured child. Under-triage affects the overall safety of the injured child as life-threatening injuries can initially go undetected, possibly leading

to a negative outcome. It is generally accepted that some amount of over-triage is necessary and expected in order to minimize the risk of under-triage.

In order to minimize both over and under triage it is crucial to carefully exam triage criteria for their effectiveness. Mechanism of injury in isolation as a criterion has not been found to be indicative of the need for a resuscitation team.[6, 11, 12, 17-25] The only specific mechanism of injury that does yield a high sensitivity as a criterion is a gun-shot wound to the torso or head.[12, 19, 24-26] Combining parameters and adding a scoring system has demonstrated high sensitivity / specificity yet has proven to be cumbersome to complete during a critical and stressful situation.[14, 16, 22, 27-30]

Recent studies indicate that physiologic parameters are strong indicators for when to activate the highest activation within a tiered system.[12, 14, 19, 30, 31] Examples of such physiologic parameters include respiratory rate [31, 32], intubation status [31, 33], Glasgow Coma Score (GCS) [12, 14, 17, 31, 34, 35], heart rate [36-38], and systolic blood pressure [13, 20, 31, 33, 39], each of which has its own limitations. Most of these studies have been completed in the adult population, with only a few being pediatric specific.[22, 40, 41]

A study completed by Steele et al. did not support the obligatory use of the six required ACS COT criteria, either for adults or pediatrics patients; [42] however, these criteria continue to be mandated for adult and pediatric trauma centers. Additional difficulty exists as many individuals question the use of adult triage criteria for children. A study by Phillips et al. concluded that utilization of adult triage criteria for children leads to high under-triage rates.[40] Conversely, unnecessary over-triage has the potential to divert time and resources away from other sick children in the Emergency Department. Therefore, in order to provide optimal care, it is extremely important to develop highly sensitive triage criteria to ensure all pediatric trauma patients who require expeditious trauma care receive it with maximum efficiency, given the type and severity of the injury.

Methodology

This prospective multi-center observational study involved the following nine verified Level I / II pediatric trauma centers: Cincinnati Children's Hospital, Akron Children's Hospital, Children's

Hospital of Pittsburgh, Children's Hospital of Wisconsin, Dayton Children's Hospital, Dell Children's Medical Center of Central Texas, Nationwide Children's Hospital, Rainbow Children's Hospital, and Toledo Children's Hospital. The study was approved by the Institutional Review Board (IRB) of each participating hospital.

Highest activation trauma triage criteria from participating pediatric trauma centers were aggregated and grouped by criteria. Standardization of criteria was required for the following: 1) degree of body surface area for burns with exclusion of location; 2) location of amputation and decision to exclude digit amputations; 3) inclusion of paralysis and / or motor deficit within the suspected spinal cord injury category; and 4) decision regarding age appropriate blood pressure limits. A Delphi method of reaching consensus was then utilized, obtaining expert opinions from all Ohio pediatric Trauma Directors and Trauma Program Managers. The initial list, which contained 34 criteria, was distributed to all members who then ranked each activation criteria from highest to lowest priority. After the first round of voting, the following 4 low priority criteria were subsequently eliminated: positive loss of consciousness (LOC), high voltage electrical contact, confirmed intracranial bleed with GCS \leq 12, and LOC with GCS \leq 12. Scores were reviewed and then re-ranked by the expert consensus panel. After the second round of voting, the criterion of "witnessed pedestrian run over" was also eliminated, taking the final consensus list to 29 criteria. (**Appendix 1 – hereinafter designated as "Criteria"**) Interestingly, discussion occurred regarding eliminating the lowest two criteria – "death of a same vehicle occupant" and "ejection from vehicle". However, as these criteria were thought to occur frequently on a national level, it was decided to include them within the study and analysis.

As with the activation criteria, a Delphi method of prioritization was utilized for development of a consensus list of Emergency Department (ED) procedures that the panel of experts believed should correlate with the highest trauma team activation. An initial list of 14 procedures was generated and standardized. After two rounds of prioritization, emergency tracheostomy and emergent transfer to PICU were eliminated from the procedure list. Based on the second review, a final list of 12 ED procedures was generated. (**Appendix 2 – hereinafter designated as "Resource"**)

For inclusion in this study, traumatically injured children evaluated by the Trauma Service at an American College of Surgeon's or state verified pediatric trauma center were screened. Only those patients that met any criteria in **Appendix 1** or **Appendix 2** and were evaluated in the Emergency Department were included in the study.

Children who were pronounced dead in the Emergency Department due to a traumatic injury were included, while children who were victims of drowning and suffocation were excluded from the study.

Once patient eligibility was established, data was collected from all

nine pediatric trauma centers and entered into a password protected on-line data collection program.

Study patients were able to meet multiple activation criteria and utilize multiple resources. Additional demographic information and specific clinical outcomes were obtained from each hospital's Trauma Registry.

Statistical analysis was performed for the continuous variables (i.e. age, ISS, time to OR transfer and time to ICU transfer) using the Wilcoxon Rank Sum test. For the categorical variables (i.e. mortality, ED disposition, and discharge to rehab) the two groups were compared using the Fisher's Exact test. All tests were conducted at the two-sided 5% level of significance.

Analysis of Research Findings

Patient Characteristics

A total of 656 patients were entered into this study from 9 verified Level I / II pediatric trauma centers over a one-year study period. Percentage of patients per hospital varied from 4% - 21%. (Figure 1) In order to assess for hospital bias, the percentage of study patients to overall admitted injured patients was calculated. (Table 1)

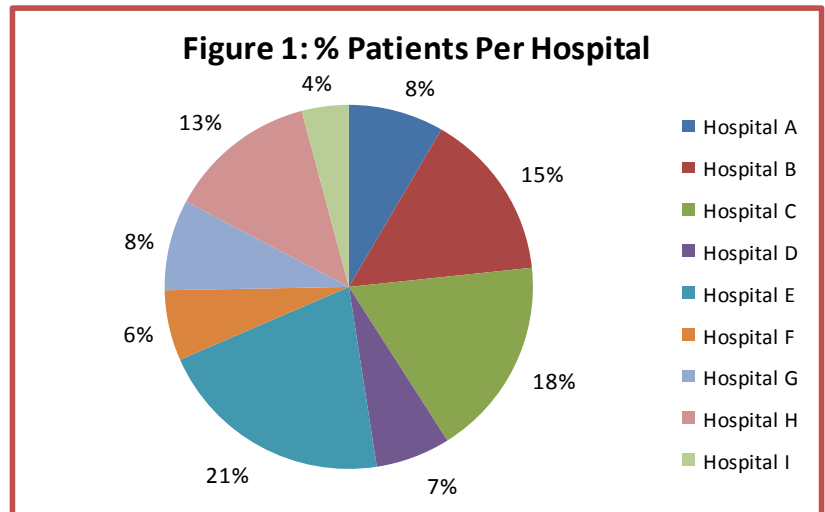


Table 1: Patient Volume from Participating Hospitals

	Level of Pediatric Verification	# Patients in Study	# Trauma Registry Patients during Study Period	% of Total Patients Entered in Study
Hospital A	II	55	1285	4.3%
Hospital B	I	98	1185	8.3%
Hospital C	I	116	1719	6.7%
Hospital D	I	43	430	10.0%
Hospital E	I	137	1982	6.9%
Hospital F	II	41	614	6.7%
Hospital G	I	53	714	7.4%
Hospital H	I	86	1416	6.1%
Hospital I	I	27	377	7.2%
TOTAL		656		Avg = 7.1

The average percentage of injured pediatric patients admitted to the study was 7.1% with a range between 4.3% - 10.0% for the nine participating hospitals. As to be expected, hospitals with larger overall injured patients submitted more

patients to the study; however, percentages were fairly consistent.

Of these 656 patients, 72 died (11%), with 24 patients (4%) dying during resuscitative measures in the Emergency Department (ED). Median age was 8.1 years with a median ISS of 14.0. The most frequent ED Disposition was PICU (43%); however, a significant population (22%) went directly from the ED to the Operating Room (OR). Seventy four patients (11%) ultimately required an in-patient rehabilitation admission. (Table 2)

Table 2: Demographic Information on Study Population

	N	Mean	Median		N	%
Age	656		8.1	Mechanism of Injury		
ISS	656		14.0	MV-occupant	153	23.3
Time to OR (min)	147		74.6	Falls	88	13.4
Time to ICU (min)	284		92.7	NAT / abuse	66	10.1
	N	%		Struck by/against	63	9.6
Activation Status				MV-pedestrian	39	6.0
Highest	405	61.7		Gun-shot	33	5.0

Mid	162	24.7		BB	29	4.4
None	89	13.6		Sports	21	3.2
	N	%		Bike	16	2.4
ED Disposition				Fire/flames	13	2.0
PICU	284	43.3		MV-bike	13	2.0
Floor	154	23.5		Other	122	18.6
OR	147	22.4			N	%
Morgue	24	3.7		Mortality	72	11.0
Other	47	7.2		D/C to Rehab	74	11.3

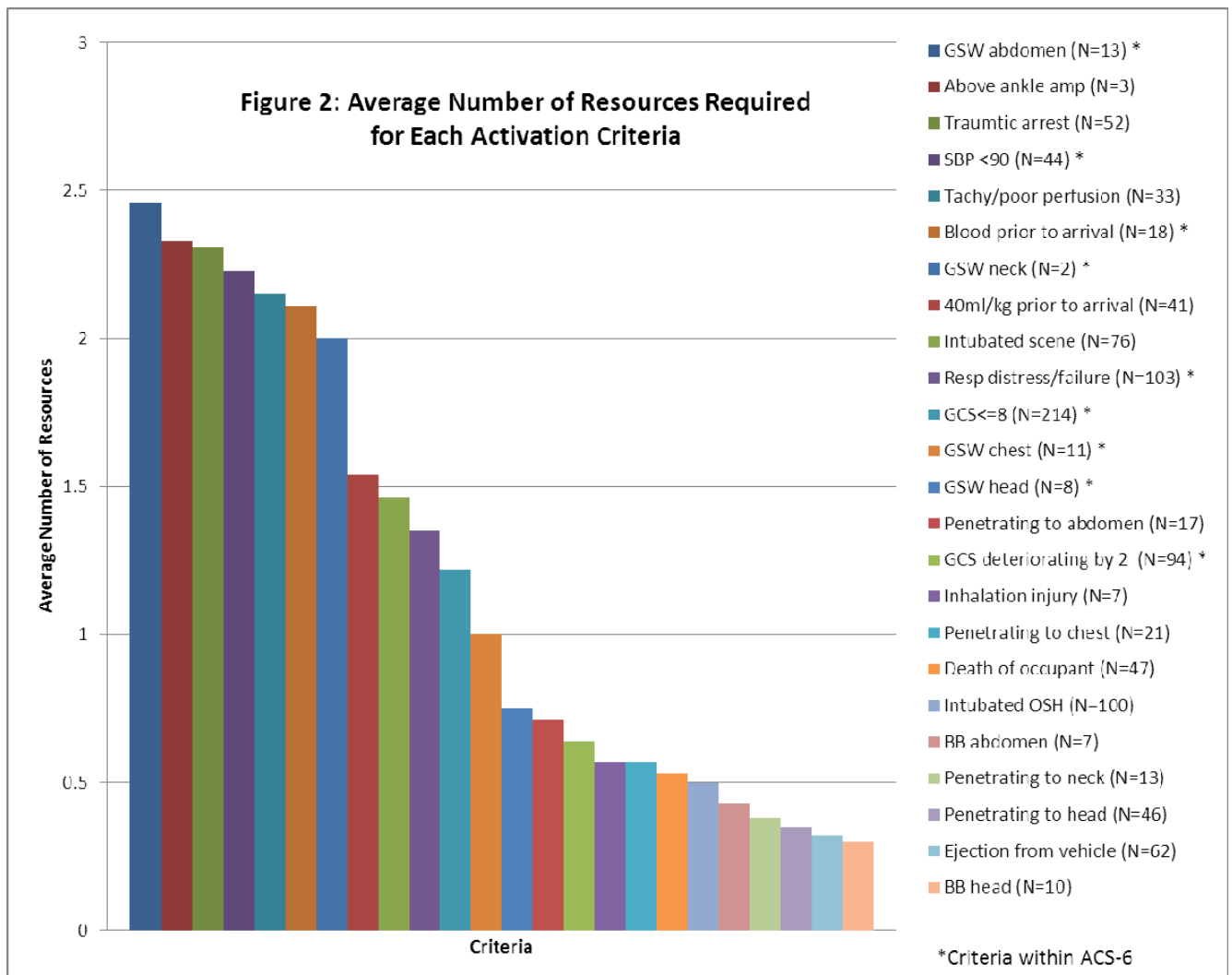
Of the 656 patients, 596 (91%) met at least one triage criterion, while 255 (43%) met 2 criteria and 119 (20%) met three or more criteria. The most common criterion was GCS \leq 8 (N=214), followed by respiratory distress (N=103), intubated at outside hospital, (N=100) and penetrating non gun-shot (N=97). Of the 656 patients, 296 (45%) utilized at least one high level resource (range 1-7) during the ED resuscitation. Of those patients that required a resource, 202 (68%) used 1 resource, 70 (24%) used 2-3 resources while 24 patients (8%) used 4-7 resources. The most frequent ED resource utilized was intubation / re-intubation (N=115), blood administration (N=67), and \geq 40 ml / kg fluid bolus after patient arrival (N=63). The resource procedure of pericardiocentesis was not utilized for any patients in this study. (Table 3)

Table 3: Frequency of High Level ED Resources

Resources	# of Occurrences	Frequency
Intubation / Re-intubation	115	17.5%
Blood administration	67	9.9%
Fluid bolus: \geq 40 /kg after arrival	63	9.6%
Time to OR: 45 – 90 min after arrival	62	9.5%
Time to OR: < 45 min after arrival	50	7.6%
CPR	38	5.8%
Central line	32	4.9%

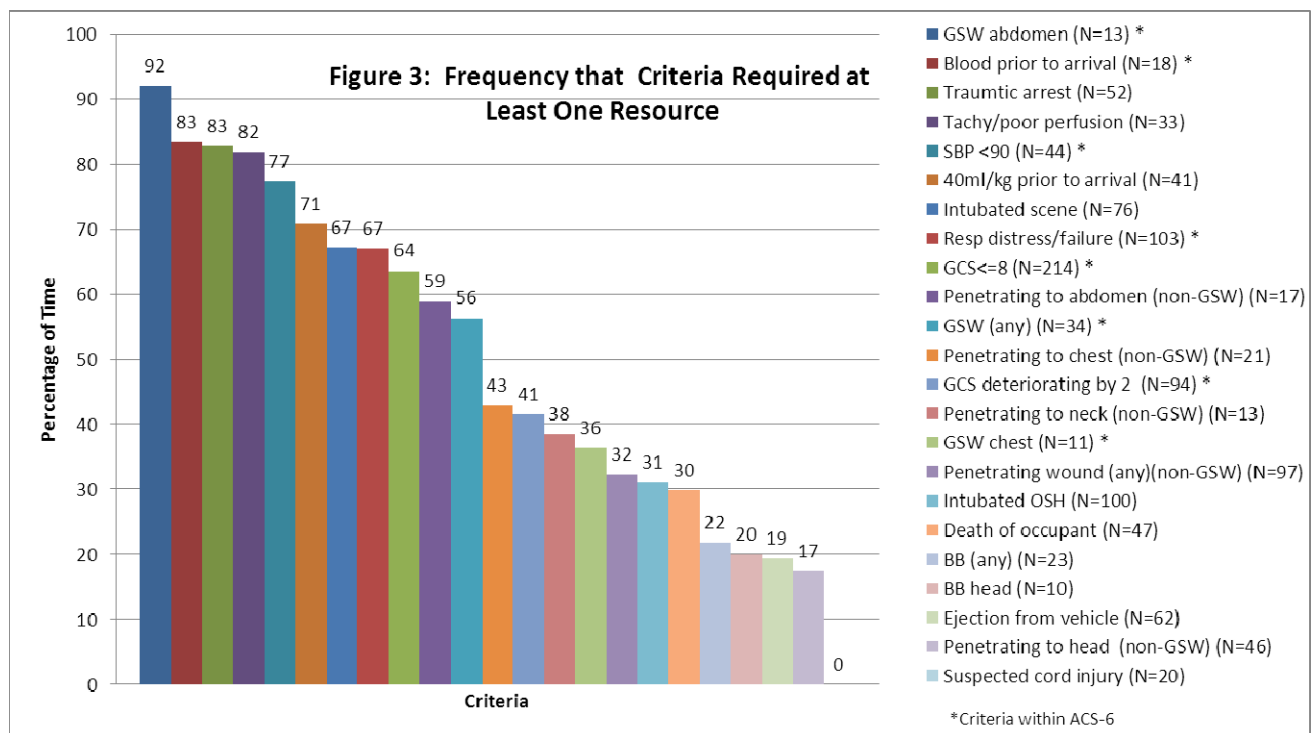
IO insertion	22	3.4%
Chest tube insertion	21	3.2%
Needle decompression	6	0.9%
Open thoracotomy	3	0.5%

For each criterion, the average number of resource utilization was calculated. The criterion of gun-shot to the abdomen utilized the most resources with an average of 2.46 resources per occurrence, followed by above-the-ankle amputation (2.33 resources), and traumatic arrest (2.31 resources). Seven activation criteria averaged more than 2 resources while an additional 5 criteria averaged at least 1 resource per occurrence. (Figure 2)

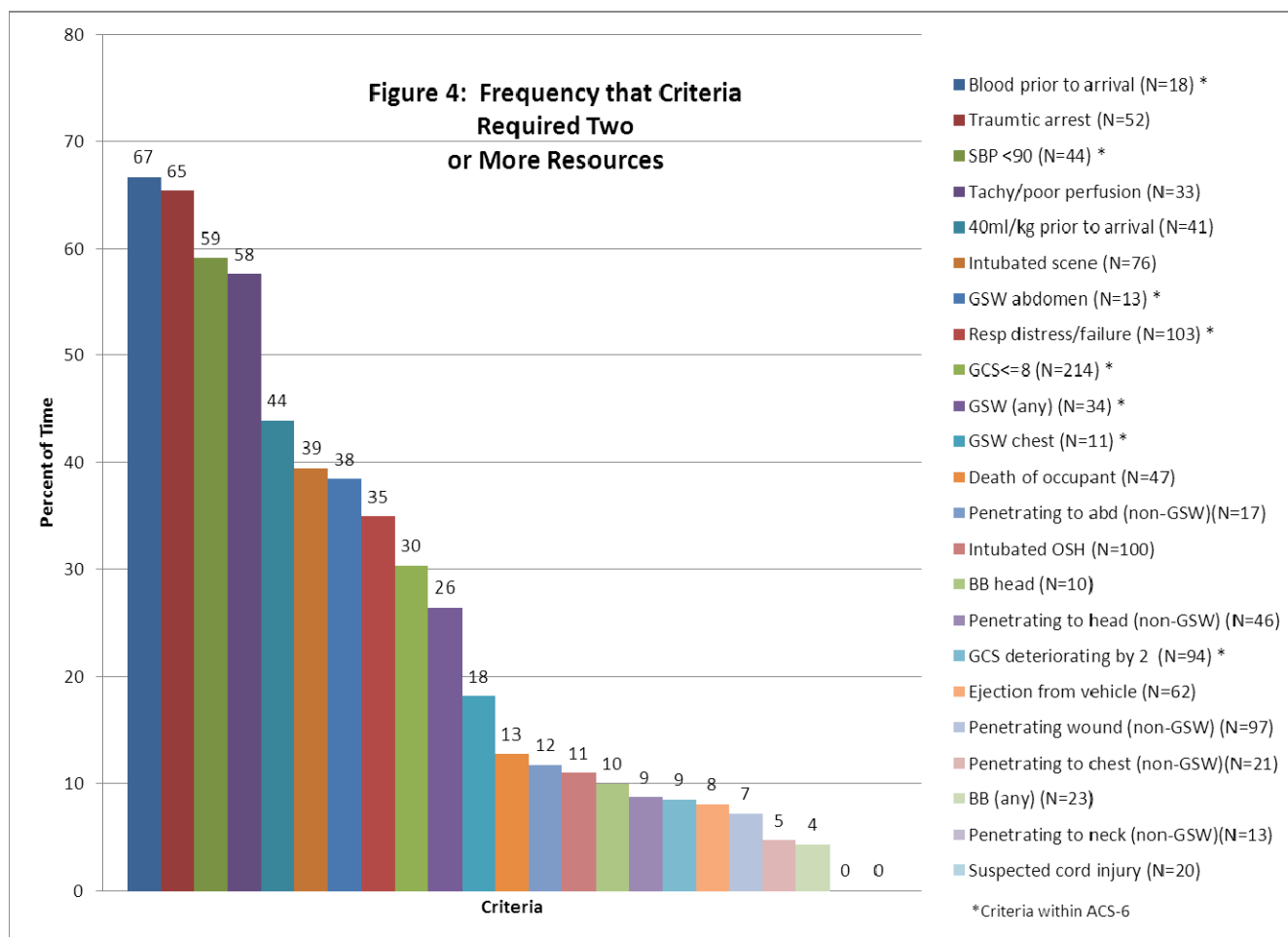


In this study population, there were certain activation criteria which occurred infrequently. These small sample sizes limited the validity of study conclusions related to these criteria. Therefore, criteria which contained less than 5 patients, such as above wrist amputation (N=0) and above ankle amputations (N=3), were excluded from further analysis. BB chest (N=4), BB neck (N=2), and gun-shot neck (N=2) were either grouped within the “BB any” or “GSW any” category.

Among criteria with more than 5 patients, gun-shot to the abdomen (92%), blood given prior to arrival (83%), traumatic arrest (83%), and tachycardia with poor perfusion (83%) were most predictive of utilizing a high level resource at least once. Eleven of the 23 criteria required at least 1 resource 50% of the time. Twenty patients with suspected spinal cord injury did not use a high level ED resource in any circumstance. (Figure 3)



The most frequent activation criteria that required two or more resources was blood prior to arrival (67%), followed by traumatic arrest (65%), age appropriate SBP < 90 (59%), and tachycardia with poor perfusion (59%). Overall, the top 11 activation criteria were consistent in both the single resource and the two or more resource category. (Figure 4)



Over-Triage and Under-triage: Relationship of Activation Criteria with Resource Utilization

Central to conclusions for this study is the methodology of measuring: 1) appropriate triage; 2) over-triage; and 3) under-triage. The definitions related to this study for over-triage and under-triage are specific only to high level trauma activations. Table 4 depicts how this study defines over-triage and under-triage in the context of the highest trauma activation criteria utilized and the overall study inclusion numbers within each category. Utilizing this matrix for all 656 enrolled patients, 55% (360/656) would have been over-triaged while 9% (60/656) would have been under-triaged

Table 4: Relationship of Resource Utilization vs. Activation Criteria

Activation Criteria	Resource Utilization	
	No	Yes
	No (Not in study)	Under-triage = no activation criteria but yes resource N=60
Yes	Over-triage = activation criteria met but no resource N=360	Appropriate triage = activation criteria met and yes resource N=236

For each of the 23 activation criterion with more than 5 patients, the following measures were calculated: 1) over-triage, 2) under-triage, and 3) percent of time a resource was utilized. Criteria were then ordered in priority according to the percent of time that a resource was utilized. Over-triage and under-triage were re-calculated with the sequential addition of one criterion. Using this information, the following figure depicts the relationship of over-triage and under-triage utilizing the sequential addition of criteria. (Table 5)

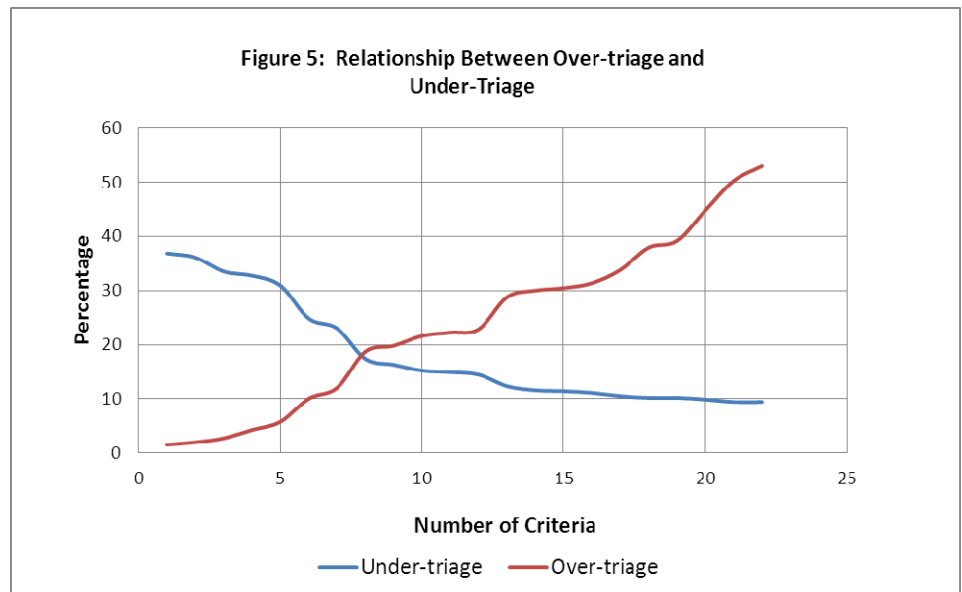
Table 5: Sequential Listing of Criteria with Over-Triage and Under-Triage

<i>Sequential Addition of Criteria</i>	Criteria (Ordered by: % Time Any Resource Utilized)	Under-triage	Over-triage	% Time Resource Utilized When Criteria Present
1	Gunshot abdomen (N=13)*	43.29	0.15	92
1-2	Traumatic arrest (N=52)	36.89	1.54	83
1-3	Blood prior to arrival (N=18)*	36.13	1.99	83
1-4	Tachy/poor perfusion (N=33)	33.54	2.74	82
1-5	SBP <90 (N=44) *	32.77	4.27	77
1-6	40ml/kg prior to arrival (N=41)	30.95	5.79	71
1-7	Resp distress/failure (N=103) *	24.85	10.06	67
1-8	Intubated scene (N=76)	23.02	12.04	67
1-9	GCS<=8 (N=214)*	17.38	18.75	64
1-10	Penetrating abdomen (non-GSW)(N=17)	16.31	19.82	59
1-11	Penetrating to chest (no-GSW) (N=21)	15.24	21.65	43
1-12	Inhalation injury (N=7)	14.94	22.26	43
1-13	BB abdomen (N=7)	14.48	22.87	43
1-14	GCS deteriorating by 2 (N=94)*	12.35	28.81	41
1-15	Penetrating to neck (non-GSW) (N=13)	11.59	30.03	38

1-16	GSW head (N=8)*	11.43	30.49	38
1-17	GSW chest (N=11)*	11.13	31.4	36
1-18	Intubated OSH (N=100)	10.52	33.84	31
1-19	Death of occupant (N=47)	10.21	37.96	30
1-20	BB head (N=10)	10.21	39.18	20
1-21	Ejection from vehicle (N=62)	9.91	44.82	19
1-22	Penetrating to head (non-GSW) (N=46)	9.45	50.3	17
1-23	Suspected cord injury (N=20)	9.45	53.05	0

*Criteria within ACS-6

An inverse relationship exists, for when the under-triage decreases; there is a concomitant increase in over-triage. (Figure 5) After the addition of the 9th criteria, the under-triage slope starts to lessen and after the addition of the 15th criteria, the under-triage curve appears to flatten out. At this point, there may be a point of diminishing return, where the addition of more criteria only increases the over-triage rate but has minimal impact on the under-triage rate.



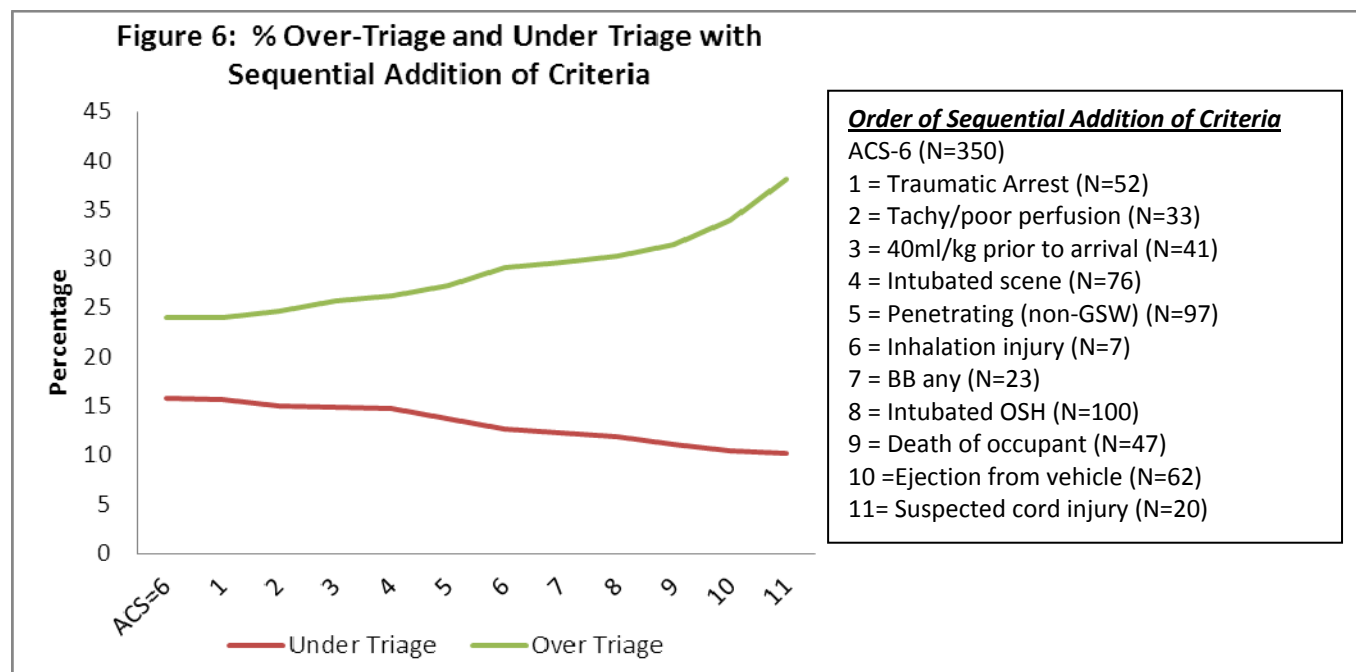
Predictive Value of Six ACS COT Mandated Criteria

The six mandated ACS COT criteria (ACS-6) for the initiation of adult / pediatric highest activation trauma resuscitations include the following: 1) age-specific hypotension; 2) respiratory compromise or obstruction; 3) transfer patients from another hospital who are receiving blood; 4) gun-shot wound to the abdomen, neck or chest; 5) Glasgow Coma Score (GCS) score of ≤ 8 ; and 6) deterioration of GCS score by 2. The category of ED discretion was not studied. All ACS-6 criteria were

included within the consensus list of criteria and specifically analyzed to compare how well they performed compared to the other consensus criteria.

Within the study population, 350 (53%) patients met at least one of the ACS-6 criteria. Utilizing only the ACS-6, 24% of patients would have been over-triaged and 16% would have been under-triaged. In order to evaluate the ACS-6 effectiveness, these six criteria were grouped together and utilized as baseline for over-triage and under-triage rate. Addition of criteria, based on the highest percent of time any resource is utilized, was then sequentially added to the ACS-6 group. With each addition of criteria, over-triage and under-triage were re-calculated and graphed. (Figure 6)

With the sequential addition of 11 criteria to the ACS-6, there is a steeper increase in over-triage with a more moderate and gradual decline in under-triage. With the addition of the first 4 criteria to the ACS-6 grouping, there is minimal change to either the over-triage or the under-triage status.



In specifically analyzing the predictive ability of each of the ACS-6 activation criteria, five of the six criteria exist within the top nine activation criteria. The ACS-6 specific requirement of “GCS deterioration by 2” generated less resource usage and was subsequently ranked lower (13 / 17) according to percentage of time a resource is utilized. (Table 6)

Table 6: Ranking of ACS-6 Criteria

Rank	Criteria
1	GSW any (N=34) *
2	Traumatic arrest (N=52)
3	Blood prior to arrival (N=18) *
4	Tachy/poor perfusion (N=33)
5	SBP <90 (N=44) *
6	40ml/kg prior to arrival (N=41)
7	Resp distress/failure (N=103)*
8	Intubated scene (N=76)
9	GCS<=8 (N=214)*
10	Penetrating (non-GSW) (N=97)
11	Inhalation injury (N=7)
12	BB any (N=23)
13	GCS deteriorating by 2 (N=94) *
14	Intubated OSH (N=100)
15	Death of occupant (N=47)
16	Ejection from vehicle (N=62)
17	Suspected cord injury (N=20)

Various combinations of activation criteria can be utilized in the calculation of over-triage and under-triage rates. The table below outlines these various methodologies, listing their over-triage and under-triage rates for comparison. (Table 7)

*Criteria within ACS-6

Table 7: Comparison of Under-triage and Over-triage for specific criteria grouping

Ranking Options	Under-triage	Over-triage
All 23 criteria (ranked on % time used resources utilized)	9.5%	55.1%
Top 13 criteria (ranked on % time of resources utilized - to include all of the ACS-6)	10.5%	39.2%
Top 9 criteria (with GSW abdomen changed to GSW any); includes 5 of 6 ACS-6 criteria	16.9%	20.4%
ACS-6	15.9 %	24.1 %
ACS-6 + addition of 4 additional criteria based on % time of resources utilized (traumatic arrest, tachycardia/ poor perfusion, 40 ml / kg bolus prior to arrival, intubated at scene)	14.8 %	26.2 %

Under-triage

Under-triage can result in life-threatening injuries going undetected. In this study, 60 (9%) patients were in the under-triage category, met no activation criteria, but utilized an ED high level resource. Additional analysis was necessary for the under-triage population, in order to inspect for the potential of omitted triage criteria. The under-triage group and the remainder of the study population were compared and found to not be statistically different in the categories of median age, median ISS, % patients with $ISS \geq 15$, median time to OR, and discharge to rehab. Statistically significant areas included the following: 1) time to ICU transfer, where the under-triage group took longer (76 minutes vs. 51.5 minutes), 2) mortality, where the under-triage group was much lower (1.7% vs. 14.3%) and disposition from the ED. A higher percentage of the under-triage patients were sent to the OR compared to the appropriately or over-triaged patients (52% vs. 19.5%), whereas a lower percentage of the patients who were under-triaged were sent to the floor compared to the appropriately or over-triaged patients (12% vs. 25%). (Table 8) One death occurred in the under-triage group, which consisted of an adolescent requiring intubation after a suicide attempt ($ISS=43$). In this circumstance, appropriate pre-hospital information was not relayed to the hospital.

Table 8: Demographic Comparisons of Under-triage and Non Under-triage Population

Variable	Under-triage (N=60)	Appropriate and Over- triage (N=596)	p-value*
Median Age (years)	7 (4,10)	8 (3,13)	0.17
Median ISS	10 (4,18)	10 (4,22)	0.97
Median Time to OR (minutes)	76 (47, 88)	51.5 (32, 88.5)	0.11
Median Time to ICU (minutes)	100 (85, 161)	68 (50, 101)	0.0002
Mortality	1 (1.7%)	71 (14.3%)	0.0091
ED Disposition			< 0.0001
ICU	21 (35%)	263 (44%)	
OR	31 (52%)	116 (20%)	
Morgue	0 (0%)	24 (4%)	
Floor	7 (12%)	147 (25%)	
Other	1 (2%)	46 (7%)	
Discharge to Rehab	4 (7%)	70 (13%)	0.21

*The Wilcoxon Rank Sum test was used for comparisons for the continuous variables. The Fisher Exact test was used for comparison for categorical variables. A p-value of <0.05 is considered significant.

**Median values reported using inter-quartile percentages (25%, 75%)

Of the 60 under-triage patients, 5(8.3%) required more than 1 resource during the ED resuscitation. Most common resources utilized were 11 patient intubations (18%), 7 patient fluid boluses of ≥ 40 ml / kg after arrival (12%), 7 patient transports to OR < 45 minutes after arrival (12%), 5 patients administered blood (8%), 5 patient transports to OR between 45 – 90 minutes after arrival (8%), and 1 patient required a central line insertion (2%). Twenty-two patients (37%) required either an intubation, emergent transfer to the OR within 45 minutes or blood administered during the resuscitation.

In analyzing this population, 31 patients (51.7%) had an ED disposition of OR; however, only 12 patients (20%) reached the OR within 90 minutes of arrival. Operative need for these 12 patients included the following: emergency craniotomy (N=4; ISS range 16-26); exploratory laparotomy (N=4; ISS range 10-20); repair of open fracture (N=2; ISS 10, 25); emergency airway (N=1; ISS 14); and an open skull fracture (N=1; ISS=10). Of note is at least 6 cases (10%; ISS range of 17-43) had inadequate pre-hospital information conveyed to the hospital staff. All 6 cases had physiological parameters which would have fit study criteria, and all eventually had the highest level trauma activation based on Emergency Department physician discretion. Of the total 60 under-triage patients, ED physician discretion for activation of highest level of resuscitation was only utilized for 16 patients (27%) while an additional 28 patients (47%) had a mid-level activation initiated. Sixteen patients within the under-triage group utilized a high level ED resource without any activation of the trauma team.

Discussion

Despite the presence of a tiered trauma system for the past decade, adult and pediatric trauma centers continue to struggle with a definitive list of highest level activation criteria. In mandating six criteria for highest level activation in 2002, the ACS COT attempted to match resources with the needs of the severely injured patient and the presence of an attending trauma surgeon at the resuscitation. However, trauma centers expanded this criteria leading to inconsistency, inefficacy of human resources and increased health care costs. This study of 656 traumatically injured children is our initial attempt to better understand and thus select pediatric triage criteria that will allow for the accurate prediction of resource needs for highest level trauma activations.

Basic to the foundation of this study, is our methodology of measuring over-triage, appropriate triage and under-triage for the most severely injured. The *Resources for Optimal Care of the Injured Patient: 2006* utilizes a general definition for under-triage – “triage decision that classified patients as not needing trauma center care when, in fact, they do”. [1] By using this method, a target under-triage rate should be 1% or less. Conversely, over-triage is “over-utilization of finite resources” with an acceptable range of 25-50%.[1] For this study, the definitions for over-triage and under-triage are specific only to high level trauma activations; therefore, they have a much different connotation than the generally accepted definition than those recommended by the ACS COT.

In order to measure over-triage and under-triage, specific outcome measures needed to be identified. In the article by Steele et al. (2007), who previously investigated the ACS-6 criteria, the only ED resuscitative outcome measurement was “emergency transfer to the OR within an hour”. Steele, et al. found that only 0.3% of the pediatric population required emergent transfer to the OR while over 23% of the pediatric population met at least one of the ACS-6 criteria. [42] They concluded that the ACS-6 were not good pediatric predictors for highest level activation. As many injured children are treated non-operatively and the benefits of the trauma team extend well beyond just operative management, we felt that this outcome measure was narrow in scope. In another study investigating pediatric activation criteria, Phillips et al (1996) utilized discharge data on level of injury as their outcome measurement. Phillips concluded that within their state pediatric trauma criteria, only GCS, ejection from vehicle, and penetrating injuries had a statistically significant impact on predicting major trauma in pediatric patients. In Phillip’s study, over-triage was at an acceptable rate of 15%, with an unacceptable rate of 33% under-triage. [40] However, the intent from our study was not to validate whether the triage criteria predicted major trauma; but instead, to investigate what pediatric triage criteria utilized specific high level ED resources by the trauma team. Therefore, throughout this study, we believe that our operational definition of appropriate triage (i.e. criteria with ED resource use), over-triage (i.e. criteria without ED resource use) and under-triage (i.e. no criteria with ED resource use) is a strong methodology for comparison and development of conclusions.

The determination of which specific ED resources correlate with highest level trauma team activation was determined by consensus among a consortium of trauma experts. Within this determination, the following two issues generated additional discussion. An operational definition was established on a time cut-off between emergent and non-emergent chest tube insertion. For this study, only chest tubes placed within 30 minutes of arrival were included as a high level resource. However, it is recognized that emergent chest tubes may have been placed outside of that time frame. Secondly, it was recognized that an emergent disposition to the OR was a major resource need for the severely injured child. For statistical purposes, the categories were broken down to “less than 45 minutes” and “between 45 to 90 minutes”. Concern was expressed that children would be included in the study who electively went to the OR quickly, possibly because of OR and / or surgeon availability. Specific analysis of the under-triage population did not validate that concern, as only 4 patients (7%) were questionable if the OR was emergent vs. non-emergent. These included: 1) 3 cases of exploratory laparotomy for possible bowel injury (ISS=10, 14, and 14); and 2) 1 case of OR for depressed skull fracture (ISS=10).

For this study, the categories of GSW, BB and penetrating injury (non-GSW) were specifically divided into body regions (i.e. head, neck, chest and abdomen) and analyzed individually. This made the analysis difficult, as in many of these categories the sample size was too small. In the category of GSW, there was much variation in the ranking of ED resource utilization. GSW to abdomen was consistently ranked high in ED resource utilization while GSW to chest and GSW to head had a more moderate ED resource utilization. GSW to neck, with only 2 patients in the study, was excluded but did use an average of 2 ED resources per case. With this larger than anticipated variation, the grouping of “GSW any” was included within the analysis.

Amputations were also included in this study with the decision to exclude any type of digit amputation within the overall criteria and only focus on amputations of above-wrists and above-ankle. We recognized that some emergent situations, specifically with immediate transfer to the OR, may include digit re-implantation. This specific scenario did occur with one of the under-triage population. In the final analysis, the category of amputations was eventually excluded due to small sample size;

however, consideration and additional research should continue regarding this criterion. In all three patient situations, a high number of ED resources were utilized. Consideration should be given to merging this specific mechanism of injury into the tachycardia / poor perfusion criteria.

In all multi-center studies, consideration needs to be given to practice-bias regarding ED treatment modalities during a trauma resuscitation. For example, a specific hospital may be more aggressive administering blood while another may be more aggressive toward early insertion of a central line. In order to assess for this potential bias, future detailed analyses will be required.

Multiple methods were examined to rank criteria: 1) average number of resources used per criteria; 2) percentage of time any resource utilized with a criteria; 3) percentage of time that two resources were utilized for a criteria; 4) mean ISS per criteria; and 5) ranked by under-triage. After a comparison analysis it became apparent that 9 criteria were consistently in the top of each ranking system. Given that our primary concern was the utilization of any resource requiring the trauma team we utilized the “percentage of time any resource utilized with a criteria” for the majority of our analyses.

One priority of this study was to evaluate the effectiveness of the mandated ACS COT criteria (ACS-6) for highest team activation. For this study, ED physician discretion was not prospectively evaluated. Within the study population, 350 (53%) patients met at least one of the ACS-6 criteria. Utilizing only the ACS-6 criteria, 24% of patients would have been over-triaged and 16% would have been under-triaged. It is significant that the under-triage is only 16% with the use of the 6 criteria and only decreases to 9% with the presence of all 23 criteria. Overall, the ACS-6 performed well in the context of over-triage and under-triage rates. The inclusion of additional criteria had little impact on under-triage but instead, continued to increase the over-triage rate.

Five of the 6 ACS-6 criteria were consistently listed within the top 10 criteria within the ranking system that was utilized for this study. Only “GCS deterioration by 2” was consistently ranked lower than the other 5. It was also noted that some of the non-ACS-6 criteria are actually included within the ACS-6 grouping. For example, a patient with a pre-hospital history of traumatic arrest should automatically be included in the ACS-6 grouping as they would fit the criteria of GCS < 8 or hypotension

in the field. A patient with an extremity amputation may or may not fit into a category of age-appropriate hypotension. With the deletion of the “GCS deterioration by 2” criterion, the addition of “tachycardia / poor perfusion” and “40 ml / kg bolus prior to arrival” (i.e. ACS-7), this change could potentially limit resource utilization for pediatric trauma resuscitations while continuing to maintain the acceptable over-triage and under-triage rates. (Table 10)

Table 10: Proposed Changes for Activation Criteria

Top 13 ranked triage criteria	ACS – 6 (current)	ACS – 7 (proposed changes)
GSW Any	GSW Any	GSW Any
Traumatic Arrest	Blood prior to arrival	Blood prior to arrival
Tachycardia / poor perfusion	SBP < 90 (age appropriate)	SBP < 90 (age appropriate) *To include traumatic arrest
Blood prior to arrival	Respiratory distress / failure	Respiratory distress / failure *To include intubation at scene
SBP < 90 (age appropriate)	GCS ≤ 8	GCS ≤ 8
40 ml / kg bolus prior to arrival	GCS deterioration by 2	Tachycardia / poor perfusion
Respiratory distress / failure		40 ml / kg bolus prior to arrival
Intubated at scene		
GCS ≤ 8		
Penetrating (non GSW) chest		
Inhalation injury		
BB any		
GCS deterioration by 2		

The under-triage population (N=60) was specifically analyzed to assess if any criteria was potentially missing from the consensus list of activation criteria. The ISS was comparable to the rest of the patient population, leading one to believe that the under-triage category was just as severely injured. On careful analysis of this group, no obvious missed criterion was apparent. In assessing the ED

resources utilized by this group, three important resources utilized were intubation, patients requiring transport to the OR in 45 minutes and patients requiring blood. These accounted for 22 patients (37%) of the under-triage group. One repeated validation that was obtained from analysis of the under-triage group was the importance of reliable pre-hospital information on clinical parameters. At least 6 patients (10%) would have been met criteria if there had been improved communications from our pre-hospital colleagues. Examples of this which would have decreased the under-triage group include: 1) pre-hospital information conveyed as “intermittently arousable” with patient requiring emergent craniotomy within 45 minutes of arrival (ISS=25); 2) pre-hospital information only as “less responsive” with patient requiring intubation (ISS=17); 3) pre-hospital information conveyed as “sometimes unconscious” with patient requiring intubation (ISS=17). Of these 6 under-triage patients, the inaccurate information provided to the hospital were all regarding assessment of GCS in children. Further attention should be concentrated on providing additional training on assessment of pediatric GCS to the pre-hospital personnel and to the hospital personnel taking the calls on how to appropriately interpret these findings.

Information on the sensitivity of specific activation criteria is vital for trauma centers as they attempt to establish an acceptable over-triage and under-triage rate. For many institutions, the aspect of under-triage is probably the most important to assess. However, assuming that the decrease of under-triage is the main ingredient of the equation can be a perilous decision. As a result, over-triage can precipitously increase the cost, both in finances and in the human resource aspect of personnel. Some argue that cost should not be a factor when there is consideration of a child’s life. However, in this era of cost containment in health care, balancing these two measures should continue to be priority. The goal of this study was to take an important first step toward improving the quality and timeliness of care for the severely injured child in a fiscally responsible manner. Trauma resuscitations, especially at the highest level are expensive endeavors as evidenced by resource and personnel utilization. For the participating hospitals in this study, the average charge for highest activations was \$7,843. If only the ACS-6 criteria were utilized, 55 highest activation resuscitations would have been eliminated or reduced to a mid-level activation; thus with a potential savings between \$230,000- \$431,000. This variation in

cost savings is dependent on whether the activation charge is eliminated or reduced to a mid-level activation. This does not take into account the financial impact of mandating personnel for the highest activation, specifically the attending / fellow pediatric surgeon and frequently utilizing anesthesia and operating room personnel.

Challenges / Limitations

A major challenge for appropriate trauma activation, whether at a mid-level or the highest level, is the timeliness and quality of the verbal report from referring hospitals, inter-facility transport service or EMS squad. This is especially true for pediatrics, as many individuals are not as comfortable assessing the younger injured child. In this study, some criteria were easily identified and reported while other criteria, such as tachycardia with poor perfusion, and respiratory distress / failure are more subjective. If this information was not adequately reported by the pre-hospital or referring institutions, then patients were included within the under-triage category. The criteria $GCS \leq 8$ appears easily quantifiable; however, obtaining this information on a pediatric child, along with a constantly changing neurologic status, makes this criterion sometimes difficult to verbally and accurately convey. Consistency and increased specific definitions from pre-hospital personnel on these parameters would assist trauma center personnel and decrease the need for interpretation.

A limitation for this study was the infrequency of specific injuries, leading to small sample size within the category; thereby, removing these from the study analysis. Interestingly, amputations (above wrist and above ankle) and gun-shot to neck utilized a high level of resources although they infrequently occurred. Additional research into these areas with a larger sample size would be of benefit.

Attempts were made to standardize each definition for the 9 pediatric trauma centers that participated, yet compliance of this was dependent on each participating hospital. A data dictionary of each criterion was developed by the 9 Trauma Program Managers. Discussion on various scenarios and clinical indicators occurred via phone conferences before the start of the research project. Three additional points of demographic information, such as insurance coverage and whether the activation was

upgraded / downgraded during the ED stay would have been helpful to the study analysis. A break-down of ED Disposition of “Other: another institution” or “Discharge home” would have benefited analysis.

Conclusion

Highly sensitive pediatric triage criteria are needed in order to appropriately initiate the highest level of trauma team activation. The ACS-6 mandated criteria performed well when evaluating this by over-triage and under-triage rates of the highest injured pediatric patients. It is generally accepted that some amount of over-triage is necessary to minimize the risk of under-triage. The inclusion of additional criteria beyond the ACS-6 had a small impact on under-triage yet continued to increase the over-triage rate significantly. Small revisions in the ACS-6 criteria for the pediatric population may potentially have some benefits. Additional education on assessment of GCS in the pediatric population and / or interpretation of pre-hospital information may assist with appropriate highest level trauma team activation.

References

1. Surgeons, C.o.T.o.t.A.C.o., *Resources for Optimal Care of the Injured Patient* 2006. . 2006, Chicago, Illinois.
2. Stafford, P.W., T.A. Blinman, and M.L. Nance, *Practical points in evaluation and resuscitation of the injured child*. Surg Clin North Am, 2002. **82**(2): p. 273-301.
3. Lloyd, D.A., et al., *A stratified response system for the emergency management of the severely injured*. Ann R Coll Surg Engl, 2001. **83**(1): p. 15-20.
4. Phillips, J.A. and T.G. Buchman, *Optimizing prehospital triage criteria for trauma team alerts*. J Trauma, 1993. **34**(1): p. 127-32.
5. Eastes, L.S., et al., *Outcomes of patients using a tiered trauma response protocol*. J Trauma, 2001. **50**(5): p. 908-13.
6. Nuss, K.E., A.M. Dietrich, and G.A. Smith, *Effectiveness of a pediatric trauma team protocol*. Pediatr Emerg Care, 2001. **17**(2): p. 96-100.
7. Chen, L.E., et al., *Trauma stat and trauma minor: are we making the call appropriately?* Pediatr Emerg Care, 2004. **20**(7): p. 421-5.
8. Bevan, C., et al., *Reducing "cry wolf"--changing trauma team activation at a pediatric trauma centre*. J Trauma, 2009. **66**(3): p. 698-702.
9. Ochsner, M.G., et al., *The evaluation of a two-tier trauma response system at a major trauma center: is it cost effective and safe?* J Trauma, 1995. **39**(5): p. 971-7.
10. Tinkoff, G.H., R.E. O'Connor, and G.J. Fulda, *Impact of a two-tiered trauma response in the emergency department: promoting efficient resource utilization*. J Trauma, 1996. **41**(4): p. 735-40.
11. Kaplan, L.J., et al., *Improved emergency department efficiency with a three-tier trauma triage system*. Injury, 1997. **28**(7): p. 449-53.
12. Kohn, M.A., et al., *Trauma team activation criteria as predictors of patient disposition from the emergency department*. Acad Emerg Med, 2004. **11**(1): p. 1-9.
13. Sola, J.E., et al., *Criteria for safe cost-effective pediatric trauma triage: prehospital evaluation and distribution of injured children*. J Pediatr Surg, 1994. **29**(6): p. 738-41.
14. Cook, C.H., et al., *Reducing overtriage without compromising outcomes in trauma patients*. Arch Surg, 2001. **136**(7): p. 752-6.
15. DeKeyser, F.G., et al., *Decreasing the cost of trauma care: a system of secondary in-hospital triage*. Ann Emerg Med, 1994. **23**(4): p. 841-4.
16. Lehmann, R., et al., *A simplified set of trauma triage criteria to safely reduce overtriage: a prospective study*. Arch Surg, 2009. **144**(9): p. 853-8.
17. Shatney, C.H. and K. Sensaki, *Trauma team activation for 'mechanism of injury' blunt trauma victims: time for a change?* J Trauma, 1994. **37**(2): p. 275-81; discussion 281-2.
18. Hunt, R.C., *Is mechanism of injury dead?* Prehosp Emerg Care, 1999. **3**(1): p. 70-3.
19. Cooper, M.E., et al., *Application of field triage guidelines by pre-hospital personnel: is mechanism of injury a valid guideline for patient triage?* Am Surg, 1995. **61**(4): p. 363-7.
20. Esposito, T.J., et al., *Do prehospital trauma center triage criteria identify major trauma victims?* Arch Surg, 1995. **130**(2): p. 171-6.
21. Qazi, K., M.S. Wright, and C. Kippes, *Stable pediatric blunt trauma patients: is trauma team activation always necessary?* J Trauma, 1998. **45**(3): p. 562-4.
22. Dowd, M.D., et al., *Maximizing the sensitivity and specificity of pediatric trauma team activation criteria*. Acad Emerg Med, 2000. **7**(10): p. 1119-25.

23. Simon, B.J., et al., *Vehicular trauma triage by mechanism: avoidance of the unproductive evaluation*. J Trauma, 1994. **37**(4): p. 645-9.
24. Kreis, D.J., Jr., et al., *A prospective evaluation of field categorization of trauma patients*. J Trauma, 1988. **28**(7): p. 995-1000.
25. Knopp, R., et al., *Mechanism of injury and anatomic injury as criteria for prehospital trauma triage*. Ann Emerg Med, 1988. **17**(9): p. 895-902.
26. Sava, J., et al., *All patients with truncal gunshot wounds deserve trauma team activation*. J Trauma, 2002. **52**(2): p. 276-9.
27. Wuerz, R., J. Taylor, and J.S. Smith, *Accuracy of trauma triage in patients transported by helicopter*. Air Med J, 1996. **15**(4): p. 168-70.
28. Henry, M.C., et al., *Incremental benefit of individual American College of Surgeons trauma triage criteria*. Acad Emerg Med, 1996. **3**(11): p. 992-1000.
29. Bond, R.J., J.B. Kortbeek, and R.M. Preshaw, *Field trauma triage: combining mechanism of injury with the prehospital index for an improved trauma triage tool*. J Trauma, 1997. **43**(2): p. 283-7.
30. Cottington, E.M., et al., *The utility of physiological status, injury site, and injury mechanism in identifying patients with major trauma*. J Trauma, 1988. **28**(3): p. 305-11.
31. Cherry, R.A., et al., *Trauma team activation and the impact on mortality*. J Trauma, 2007. **63**(2): p. 326-30.
32. Husum, H., et al., *Respiratory rate as a prehospital triage tool in rural trauma*. J Trauma, 2003. **55**(3): p. 466-70.
33. Tinkoff, G.H. and R.E. O'Connor, *Validation of new trauma triage rules for trauma attending response to the emergency department*. J Trauma, 2002. **52**(6): p. 1153-8; discussion 1158-9.
34. Norwood, S.H., et al., *A prehospital glasgow coma scale score ≤ 14 accurately predicts the need for full trauma team activation and patient hospitalization after motor vehicle collisions*. J Trauma, 2002. **53**(3): p. 503-7.
35. Meredith, W., et al., *Field triage of trauma patients based upon the ability to follow commands: a study in 29,573 injured patients*. J Trauma, 1995. **38**(1): p. 129-35.
36. Lehmann, R.K., et al., *Trauma team activation: simplified criteria safely reduces overtriage*. Am J Surg, 2007. **193**(5): p. 630-4; discussion 634-5.
37. Victorino, G.P., F.D. Battistella, and D.H. Wisner, *Does tachycardia correlate with hypotension after trauma?* J Am Coll Surg, 2003. **196**(5): p. 679-84.
38. King, D.R., et al., *Heart rate variability as a triage tool in patients with trauma during prehospital helicopter transport*. J Trauma, 2009. **67**(3): p. 436-40.
39. Franklin, G.A., et al., *Prehospital hypotension as a valid indicator of trauma team activation*. J Trauma, 2000. **48**(6): p. 1034-7; discussion 1037-9.
40. Phillips, S., et al., *The need for pediatric-specific triage criteria: results from the Florida Trauma Triage Study*. Pediatr Emerg Care, 1996. **12**(6): p. 394-9.
41. Vernon, D.D., et al., *Effect of a pediatric trauma response team on emergency department treatment time and mortality of pediatric trauma victims*. Pediatrics, 1999. **103**(1): p. 20-4.
42. Steele, R., et al., *Do the American College of Surgeons' "major resuscitation" trauma triage criteria predict emergency operative management?* Ann Emerg Med, 2007. **50**(1): p. 1-6.

Appendix 1: Activation Criteria with Data Collection Definitions

Activation Criteria	Data Definitions
Traumatic Arrest	Cessation of cardiac activity
Respiratory distress / failure from scene	Outwardly evident, physically labored respiratory effort; dyspnea to include SOB; retractions; stridor; not included - patient with ongoing CPR
Intubated patient from referring facility	LMA included. Include when aeromedical personnel intubates before leaving referring hospital.
Intubated patient from scene	LMA included
Tachycardia with poor perfusion	Age appropriate HR to be utilized
≥ 40 ml / kg fluid bolus before patient arrival	Regardless of type of fluid
Blood received any time before patient arrival	Any amount
GCS < 8	Glasgow Coma Score, utilizing all 3 components of eye, verbal and motor noted in the field. Check this if patient was intubated due to a reported GCS < 8.
GCS deteriorating by 2 (any time prior to patient arrival)	
Suspected spinal cord injury with motor deficit	Include any observed/reported motor deficit
Burns > 30% body surface area (BSA)	As estimated at scene
Suspicion of inhalation injury (chemical / thermal)	
Systolic blood pressure (SBP) < 90 (with age appropriate definitions) < 1 = 60; ages 1-2 = 70; ages 3-5 = 75; ages 6-12 = 80	At least one episode in the prehospital setting, referring hospital or during transport.
Extremity amputation (above ankle)	To include partial or complete amputation
Extremity amputation (above wrist)	To include partial or complete amputation
Penetrating wound (non GSW) to head	A wound made by a sharp object that breaks the skin and enters into a cavity, organ or body area. Must be more than a superficial laceration.
Penetrating wound (non GSW) to neck	See above
Penetrating wound (non GSW) to chest	See above
Penetrating wound (non GSW) to abdomen	Penetrating to at least the level of the fascia
GSW to head	
GSW to neck	
GSW to chest	
GSW to abdomen	
BB to head	
BB to neck	
BB to chest	
BB to abdomen	
Ejection (car / pick-up truck / motorcycle)	Not include: car surfing, ATV, motorized scooter, Amish buggy
Death of occupant within same vehicle	Not to include death in other vehicle

Appendix 2: Emergency Department Resources

- Intubation / Re-intubation
- Administration of blood
- Fluid Bolus (≥ 40 ml / kg since time of arrival)
- Arrival time to Operating Room transfer < 45 minutes after patient arrival
- Arrival time to Operating Room transfer 45 – 90 minutes after patient arrival
- IO insertion
- Pericardiocentesis
- CPR / traumatic arrest
- Needle decompression
- Central line insertion (femoral, subclavian, etc.,)
- Chest tube insertion within 30 minutes after patient arrival
- Open thoracotomy

EVALUATION OF TRAUMA TRIAGE CRITERIA FOR MEDICAL TRANSPORT OF ADULTS AND CHILDREN

INVESTIGATORS: HOWARD WERMAN, MD; MICHAEL CUDNIK, MD,
MPH; LYNN WHITE, MS; JUDY OPALEK, PHD

ACKNOWLEDGEMENTS

This project was funded through an Ohio Division of EMS's Trauma Research Grants

Program

Werman
ODPS
Final
Report

INTRODUCTION

Currently, the state of Ohio has promulgated legislative mandated trauma triage criteria.

These criteria are to be used by emergency care providers to determine which patients are to be transported to state designated Trauma Centers. While the criteria are based on nationally recognized guidelines, they do not suggest the appropriate mode of transport. The current study hoped to address which of these criteria were useful in predicting the benefit of air transport of adult patients to a Level I trauma center and to extend this analysis to include pediatric patients as well.

Table of Contents

Introduction	Page 2
Acknowledgements	Page 3
Literature Review	Page 4
Study Design and Setting	Page 6
Results	Page 10
Discussion	Page 12
Conclusions	Page 15
References	Page 17
Tables and Figures	Page 20
Appendix A	Page 25

Executive Summary

The study was conducted to determine which of the statewide trauma criteria was predictive of the following outcomes: operative procedure in first 24 hours, administration of blood products, intensive care admission and in-hospital death in Level 1 trauma facilities among patients transported by helicopter. We had previously validated that the following criteria predicted high utilization: age ≥ 45 , Glasgow Coma Score ≤ 13 , systolic BP < 90 and the presence of a flail chest. Applying these criteria prospectively, we found that these variables

had a sensitivity of 97% (80.2%-100%), specificity of 53.2% (50.6%-51.6%), a NPV of 100% (98.0%-100%) and a PPV of 11.9% (9.9%-12.3%). No deaths were seen among patients who met none of these criteria. On the other hand, the statewide pediatric trauma criteria performed poorly with over 35% of patients being discharged from the emergency department after evaluation.

Acknowledgements

This project was funded through an Ohio Department of Emergency Medical Services's Trauma Research Grants Program. This work has currently led to one published manuscript, two published abstracts, as well as national and regional presentations (see Appendix A)/

Information/Qualifications – Principal and all co-investigators:

Howard Werman, MD, Professor of Clinical Emergency Medicine, The Ohio State University

Michael Cudnik, MD, MPH, Assistant Professor of Clinical Emergency Medicine, The Ohio State University

Lynn White, MS
The Ohio State University

Judy Opalek, PhD
Research Director, Trauma Program
Grant Medical Center

The PI for this project is Howard Werman, MD, Professor of Emergency Medicine at The Ohio State University College of Medicine, Columbus, OH. Dr. Werman is an attending physician at The Ohio State University Medical Center and has been the Medical Director for MedFlight of Ohio since 1998. Dr. Werman has an active publication record in the area of air medical transport and is the recipient of multiple awards for service, research and education.

Michael Cudnik, MD, MPH, is Assistant Professor of Emergency Medicine at The Ohio State University College of Medicine. Dr. Cudnik received his MPH in Biostatistics and Epidemiology from Oregon Health and Science University in 2007 where he completed a Clinical Research fellowship working with the Resuscitation Outcomes Consortium (ROC) research network. Dr. Cudnik has published extensively in the area of trauma and has considerable experience and expertise with large database analysis.

Lynn White, MS. At the time of this study, Ms. White was the Clinical Manager of the Research program at The Ohio State University Medical Center Department of Emergency Medicine. Ms. White holds an adjunct assistant professorship at The Ohio State University and has had considerable research experience and publications in the areas of resuscitation, trauma and air medical transport. Ms. White is currently the National Director of Resuscitation and Accountable Care at AMR Medicine.

Judy Opalek, PhD, is the Trauma Research Manager at Grant Medical Center in Columbus, OH. She received her PhD from The Ohio State University and has published widely in the trauma literature.

A review of the literature related to the project topic

Trauma is the leading cause of death for patients between the ages of one and 44 and represents a substantial proportion of health care costs in the United States.^{1,2} Transport of the most critically injured patients is understood to be of critical importance, and therefore, it is important that we understand and provide the most effective transport methods for this

population. This is particularly true since air medical transport has grown substantially in the last decade with over 400,000 patient transports utilizing over 900 helicopter resources has occurred in the United States.³

Some research has demonstrated the benefit of air medical transport for trauma victims, in terms of cost effectiveness and survival when compared to ground transport.⁴⁻⁶ However, overuse of air medical resources is a significant concern, with some studies demonstrating over-triage rates of 60% in the adult population and 85% in pediatric trauma.^{5,7} The cost of transport is high, and safety risk to both the patient and staff is real, making it essential that only patients who will clearly benefit should be transported by air.^{8,9} It is estimated that the cost of an average air transport is 5 to 15 times the cost of a typical ground transport.³

Although broad based trauma triage guidelines currently exist, there is little evidence-based information available to guide EMS in their decisions to call for air transport from the scene of injured patients.^{9,10} Even less is known about the use of air transport in pediatric trauma victims.¹¹ Several states use destination protocols defining when a patient should be transported to a trauma center without clearly defining the most appropriate mode of transport. Our previous work¹² demonstrated that four variables available on scene could which patients would require the resources of a trauma center based on the need for early operative intervention, admission to an ICU, blood product administration and in-hospital mortality.

The purpose of this study was to prospectively validate whether clinical variables available at the scene of injury were associated with appropriate trauma hospital resource utilization and

improved clinical outcomes. Additionally, we began a preliminary investigation as to the performance of pediatric trauma triage criteria as a tool for selective air medical transport.

Historical perspectives on the topic of this report

While there have been previous investigations on the outcomes of trauma patients transported by air when compared to ground transport, this is the first known investigation examining the specific topic of the performance of state or national trauma triage criteria in predicting the need for air medical transport. Previous investigations have cited high over-triage rates (i.e. transporting trauma patients with minor injuries) of over 60% in adults and over 85% in children.

A brief review of the current status of the topic in Ohio, the surrounding states, and nationally

Currently, there are over 35 helicopters transporting patients throughout Ohio. Nationally, the number is increasing at a rapid rate (currently there are over 900 air transport assets in the US) without clear and convincing evidence as to which patients truly benefit from air medical transport. The State of Ohio has promulgated pediatric, adult and even geriatric field trauma triage guidelines (see Table 1) but these do not specifically address the use of air medical assets.

STUDY DESIGN AND SETTING

This was a prospective, analysis of consecutive injured, adult patients (16 years of age or older) who were transported by a single air transport agency (MedFlight) to one of the three Level One trauma centers in Central Ohio (Grant Medical Center, Nationwide Children's Hospital, OSU Medical Center). The project was approved by the Institutional Review Boards (IRB) at all participating trauma centers.

Data were prospectively collected from August 1, 2010 through September 30, 2011. The data collected for each patient transport were derived from three different sources. The first was a direct survey of prehospital personnel by air medical dispatch personnel. These indicators included elements of the State of Ohio Trauma Triage Criteria (Table 1) including mechanism of injury as well as anatomical and physiologic characteristics of the patient at the scene (see ‘variables collected’ below). The questionnaire included 40 questions based on trauma triage guidelines for the State of Ohio including pediatric-specific triage criteria. The data were maintained by personnel at MedFlight and became part of the on-line transport debriefing system. Additionally, patient demographic and geographical scene information data were included as these data are routinely collected as part of the program’s computer aided dispatch system.

Hospital data were obtained from each receiving hospital’s trauma registry. The registries are prospectively collected with specific data elements based on the State of Ohio’s trauma data registry criteria which is further derived from the National Trauma Database (NTDB). All patients transported directly from the scene of the injury by air medical transport to each of the Level I trauma centers were included in the analysis. The three Level I trauma centers are located in a single large, metropolitan city and are the only two Level I trauma centers in the region (two adult and one pediatric). In order to be entered into the trauma registry, a patient must have sustained a traumatic injury, within the ICD-9 injury diagnosis of 800 to 959.9, excluding those with an isolated hip fracture (ICD-9 series 820). In addition, the patient must be admitted to the trauma team, be classified as trauma team activation, or evaluated by a member of the hospital’s trauma team while in the Emergency Department. Quality assurance

measures, such as re-abstraction and data checks, are completed on a minimum of 10% of the registry patient entries. Edit fails are also in place to check blank or incorrectly entered data and the coding summary comparison from Medical Information Management is reviewed for inconsistencies in the diagnosis and the coding to ensure consistent and accurate data collection and documentation.

Variables Collected

Prehospital variables collected from the scene at the time of injury are listed in Table 1. These variables were obtained via direct query of the transport team by the dispatcher at MedFlight headquarters. In addition, the zip codes from the area in which the injury occurred, the number of loaded statute miles for each transport, and whether or not the injury occurred in a rural location (as defined by the U.S. Census Bureau), were also collected from the transport agency.

Variables obtained from each trauma center included: age (in years), gender, race (White, Black, Asian, Hispanic, Other), insurance status (private, Medicare/Medicaid, workers compensation, self pay), injury severity score (ISS), intensive care unit (ICU) length of stay (LOS) in days, hospital LOS in days, trauma type (blunt vs. penetrating), and the ICD-9 discharge diagnoses. ISS, LOS, and ICU LOS were continuous variables; all others were categorical.

The primary outcome of interest was in-hospital mortality, defined as death from any cause while in the hospital. Additional outcomes collected included: early death, defined as death within 24 hours of admission; early blood use, defined as a blood transfusion within 24 hours

of admission; ICU admission for greater than 24 hours; and emergent surgery, defined as any operation that occurred within 24 hours of arrival. These additional outcomes were chosen as they potentially represent extensive trauma center resource utilization and could represent the necessity of expeditious transport to a Level 1 trauma center via air transport. In particular, the outcome of early blood transfusion was chosen based on clinical experience as well as prior work that such patients are often much more seriously injured and will require additional resources in addition to the blood products themselves.¹⁰ Such criteria have also been suggested by others as indicative of hospital resource use in trauma patients.¹² In addition, a combined outcome of all variables (death, ICU admit >24 hours, early emergent surgery within 24 hours, or blood transfusion within 24 hours) was also assessed.

Data Analysis

Descriptive statistics were used to describe the study population and the prehospital questions and were reported as means with 95% confidence intervals (CI) or medians with inter-quartile ranges (IQR), where appropriate. Continuous and categorical variables were compared using Chi-Square Analysis and Kruskal-Wallis test, where appropriate. We then compared the ability of our four variable clinical decision rule (CDR) to predict both mortality and the use of Level I resources as judged by the presence of early operative intervention, administration of blood products, ICU admission and in-hospital mortality. These variables included: age \geq 45 years, GCS \leq 13, systolic BP < 90 mmHg and the presence of a flail chest.

We then calculated the sensitivity, specificity, and positive (PPV) and negative predictive values (NPV) with 95% CIs of the rule when applied to patients in the initial dataset. In

addition, Receiver Operatic Characteristic (ROC) curves were calculated for each of the models with their respective outcomes.

RESULTS

A total of 455 patients enrolled from August 2010 through September 2011. Demographics are listed in Table 2. The majority of patients were male (60%), white (79%), with injuries occurring in a rural locations (60%) and having sustained blunt force trauma (95%). The patients had a median ISS of 9 and an overall mortality of 6%.

The most common triage criteria used to summon air transport were motor vehicle collision (MVC) with high risk mechanism (18%), Glasgow Coma Score (GCS) ≤ 13 (16%), a loss of consciousness for more than 5 minutes (16%) and an MVC of >20 MPH (13%). High risk mechanisms of injury included: death of another occupant in the vehicle compartment, ejection of the patient and vehicle telemetry data show high risk of injury. Of all the factors listed, however, only a GCS ≤ 13 was associated with mortality ($p < 0.05$).

We evaluated whether criteria defined in our prior study¹¹ was predictive of trauma center resources among air transported patients. When applying the previously identified criteria to this population the model had a sensitivity of 97% (80.2%-100%), a specificity of 53.2% (50.6%-51.6%), a NPV of 100% (98.0%-100%) and a PPV of 11.9% (9.9%-12.3%). No deaths were missed if the CDR rule was negative (i.e. no deaths in patients without one of the four criteria). The area under the curve for the model was 0.88, suggesting a reasonably accurate model (see Figure 1).

Data collected on pediatric patients transported to Nationwide Children's Hospital by air medical transport are summarized in Table 3. It should be noted that a significant proportion of the patients (35.1%) were treated and discharged from the emergency department.

DISCUSSION

In this prospective portion of the project, we found that the predictive model developed in our previous work¹² performed well in terms of the negative predictive value and sensitivity of the model. Moreover, it suggests that the state-wide trauma triage criteria utilized to define the trauma patient may not perform well in determining which patients benefit from air medical transport. Our results suggest that further study is needed to determine if more patients can be transported by ground to their local facility where further assessment would determine the need for secondary transport to a trauma center. Only patients with a low systolic blood pressure < 90 mmHg, a GCS less than 14, evidence of a flail chest or trauma victims with other triage criteria who are older than 45 years have demonstrated a need for immediate resources available in the trauma center.

The findings of this project are similar to work that has done by others. Bledsoe et al, in a recent meta-analysis, reported that more than 60% of injured patients who were transported by air medical transport had only minor injuries and that 26% of patients were discharged less than 24 hours after arriving at the trauma center.⁷ We found an even greater number of patients with minor injuries in our study population with 70% of patients ultimately having an ISS \leq 15, suggesting that the issue of over-utilization may be greater in our system than others. This suggests that the criteria currently in use may be overly conservative based on the current factors that are being

incorporated from the scene of injury. Indeed, work by others has suggested that triage criteria involving mechanism of injury alone is not a good indicator of risk of mortality or serious injury.¹⁴⁻¹⁶ As such, the CDC has revamped their triage guidelines and has suggested that this criteria alone warrants transport to the closest trauma center, rather than the highest level trauma center.¹ Based on the results of our study, mechanism of injury by itself may not be a suitable factor alone to warrant air medical transport to a Level I trauma center.

Some guidelines continue to advocate that mechanism, by itself, may be enough to warrant air medical transport to a trauma center.^{9, 10} While such patients may still require the resources and care available at a trauma center, they may not need a helicopter transport. Such a finding has been observed by others and refining such a criterion could potentially decrease the over-utilization of air medical transport for injured patients.^{17, 18}

While there is a considerable body of evidence to suggest that appropriate use of air medical transport can improve patient outcomes,¹⁹ the overuse of air medical transport is in of itself not a benign process. The cost of air medical transport is often significantly greater than the cost of ground transport. As the cost of medical care continues to increase, such expenses will continue to be held under close scrutiny. In addition, flights deemed to be medically inappropriate may not be reimbursed for their services,²⁰ which will pass the burden of cost onto patients, many of whom may

not be able to pay for such charges. In addition, there is also the issue of patient and staff safety.²¹ In recent years, there has been an increase in the number of helicopter crashes with resultant injury and even deaths of the occupants.²² There is a clear safety risk of transport of an injured patient who does not have life or limb-threatening injuries, as well as the safety risk for pilots and staff caring for the patient should not be considered acceptable. Ensuring that only appropriate patients are transported in the most effective and safest method possible should be the top priority for all agencies.

Field triage by prehospital providers is challenging not only because such decisions are made in the early stages of injury, but also because of the natural progression of symptoms that occur with injured patients.²³ One has to balance the amount of under-triage (i.e. sensitivity) with over-triage (i.e. specificity), as flying an uninjured patient has its own negative consequences to both the patient and the trauma center. The clinical decision rule developed in this project due to its high sensitivity, would lend itself to a negligible under-triage rate with an acceptable over-triage rate. Moreover, the very clear and easily identifiable variables we have included in this model make it an attractive first step in identifying injured patients who require helicopter transport in our state. While the primary model developed is encouraging, the opposite is true for the model developed evaluating the combined clinical outcomes. This model will be included in the published manuscript. Its fair discriminatory ability, while it may be acceptable for some clinical decisions, would be unacceptable for field triage as

the over-triage rate would be unacceptably high whenever any acceptable sensitivity would be reached.

LIMITATIONS

There are several limitations to this project. The first is that we have described limited geographical system that may be very different from other trauma systems. There is also a lack of a comparison group of ground transported patients. Prior work has shown that air transport is beneficial compared to ground transport in seriously injured patients.²⁴ The lower median ISS in our project also may limit the external validity of our findings as the median ISS in our project was much less than a recently published retrospective project from the NTDB, a study which found a beneficial impact of helicopter transport.²⁵ It should also be noted that there are additional air medical providers in the region that was covered in this project who were not included in this analysis. However, MedFlight is the highest volume air medical transport agency in this region and responds to approximately 95% of the scene calls for injured patients during the study period, reducing such bias.

CONCLUSIONS

In this injured cohort of air medical transported patients, a minority of patients had serious injuries that required the resources immediately available at a Level I trauma center. Mechanism of injury was clearly found to be a poor indicator of trauma mortality or trauma center resource utilization. Future studies are needed to develop

evidence-based prehospital trauma triage criteria specifically directed towards air medical transport in order to decrease over-triage of patients.

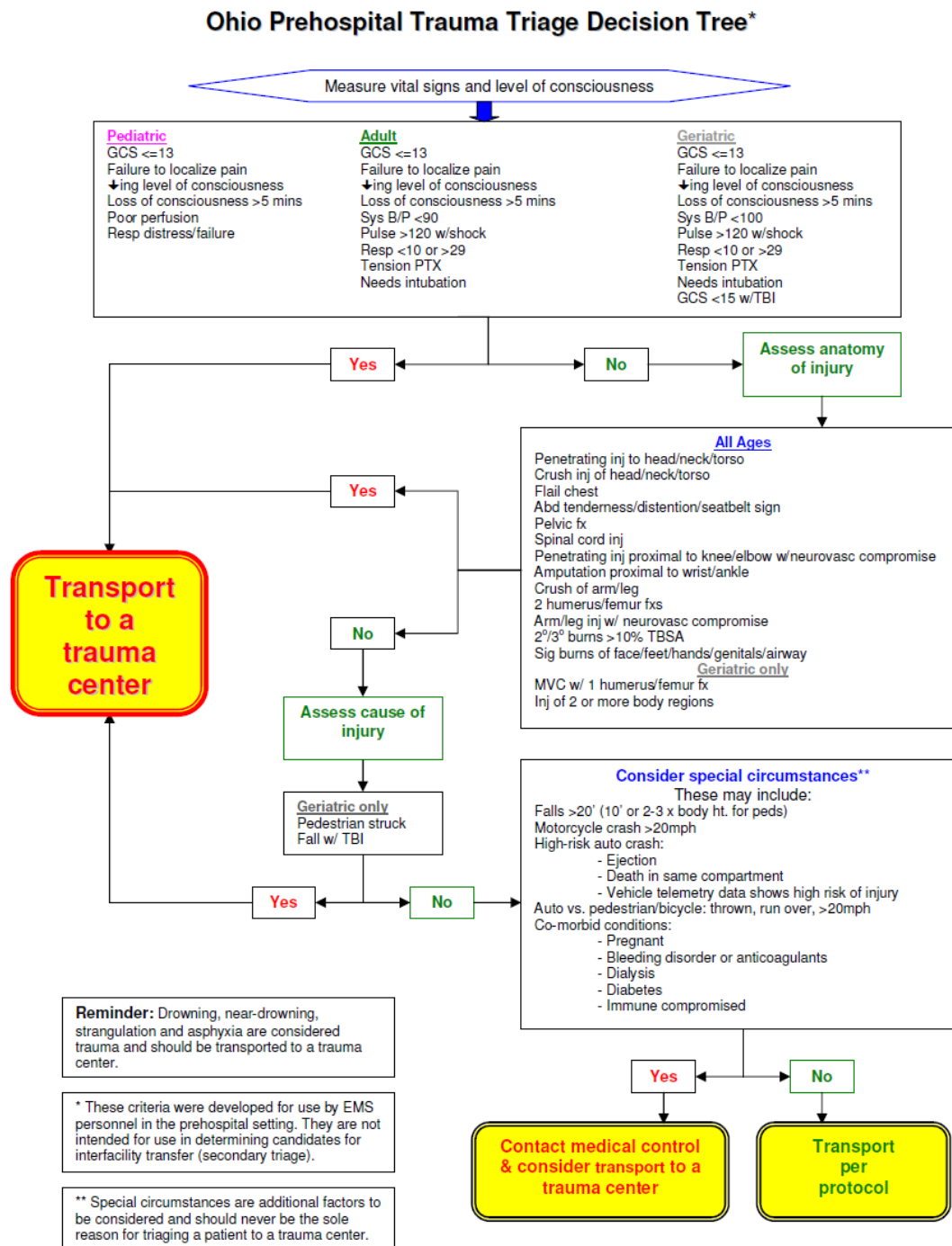
REFERENCES

- (1) Sasser SM, Hunt RC, Faul M, Sugerman D, Pearson WS, Dulski T, Wald MM, Jurkovich GJ, Newgard CD, Lerner EB; Centers for Disease Control and Prevention (CDC). Guidelines for field triage of injured patients: recommendations of the National Expert Panel on Field Triage, 2011. *MMWR Recomm Rep*. 2012; 61(RR-1):1-20.
- (2) Peitzman AB, Rhodes M, Schwab CW, Yealy D, Fabian TC. *The Trauma Manual: Trauma and Acute Care Surgery*. 3rd ed. Philadelphia: Lippincott Williams & Wilkins; 2008.
- (3) Lemonick DM. Controversies in prehospital medicine. *Am J Clin Med* 2009; 6(1):5-17.
- (4) Baxt WG, Moody P. The impact of a rotorcraft aeromedical emergency care service on trauma mortality. *JAMA* 1983 June 10;249(22):3047-51.
- (5) Moront ML, Gotschall CS, Eichelberger MR. Helicopter transport of injured children: system effectiveness and triage criteria. *J Pediatr Surg* 1996 August;31(8):1183-6.
- (6) Gearhart PA, Wuerz R, Localio AR. Cost-effectiveness analysis of helicopter EMS for trauma patients. *Ann Emerg Med* 1997 October;30(4):500-6.
- (7) Bledsoe BE, Wesley AK, Eckstein M, Dunn TM, O'Keefe MF. Helicopter scene transport of trauma patients with nonlife-threatening injuries: a meta-analysis. *J Trauma* 2006; 60(6):1257-65.
- (8) Taylor CB, Stevenson M, Jan S, Middleton PM, Fitzharris M, Myburgh JA. A systematic review of the costs and benefits of helicopter emergency medical services. *Injury* 2010; 41(1):10-20.
- (9) Thomson DP, Thomas SH. Guidelines for air medical dispatch. *Prehosp Emerg Care* 2003; 7(2):265-71.
- (10) Association of Air Medical Services. Position Paper on the Appropriate Use of Emergency Air Medical Services. *J Air Med Transp*. 1990; 9(9):29-30, 32-3.
- (11) Newgard CD, Hedges JR, Adams A, Mullins RJ. Secondary triage: early identification of high-risk trauma patients presenting to non-tertiary hospitals. *Prehosp Emerg Care* 2007; 11(2):154-63.

- (12) Cudnik MT, Werman HA, White LJ, Opalek JM. Prehospital factors associated with mortality in injured air medical patients. *Prehosp Emerg Care*. 2012; 16(1):121-7.
- (13) Newgard CD, Hedges JR, Diggs B, Mullins RJ. Establishing the need for trauma center care: anatomic injury or resource use? *Prehosp Emerg Care* 2008; 12(4):451-8.
- (14) Kohn MA, Hammel JM, Bretz SW, Stangby A. Trauma team activation criteria as predictors of patient disposition from the emergency department. *Acad Emerg Med* 2004; 11(1):1-9.
- (15) Knopp R, Yanagi A, Kallsen G, Geide A, Doehring L. Mechanism of injury and anatomic injury as criteria for prehospital trauma triage. *Ann Emerg Med* 1988; 17(9):895-902.
- (16) Boyle MJ, Smith EC, Archer F. Is mechanism of injury alone a useful predictor of major trauma? *Injury* 2008; 39(9):986-92.
- (17) Stewart KE, Cowan LD, Thompson DM, Sacra JC. Factors at the scene of injury associated with air versus ground transport to definitive care in a state with a large rural population. *Prehosp Emerg Care* 2011; 15(2):193-202.
- (18) Shatney CH, Homan SJ, Sherck JP, Ho CC. The utility of helicopter transport of trauma patients from the injury scene in an urban trauma system. *J Trauma* 2002; 53(5):817-22.
- (19) Sullivent EE, Faul M, Wald MM. Reduced mortality in injured adults transported by helicopter emergency medical services. *Prehosp Emerg Care* 2011; 15(3):295-302.
- (20) Department of Health and Human Services. Pub 100-02 Medicare Benefit Policy. 10-22-2010.
Ref Type: Statute
- (21) Foo CP, Ahghari M, MacDonald RD. Use of geographic information systems to determine new helipad locations and improve timely response while mitigating risk of helicopter emergency medical services operations. *Prehosp Emerg Care* 2010; 14(4):461-8.
- (22) Bledsoe BE. Air medical helicopter accidents in the United States: a five-year review. *Prehosp Emerg Care* 2003; 7(1):94-8.

- (23) Rehn M, Eken T, Kruger AJ, Steen PA, Skaga NO, Lossius HM. Precision of field triage in patients brought to a trauma centre after introducing trauma team activation guidelines. *Scand J Trauma Resusc Emerg Med* 2009;17:1.
- (24) McVey J, Petrie DA, Tallon JM. Air versus ground transport of the major trauma patient: a natural experiment. *Prehosp Emerg Care* 2010; 14(1):45-50.
- (25) Brown JB, Stassen NA, Bankey PE, Sangosanya AT, Cheng JD, Gestring ML. Helicopters and the civilian trauma system: national utilization patterns demonstrate improved outcomes after traumatic injury. *J Trauma* 2010; 69(5):1030-4.

Table 1. State-mandated trauma triage criteria



fx = fracture

GCS = Glasgow Coma Score

MVC = motor vehicle collision

PTX = pneumothorax
Sys B/P = systolic blood pressure
TBI = traumatic brain injury
TBSA = total body surface area

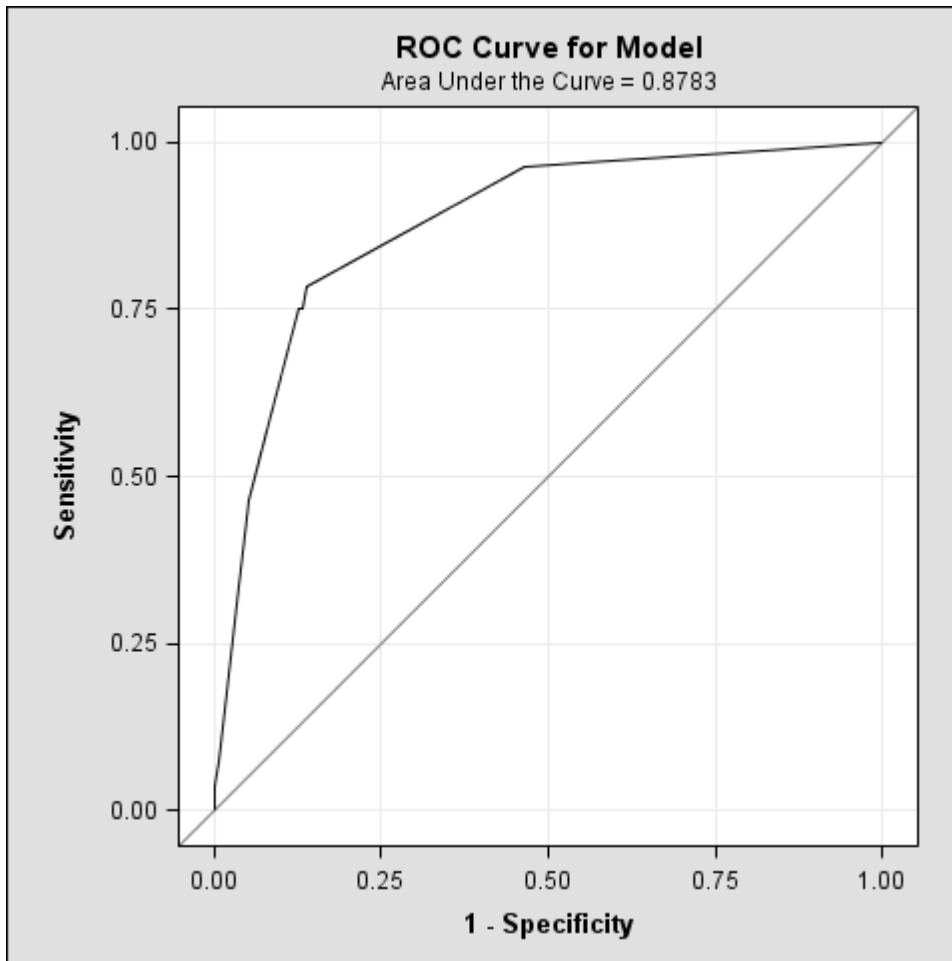
Table 2. Patient Demographics

Age, median [IQR]	39 [25-55]
Male (%)	272 (60%)
White (%)	361 (79%)
Rural Location (%)	270 (60%)
Distance, Miles [IQR]	38 [28-52]
Insurance	
Private (%)	322 (70%)
Self Pay (%)	50 (11%)
Medicare/Medicaid	77 (17%)
Workers	6 (1%)
Penetrating Injury (%)	23 (5%)
ED GCS <9 (%)	76 (17%)
ISS, median [IQR]	9 [5-17]
ISS >15 (%)	135 (30%)
EMS ETI (%)	111 (24%)
ICU Admit (%)	150 (33%)
ICU Stay >24 hours (%)	148 (33%)
Blood w/in 24 hours (%)	48 (11%)
Surgery w/in 24 h (%)	130 (29%)
ICU LOS, median [IQR]	0 [0-2]
Hospital LOS, median [IQR]	3 [1-8]
Mortality (%)	27 (6%)
Early Death, <24 hours (%)	8 (2%)

Table 3. Summary of pediatric trauma patients

	Admit (N = 70)	Discharge (N = 38)	Total (N = 108)
Age	10.15 \pm 3.73	9.62 \pm 5.48	9.96 \pm 4.40
Sex (male %)	52/70 (74.3%)	21/38 (55.3%)	73/108 (67.6%)
Race (white %)	61/70 (87.1%)	25/35 (71.4%)	86/108 (79.6%)
Type (blunt %)	63/70 (90%)	38/38(100%)	101/108 (93.5)
Outcomes (Admit only)			
Deaths	3/70 (4.3%)		
Surgery w/in 24 hrs	20/70 (28.6%)		
Prehospital intubation	11/70 (15.7%)		
Total intubation	13/70 (18.6%)		

Figure 1. Receiver-Operator Curve for CDR



Appendix A. Outcomes of Ohio Division of EMS's Trauma Research Grants Program

Cudnik MT, Werman HA, White LJ, Opalek JM: Prehospital factors associated with mortality in injured air medical patients. *Prehosp Emerg Care* 2012; 16:121-127.

Cudnik MT, Werman HA, White LJ, Opalek JM: Prospective validation of clinical decision rule for helicopter transport of injured patients (abstract). *Acad Emerg Med* 2012; 19(4):S285

Cudnik MT, Werman HA, White LJ, Opalek JM: Prehospital intubation by air medical providers is not associated with increased mortality (abstract). *Acad Emerg Med* 2012; 19(4):S334

2nd Annual Central Ohio Trauma Symposium:

Werman HA: Prehospital intubation by air medical providers is not associated with increased mortality. Columbus, OH. May, 2012

Werman HA: Prospective validation of clinical decision rule for helicopter transport of injured patients. Columbus, OH. May, 2012

Society of Academic Emergency Medicine – 2012 Annual Meeting

Cudnik MT: Prospective validation of clinical decision rule for helicopter transport of injured patients. Chicago, IL. May, 2012

Cudnik MT: Prehospital intubation by air medical providers is not associated with increased mortality. Chicago, IL. May, 2012

Ohio Department of Public Safety
Division of Emergency Medical Services
Office of Research and Analysis



Summary of Research Data Requests
2007



This document contains a brief summary of all requests that were made in 2007 for research data from the EMS Office of Research and Analysis.

The summary of each request contains the date the request was made, the reference number that the request was assigned, who made the request, a synopsis of what was requested, and finally, what data sources were used to fulfill the request.

The purpose of this document is to demonstrate to both the EMS and trauma care communities that the data they work diligently to collect and submit are not just being sent into a “black hole” but are, in fact, being used to improve care given to ill and injured people, as well as to enhance the systems delivering that care.

You may note that several requests have a summary that states “Unable to fulfill due to confidentiality restrictions.” We include these to reassure the providers of data that while we are eager for the data to be used to improve care, we are also very conscientious of the various privacy concerns of the patient and the providers of care, and adhere to the laws and rules that govern privacy.

The data sources listed in this document are abbreviated. Below are the translations for these abbreviations:

- Agency DB – Agency Database; houses information on each EMS agency in the state.
- Certifications DB – Certifications Database; houses information on the people who hold certification by the State of Ohio as EMT or firefighter
- Education DB – Education Database; houses information on all EMS and Fire educational institution allowed to operate in the State of Ohio.
- EMSIRS – The EMS Incident Reporting System; houses information on all emergency runs made by emergency medical services.
- Grants DB – Grants Database; houses information on the grant funds distributed to EMS agencies for training and equipment, as well as funds distributed for research into EMS and trauma care.
- TACR – Trauma Acute Care Registry; a module of the Ohio Trauma Registry, this houses cause of injury, treatment and outcome information on all seriously injured persons admitted to hospitals in the State of Ohio.
- TRR – Trauma Rehabilitation Registry; a module of the Ohio Trauma Registry, this houses admission and discharge assessments of functional impairment of trauma patients sent to inpatient rehabilitation facilities.

Finally, we would like to acknowledge all of the people across Ohio who work so hard to collect and submit the data stored in these databases that are used to make EMS and trauma care better for everyone. Without their care and attention to detail, none of this would be possible. Thank you, and well done.

Research Data Requests - 2007				
Date	Number	Organization	Summary of request	Data Source(s)
1/2/07	07-001	Xenia FD	Number of times diltiazem was administered in Region 2	EMSIRS
1/18/07	07-002	EMS Board	Multiple requests from the EMS Board for strategic planning sessions	EMSIRS, TACR
1/23/07	07-003	Xenia FD	Number of incidents in Region 2	EMSIRS
1/23/07	07-004	Stark County Safe Committee	Locations of all injury accidents in Stark County to be given to the Stark Co. Auditors office for mapping.	EMSIRS
1/29/07	07-005	US Sportsmen's Alliance	Number of traumatic brain injury incidents in Ohio annually; number of deaths due to traumatic brain injury; number of hospitalizations due to traumatic brain injury.	TACR
1/29/07	07-006	Florida EMS Advisory Council	Comparison of gross mortality of FL-defined geriatric patients (55+) and OH-defined geriatric patients (70+), specifically those with resp. rate >30, GSW to extremity, long bone fracture from motor vehicle crash, and degloving injury	TACR
1/24/07	07-007	---	Unable to fulfill due to confidentiality restrictions	
2/2/07	07-008	EMS Board - RPAB Region 1	Region 1 benchmark data with county breakdown	EMSIRS
2/5/07	07-009	EMS Division Staff	Number of Medical Directors with three or more agencies; average number of agencies handled by Medical Directors; and average number of incidents.	EMSIRS
2/7/07	07-010	Dayton FD	Number of EMTs and FFs per county for given list of counties	Certification DB
2/7/07	07-011	Ohio Department of Health	Busiest and slowest days for trauma admissions for each year	TACR
2/20/07	07-012	EMS Board - HB 375 Workgroup	Number of EMS transports per RPAB region; number of transports per Homeland Security region; number of EMS agencies per RPAB region; number of EMS agencies per Homeland Security region	EMSIRS, TACR
2/22/07	07-013	Summa Health Systems	Geriatric patients refusing EMS care	EMSIRS
2/27/07	07-014	Individual	Fax numbers for agencies in Ashtabula, Lake, Cuyahoga, Geauga, Trumbull, Mahoning, Portage, Summit, Stark, Columbiana, Carroll, Tuscarawas and Jefferson counties.	Agency DB
2/19/07	07-015	---	Unable to fulfill due to confidentiality restrictions	
2/28/07	07-016	Dayton Children's Hospital	Information on pediatric patients with abuse-related causes	TACR
3/2/07	07-017	Strategic Health Care (for Care Path EBM)	List of trauma centers that treat the most traumatic brain injury patients	TACR
3/2/07	07-018	CODES Program	Number of trauma patients transferred more than once	TACR
3/5/07	07-019	EMS Division Staff	Number of fire-based EMS agencies.	Agency DB
3/6/07	07-020	Summa Health Systems	Geriatric refusal study additional information	EMSIRS
3/8/07	07-021	Cleveland EMS	Large city EMS performance improvement data for comparison	EMSIRS
3/9/07	07-022	Strategic Health Care (for Care Path EBM)	Count of traumatic brain injury patients by county of injury	TACR
3/13/07	07-023	Columbus Children's Hospital	Data on pediatric spleen injuries	TACR
3/14/07	07-024	Akron Children's Hospital	Top two discharge diagnoses from specified 17 county area	TACR
3/22/07	07-025	Wooster Twp FD	List of individuals and their certifications that are shown as being associated with the Wooster Township Fire Department.	Agency DB
3/22/07	07-026	Central Ohio Trauma System	Emergency department length of stay data for COTS member hospitals	TACR
3/30/07	07-027	EMS Board - EMS for Children	Total number of injured children (<=14 y/o) in OTR and total number of children who died in last complete 12 month period	TACR
3/28/07	07-028	Canton Repository	All runs made in Stark County, heavily de-identified.	EMSIRS
3/29/07	07-029	EMS Division Staff	Classifications of equipment, training and training equipment purchased with grant funds	Grants DB

Research Data Requests - 2007				
Date	Number	Organization	Summary of request	Data Source(s)
3/30/07	07-030	---	Unable to fulfill - requested data not collected	
4/4/07	07-031	EMS Public Information Officer	Number of EMS runs made in Franklin County	EMSIRS
4/9/07	07-032	---	Unable to fulfill - requested data not collected	
4/12/07	07-033	Voinovich Center for Morgan County's Family and Children First Council	Number of children transported for injuries, cross-tabulated by age group and cause for Morgan County and Ohio	EMSIRS
4/17/07	07-034	EMS Board	Contact information on Basic and Intermediate services in Ohio	Agency DB
4/20/07	07-035	Individual	Count of EMTs/FF in Champaign, Darke, Greene, Miami, Montgomery, Preble and Shelby counties.	Certification DB
4/25/07	07-036	Miami Valley Hospital	EMS transport volume data for given counties and given receiving hospitals	EMSIRS
5/1/07	07-037	EMS EXPO	Addresses of Ohio agencies	Agency DB
5/2/07	07-038	---	Unable to fulfill due to confidentiality restrictions	
5/17/07	07-039	EMS Division Staff	Count of dual EMT/firefighter certificate holders	Certification DB
5/14/07	07-040	EMS Public Information Officer	Pediatric injury data for trauma season promotions/releases	EMSIRS, TACR
5/22/07	07-041	SUNY Upstate Medical University	Fill out survey regarding state protocols for giving glucose, dextrose and glucagon by cert level	EMSIRS
5/23/07	07-042	Harrison County Commissioners	Time segment benchmarks for state, Region 6 and Harrison County	EMSIRS
5/30/07	07-043	University Hospital	Number of cardiac-related calls in Hamilton, Butler, Warren, Clermont and Clinton Counties	EMSIRS
5/31/07	07-044	---	Unable to fulfill due to confidentiality restrictions	
6/6/07	07-045	EMS Board - EMS Medical Director	Medical Directors for Williams, Fulton, Lucas, Henry, Paulding, Putnam, Mercer, Allen, Ottawa and Logan	Agency DB
6/6/07	07-046	Trumbull Memorial Hosp	Region 10 volume of trauma.	TACR
6/6/07	07-047	Ohio Department of Health	Compare EMS times for CVA patients pre- and post- Advanced Stroke Life Support training	EMSIRS
6/11/07	07-048	EMS Public Information Officer	Count of ATV injuries	TACR
6/5/07	07-049	Cleveland Clinic	Various care-related data fields for Cleveland area trauma victims	TACR
6/25/07	07-050	Lucas Co. Safe Communities	Leading causes of death and injury in Lucas County	TACR
7/11/07	07-051	Safe Kids Greater Toledo	Count by incident county, patient age, patient gender, patient race and mechanism of injury.	TACR
7/16/07	07-052	EMS Board - EMS for Children	Count of destination determination for pediatric patients	EMSIRS
7/18/07	07-053	Ohio ACEP	Average response times for background info on HB 212	EMSIRS
7/17/07	07-054	Akron Children's Hospital	Count of pediatric transports broken down by trauma vs medical. Percentage of pediatric runs compared to overall runs. # of IV/IO and # of ETT (attempts/successful)	EMSIRS
7/31/07	07-055	Trumbull Memorial Hospital	Mortality causes	TACR
7/25/07	07-056	NW Ohio Regional Trauma Registry	Risk-adjusted data on trauma patients transferred from an emergency department to a trauma center	TACR
8/1/07	07-057	Clermont County Health district	Geriatric fall data for Clermont County	EMSIRS
8/1/07	07-058	ESO Solutions	Requested the agency list in excel format.	Agency DB
8/6/07	07-059	EMS Division Staff	Report on EMS agency grantees with outstanding balance over \$300.00.	Grants DB
8/3/07	07-060	OSU Emergency medicine	Data on geriatric trauma patients and mortality	TACR
8/7/07	07-061	Individual	Provide performance improvement reports as on website for specified area	EMSIRS
8/7/07	07-062	EMS Division Staff	Count by birth month of dual certification holders.	Certification DB
8/14/07	07-063	---	Unable to fulfill - requested data not collected	
8/15/07	07-064	Red Cross	Count of patients by nature of call by disposition.	EMSIRS

Research Data Requests - 2007				
Date	Number	Organization	Summary of request	Data Source(s)
8/16/07	07-065	Greater Cincinnati MMRS	The total number of certified EMTs residing within Adams, Brown, Butler, Clermont, Clinton, Hamilton, Highland and Warren counties	Certification DB
8/21/07	07-066	OSU Emergency Medicine	Airway management information on trauma patients admitted to hospitals	TACR
8/29/07	07-067	Summa Health Systems	Airway procedures on the ten squads under their medical direction and same for Region 8 as a whole.	EMSIRS
9/4/07	07-068	St. Elizabeth Medical Center	Region 10 medical directors	Agency DB
9/12/07	07-069	Individual	Benchmarks for Region 1 with county breakdowns.	EMSIRS
9/11/07	07-070	KJ Trauma Consulting LLC	Level 3 trauma center data	TACR
9/10/07	07-071	Central Ohio Trauma System	Trauma scene time data	EMSIRS
9/12/07	07-072	Central Ohio Trauma System	Trauma center autopsy rates	TACR
9/17/07	07-073	NW Ohio Regional Trauma Registry	Information on trauma patients admitted to specified hospitals in NW Ohio	TACR
9/18/07	07-074	EMS Board - EMS for Children	Data to mirror geriatric study for ages 18 and under.	TACR
9/21/07	07-075	EMS Division Staff	Grant distribution graphs.	Grants DB
9/24/07	07-076	Mount Carmel Hospital	Count of incidents from Franklin, Fairfield, Licking, Union, Delaware, Pickaway, Madison and Fayette counties	EMSIRS
9/26/07	07-077	NW Ohio Regional Trauma Registry	List of Region 10 hospitals and total number of TACR records submitted by those hospitals (aggregate)	TACR
10/8/07	07-078	Miami Valley Hospital	EMS transport volume data for given counties and given receiving hospitals	EMSIRS
10/10/07	07-079	NW Ohio Regional Trauma Registry	Complication data for obese trauma patients	TACR
10/18/07	07-080	The Daily Record	Create regional performance improvement benchmark report for Holmes County and for volunteer agencies in Wayne county.	EMSIRS
10/19/07	07-081	Southeast Regional Medical Center	Level 3 trauma center patient with operative procedures summary	TACR
10/16/07	07-082	Nationwide Children's Hospital	Frequency of intubation of pediatric scald patients	TACR
10/16/07	07-083	---	Unable to fulfill due to confidentiality restrictions	
10/24/07	07-084	Univ. of Illinois, Chicago	Data on trauma patients with agriculture-related injuries	TACR
10/26/07	07-085	Individual	Count of gunshot wounds in Union county by year and type of firearm; on-scene time segment for GSW patients.	EMSIRS, TACR
10/30/07	07-086	Union Hospital	EMS helicopter use in Tuscarawas county	EMSIRS
11/5/07	07-087	EMS Board - Grants	Any EMS agency grantee from 2006-2007 who have a balance or has never reported an invoice.	Grants DB
11/8/07	07-088	Nationwide Children's Hospital	Number of children injured in Franklin County and Ohio	EMSIRS
11/14/07	07-089	EMS Division Staff	Award vs Budget reported and percentage of budget award represents.	Grants DB
11/7/07	07-090	Southwest General Hospital	Count of patients transported to SGH by 16 specific departments	EMSIRS
11/15/07	07-091	Bethesda North Hospital	List of all active schools with coordinator names, school addresses	Education DB
11/13/07	07-092	NW Ohio Regional Trauma Registry	Expanded version of the obese trauma patient study	TACR
11/16/07	07-093	EMS Board - RPAB Region 1	Region 1 benchmark data.	EMSIRS
11/13/07	07-094	NW Ohio Regional Trauma Registry	Risk-adjusted data on trauma patients transferred from an ED to a trauma center	TACR
11/13/07	07-095	NW Ohio Regional Trauma Registry	Traumatic brain injury data for comprehensive report	TACR
11/16/07	07-096	Safe Kids	Non-fatal injury data on pediatric patients in Erie, Huron, Ottawa, Sandusky counties.	TACR
11/26/07	07-097	OSU Emergency Medicine	Count of EMS incidents per year for 2006 and 2007.	EMSIRS
11/29/07	07-098	Fox 8 News Cleveland	Data on EMS response to and treatment of cardiac arrests in metropolitan areas and several specific counties	EMSIRS
12/17/07	07-099	Ohio Health	Count of EMTs	Certification DB

Research Data Requests - 2007				
Date	Number	Organization	Summary of request	Data Source(s)
12/19/07	07-100	State Fire Marshall Ohio Fire Academy	Count of the number of certified firefighters and EMS providers by county.	Certification DB
12/19/07	07-101	EMS Board - Trauma Committee	Count of geriatric trauma pts who would have been triaged to trauma centers in 2006 under new triage rules.	TACR
12/20/07	07-102	Individual	Count of EMS agencies entering EMSIRS data directly through website	EMSIRS
11/9/07	07-103	EMS Board - Trauma Committee	Summary analysis of estimated impact of geriatric triage rules.	TACR