

Introduction



“If a disease were killing our children at the rate unintentional injuries are, the public would be outraged and demand that this killer be stopped.”

C. Everett Koop, MD, ScDC. ScD
Former US Surgeon General
Former General Chairman, The National SafeKids Campaign

Injuries in Indiana Children & Teens

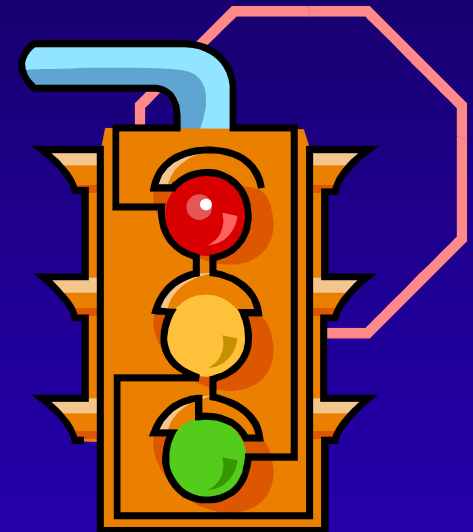


- The leading cause of death for elementary school age children was unintentional injuries with 102 deaths (2002-05).
- The leading cause of death for adolescents was unintentional injuries with 739 deaths.

Injuries in Indiana Children & Teens



- MVCs were by far the leading cause of injury/death among children and teens (aged 10 to 19 years).
- 76% of unintentional injury deaths and 42 percent of all hospital admissions resulted from traffic crashes.





Introduction

- There is also a monetary cost from trauma.
- Just the subset of alcohol- related motor vehicle crashes (only 24% of Indiana's crash costs) cost Hoosiers an estimated \$2.4 billion in 1998.
- Add the remainder of the motor vehicle crashes along with all of the other causes of injuries, and the cost is estimated to be in the \$10's of billions.

Introduction



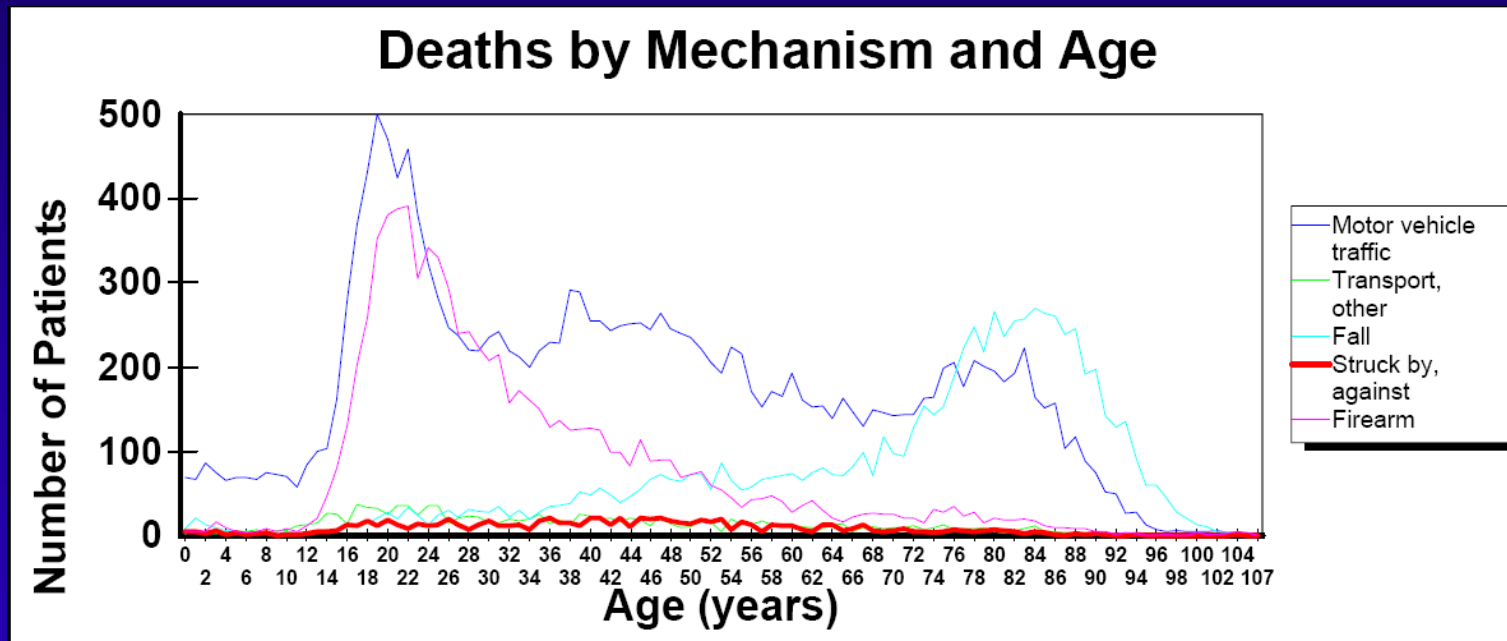
- **Injury is a major public health problem across the U.S.**
 - **Leading cause of death in 1st 4 decades of life**
 - **Leading cause of loss of productivity**
 - **Over 300 million injuries, 4 million deaths worldwide**
- **Despite obvious magnitude, little public focus**
- **Has been the “neglected disease” since 1966**
- **Significant progress in individual patient care**
- **Trauma systems shown to save lives**
- **Few stable solutions at the public health level**



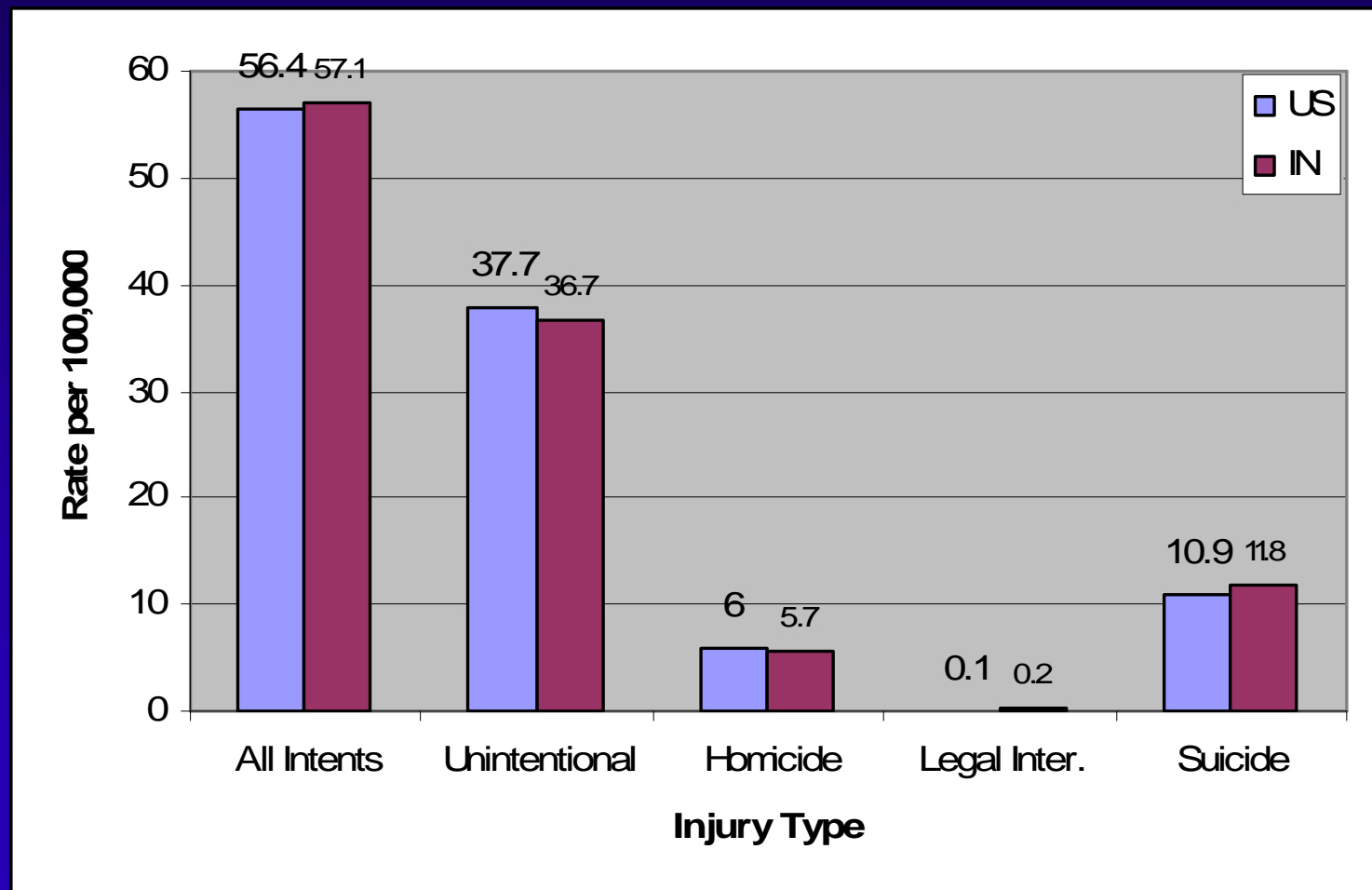
Introduction

- A comprehensive system of trauma care is an essential part of the public safety net.
- Lives and productive years are being lost
- Injury is a problem that affects everyone
- This is a problem that can be solved
 - Public awareness
 - Legislative support
 - Appropriate framework and system-level view
 - Dedicated system of providers

Deaths by Age and Mechanism NTDB Annual Report 2005



Injury Death Rates, U.S. Compared with Indiana, 2002-2005



State of Indiana: Trauma Systems Consultation Site Visit Team



- Christoph Kaufmann, MD, MPH, FACS Team Leader
- Jane Ball, RN, DrPH ACS Consultant
- Theodore Delbridge, MD, MPH, FACEP Emergency Physician
- Thomas Esposito, MD, MPH, FACS Trauma Surgeon
- Heidi Hotz, RN Trauma Program
Manager
- Janet Griffith Kastl, MA State EMS Director
- Nels Sanddal, MS, REMT-B ACS Consultant
- Mindy Baker ACS Staff
- Holly Michaels ACS Staff

Objective



- To help promote a sustainable effort in the graduated development of an inclusive trauma system for Indiana

American College of Surgeons

COMMITTEE ON TRAUMA



Consultation Program for Trauma Systems



- Consultation, not verification
- Multi-disciplinary team, tailored to state needs
- Data collected through:
 - Review of state questionnaire
 - Review of other available data
 - Interactive session with stakeholders

American College of Surgeons

COMMITTEE ON TRAUMA



Consultation Program for Trauma Systems



- Consensus-based process
- Recommendations derived independently
- Standard is an inclusive trauma system based on public health model
- Our priority is the best interest of the patient



Welcome to

Indiana

Crossroads of America

AREA

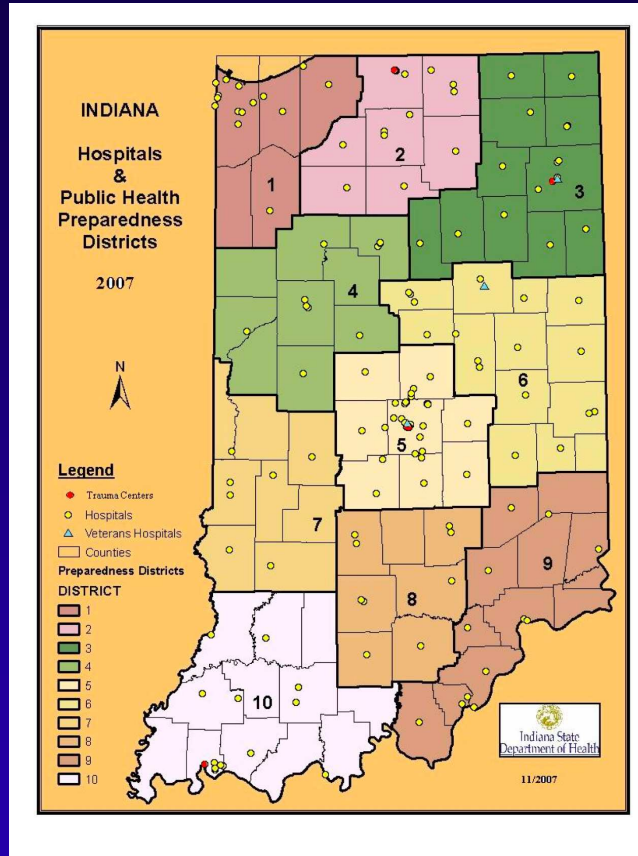


Indiana



- Hoosier State
- Area about 36,418 square miles
- Population about 6,345,000
- Population density 169/sq mi = 17th
- First among states for miles of interstate highway per land area
- 50th among states for per capita public health funding

Current Status



- Public Health Preparedness Regions
- Trauma System Advisory Taskforce

Current Status



“We are all in this together”

Merry Addison, RN

Current Status



- 129 acute care hospitals with emergency departments
- 7 trauma centers (verified through the ACS VRC process)
 - 2 adult level I
 - 1 pediatric level I
 - 4 level II
- Successful examples of regional implementation

Trauma System Advisory Taskforce Conclusions



- The goal of a statewide trauma system is preventing injuries and coordinating care of injured patients to accomplish decreased death and disabilities due to trauma.
- It is desirable for all Indiana hospitals to eventually be part of a statewide trauma system, based on the level of care each hospital is able to provide.
- System participation by hospitals would be voluntary.
- Collaboration between emergency medical services, hospitals, rehabilitation facilities and public health is needed.

Trauma System Advisory Taskforce Conclusions



- A statewide trauma registry is necessary because it provides a proven mechanism to examine trauma patient care data on a confidential basis.
- All hospitals participating in the system must provide data to the state trauma registry.
- There should be a legislatively identifiable and sustainable source of financing.

Advantages & Assets



- Well-organized EMS resources, EMT training, Breadth of aero-medical coverage
- Current trauma centers fairly well-distributed, Informal statewide trauma system
- Adequate rehabilitation facilities/resources already available
- Substantial sources of data
- Strong existing injury prevention programs/agencies/committees/framework

Challenges and Vulnerabilities



- **Emergency Medical Services**

- Uneven access to and quality of EMS throughout state, especially in rural areas (counties w/ no hospital/paramedics/911)
- EMT & medical director training/continuing education is inadequate, inconsistent, inaccessible
- Inadequate funding
- Inadequate communications system

- **Trauma Care in Hospitals**

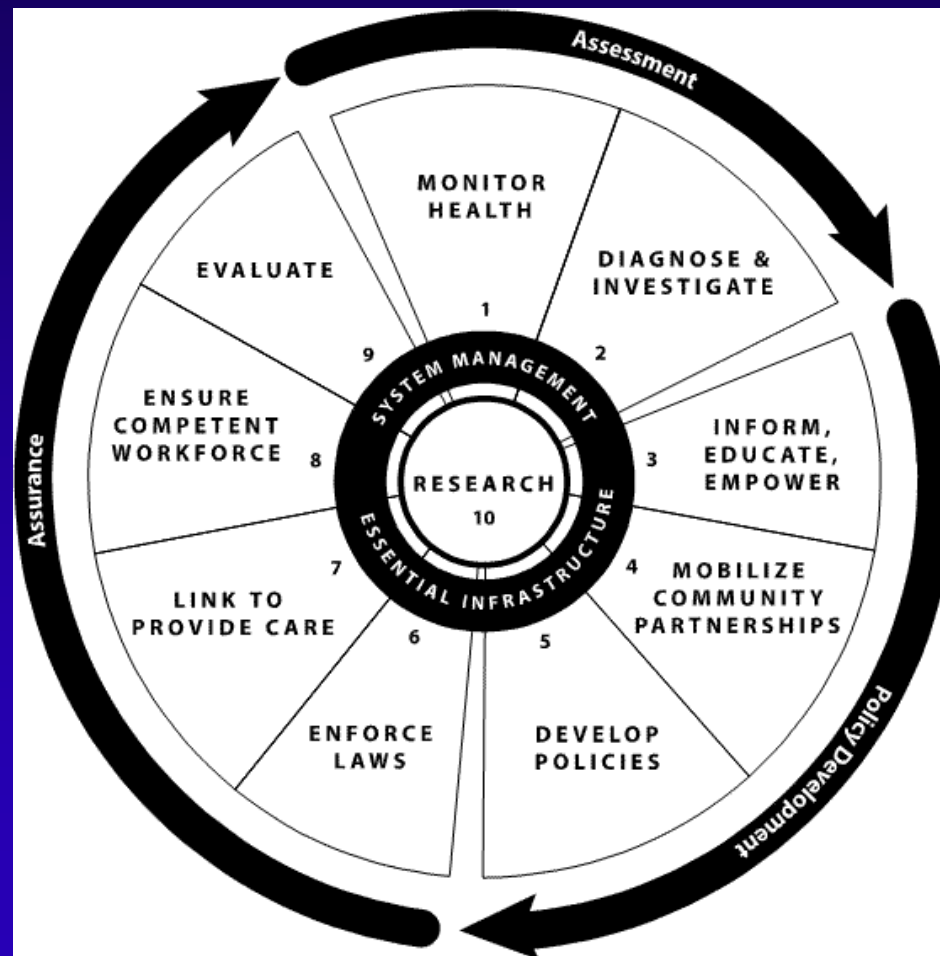
- Cost/lack of funding/staffing shortages
- Turf battles/competition/politics
- Trauma centers currently concentrated in a few areas, especially for pediatrics

Challenges and Vulnerabilities



- **Special Needs: Pediatrics and Geriatrics**
 - Lack of education pediatric and geriatric needs
 - Not enough pediatric surgeons and PICU's
- **Trauma Registries**
 - Existing databases not linked
 - Lack of clear mission/authority/leadership by state agencies & Cost/lack of funding
- **Injury Prevention**
 - Lack of legal immunity for providers of data, potential loss of confidentiality, Competition among providers
 - Data insufficient, incomplete, or uncoordinated
 - Agencies/programs uncoordinated and or/duplicative
 - Inadequate funding / Lack of usable E-code data
 - Lack of statewide "system"

Public Health Model



Themes



- You are closer than you think – many components are already in place
- You have more resources than you think and many are underutilized.
- Timing is right for system development efforts
- In the current fiscal climate, system implementation can begin with redirection of current assets
- Public perspective and those of elected representatives about the role of EMS and trauma care can and should be improved.
- Indiana is poised to develop a model trauma system



Executive Summary

Statutory Authority



- Amend PL 155-2006, trauma system law, to include establishment of a Governor appointed state trauma advisory board (STAB) that is multidisciplinary to advise the Department of Health in developing, implementing and sustaining a comprehensive statewide trauma system.

System Leadership



- **Develop an Office of Emergency Care within the Department of Health that includes both the trauma program and EMS.**

Lead Agency and Human Resources



- Hire sufficient staff based on the recommendations identified in the trauma system plan.

Trauma System Plan



- **Develop a plan for statewide trauma system implementation using the broad authority of the 2006 trauma system legislation.**

Financing



- **Develop a detailed budget proposal for support of the infrastructure of the state system within the trauma system plan.**

Definitive Care



- **Perform a needs assessment to determine the number and level of trauma hospitals needed within the state**
 - **All hospitals should have a role in the inclusive trauma care system.**

Emergency Medical Services



- **Recruit and hire a qualified State Trauma/EMS Medical Director who will provide clinical expertise, oversight, and leadership for the state's Trauma and EMS systems.**

System Coordination and Patient Flow



- **Develop, approve, and implement prehospital trauma triage guidelines as well as inter-facility transfer criteria.**

Disaster Preparedness



- **Involve the State Trauma/EMS Medical Director in statewide disaster planning initiatives.**

System-Wide Evaluation and QA



- **Create a PI Subcommittee to develop a trauma system performance improvement plan.**
 - **Develop a PI process template as a resource tool for all trauma centers and participating hospitals**
 - **Standardize a subset of trauma PI activities for each trauma center and participating hospital.**
 - **Implement regional PI processes that feed into the statewide trauma PI processes**

Trauma Management Information Systems



- Amend or create a Statute with specific language to protect the confidentiality and discoverability of the Trauma Registry and of trauma system performance improvement activities.
- Create and implement a Trauma System Information Management Plan.

Closing Comments



- Christoph Kaufmann, MD, MPH, FACS Team Leader
- Jane Ball, RN, DrPH ACS Consultant
- Theodore Delbridge, MD, MPH, FACEP Emergency Physician
- Thomas Esposito, MD, MPH, FACS Trauma Surgeon
- Heidi Hotz, RN Trauma Program
Manager
- Janet Griffith Kastl, MA State EMS Director
- Nels Sanddal, MS, REMT-B ACS Consultant
- Mindy Baker ACS Staff
- Holly Michaels ACS Staff

American College of Surgeons

COMMITTEE



ON TRAUMA

Consultation Program for Trauma Systems



One day in the future when
your trauma system is in
place, Hoosiers will ask:
How did they DO that?

Thank You !