



**Indiana**  
Department  
of  
**Health**

Division of  
**Trauma &  
Injury Prevention**

# Indiana Trauma and Injury Prevention Strategic Plan

January 1, 2021 – December 31, 2022

# Contents

- Mission statement ..... 3
- Vision..... 3
- Core values..... 3
- Strategic priorities..... 3
- What is a trauma system? ..... 4
- Trauma system elements..... 4
- Burden of injuries in Indiana..... 5
- Indiana efforts to reduce injuries and violence ..... 8
- System development ..... 10
- Pre-hospital ..... 13
- Trauma Center/Emergency Department ..... 15
- Acute Medical Care ..... 17
- Rehabilitation..... 18
- Time-sensitive systems ..... 19
- Injury Prevention and Outreach ..... 19
- Injury Prevention and Trauma Public Education ..... 22
- Drug Overdose Prevention ..... 23
- Injury Surveillance and Quality Improvement ..... 25
- Appendix ..... 30
- Indiana trauma system history..... 30

## Mission statement

The mission of the Indiana Department of Health's Division of Trauma and Injury Prevention is to develop, implement and provide oversight of a statewide comprehensive trauma care system that:

- Prevents injuries
- Saves lives
- Improves the care and outcomes of trauma patients

## Vision

Prevent injuries in Indiana

## Core values

- **Health Equity** – We place equity at the center of our work to ensure every Hoosier, regardless of individual characteristics historically linked to discrimination or exclusion, has access to social and physical supports needed to promote health from birth to end of life.
- **Communication** – We provide stakeholders and the public accurate and up-to-date scientific data and provide education and resources regarding utilization of evidence-informed practices in a timely manner.
- **Innovation** – We continue to learn, research evidence-informed practices, advance our services, and be open to new methods, ideas, and products that help build and expand upon the services we provide.
- **Integrity** – We are honest, trustworthy, and transparent. We uphold our standards and do the right things to achieve the best public health and safety outcomes.

## Strategic priorities

The Division of Trauma and Injury Prevention values the following Indiana Department of Health (IDOH) priorities that will have the greatest impact on the division's operations and its ability to deliver on its mission:

- Ensure access to high-quality, evidence-based, and continuously improving services and resources that reduce health disparities and proactively address public health threats, leading to equitable health outcomes.
- Implement a statewide, collaborative approach to improving Indiana's health outcomes.
- Improve staff, customer, and partner experiences with consistent, efficient, effective, and data-driven services and work processes.

- Attract and retain a dedicated, knowledgeable, and diverse workforce to support strong public health outcomes in Indiana.
- Improve financial infrastructure, management, and data-informed decision making.

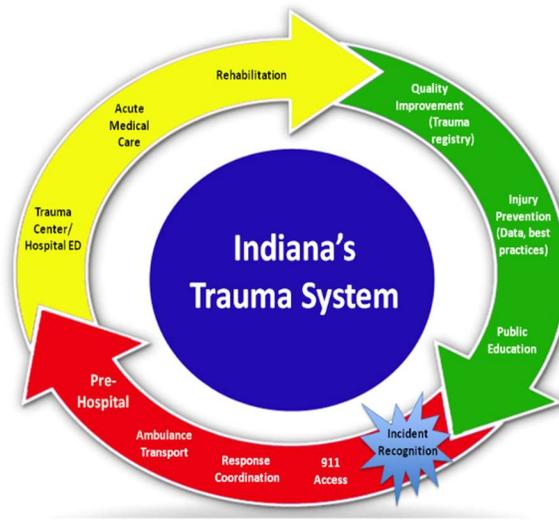
## What is a trauma system?

An ideal trauma system includes all the components identified with optimal trauma care, such as prevention, access, pre-hospital care and transportation, acute hospital care, rehabilitation, and research activities. The term “inclusive” trauma system is used for this all-encompassing approach, as opposed to the term “exclusive” system, which focuses only on major trauma centers. It must be noted, however, that an “inclusive” system does not mean an unplanned or unregulated system. Each facility should have an identifiable role based on the resources and needs of the community rather than a self-selected level of designation. Although this document still addresses trauma center verification and consultation, it also emphasizes the need for various levels of trauma centers to cooperate in the care of injured patients to avoid wasting precious medical resources. The intent of this emphasis is to provide optimal care in a cost-effective manner.

## Trauma system elements

A trauma system is an organized approach to treating patients with acute injuries. Trauma stakeholders need to evaluate the entire trauma system to get a better understanding of the continuum of trauma patient care in Indiana. While Indiana is one of six states without an integrated statewide trauma system, we have key components of a system:

- Emergency medical services (EMS) providers
- Trauma centers
- Trauma registry
- Rehabilitation facilities



## Burden of injuries in Indiana

Injuries are caused by acute exposure to physical agents, such as mechanical force or energy, heat, electricity, chemicals and ionizing radiation, in amounts or at rates that cause bodily harm. Injury may be either unintentional or intentional (violence-related, including assault, homicide and suicide) and can lead to death, disability and other lifelong health consequences.

Unintentional injury accounts for the vast majority of injury-related deaths and can be defined as involving injury or poisoning by unpremeditated measures. Unintentional injury is also the leading cause of years of potential life lost in Indiana, which is a measure of premature mortality and early death. Regardless of intention, injury has emerged as a public health issue leading to significant morbidity and mortality.

Injury is the leading cause of death for Indiana residents ages 1 through 44 years and the fourth-leading cause of death overall. In 2019, there were 5,476 injury deaths at an age-adjusted rate of 79.87 per 100,000, compared to a national rate of 71.09 per 100,000. Of the 5,476 injury deaths, 972 Hoosiers died by suicide and 466 died from homicide. The leading causes of unintentional injury death in Indiana in 2019 were poisoning (1,624 deaths), motor vehicle collisions (839 deaths) and falls (541 deaths). In the same year, more than 40,000 Hoosiers suffered a traumatic brain injury (TBI), which resulted in 1,242 deaths. The highest number of TBI-related deaths were among 25- to 34-year-olds.

The injury pyramid provides a visualization of the injury spectrum, illustrating the reality that injury-related deaths represent a small percentage of overall injury-related outcomes. While deaths are the most devastating outcome related to injuries, the analysis of hospitalization and emergency department visits related to injury provides additional useful information. Although injury deaths are significant, nonfatal injuries occur more frequently. Although there were over 5,000 injury deaths in Indiana, more than 50,000 Hoosiers are hospitalized and more than 775,000 visit emergency departments for injuries each year.

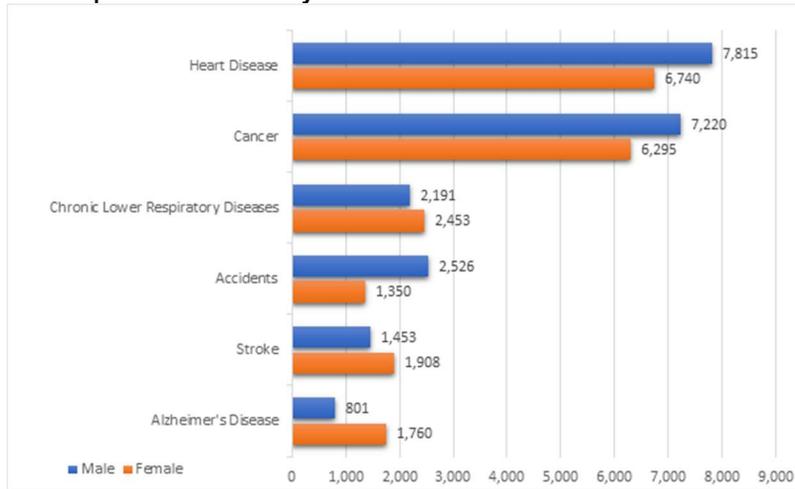


*Adapted from Safe States Alliance (formerly State and Territorial Injury Prevention Directors Association): Safe States, 2003 Edition*

The financial consequences from injuries are extensive. The CDC estimates that the lifetime medical costs from deaths due to injuries of all intents in 2014 totaled \$5.2 billion for the state of Indiana. Total lifetime costs per capita ranged from \$1,233 in New Mexico to \$491 in New York (Indiana was in the middle at \$794). These totals do not include other costs, such as impacts on the quality of life.

# Leading Causes of Death

Total Population, by Sex: Indiana Residents, 2016



Produced By: Indiana Department of Health, Division of Trauma and Injury Prevention  
 Data Source: CDC WISQARS, National Center for Health Statistics (NCHS), National Vital Statistics System.

## 10 Leading Causes of Injury Deaths, Indiana 2019, All Races, Both Sexes

Rank	Age Groups										All Ages
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Congenital Anomalies 129	Unintentional Injury 40	Unintentional Injury 20	Unintentional Injury 18	Unintentional Injury 284	Unintentional Injury 605	Unintentional Injury 626	Malignant Neoplasms 853	Malignant Neoplasms 2,626	Heart Disease 11,484	Heart Disease 14,555
2	Short Gestation 84	Congenital Anomalies 10	Congenital Anomalies ---	Suicide 17	Homicide 146	Suicide 182	Heart Disease 247	Heart Disease 774	Heart Disease 1,895	Malignant Neoplasms 9,672	Malignant Neoplasms 13,515
3	SIDS 55	Malignant Neoplasms ---	Cerebrovascular ---	Malignant Neoplasms ---	Suicide 117	Homicide 124	Malignant Neoplasms 227	Unintentional Injury 532	Chronic Low Respiratory Disease 641	Chronic Low Respiratory Disease 3,832	Chronic Low Respiratory Disease 4,644
4	Unintentional Injury 48	Heart Disease ---	Chronic Low Respiratory Disease ---	Congenital Anomalies ---	Heart Disease 35	Heart Disease 99	Suicide 153	Liver Disease 180	Unintentional Injury 537	Cerebrovascular 2,874	Unintentional Injury 3,876
5	Atelectasis 15	Homicide ---	Malignant Neoplasms ---	Homicide ---	Malignant Neoplasms 34	Malignant Neoplasms 85	Liver Disease 81	Suicide 165	Diabetes Mellitus 385	Alzheimer's Disease 2,538	Cerebrovascular 3,381
6	Respiratory Distress 15	Chronic Low Respiratory Disease ---	Septicemia ---	Chronic Low Respiratory Disease ---	Congenital Anomalies 11	Cerebrovascular 22	Homicide 78	Diabetes Mellitus 144	Liver Disease 322	Diabetes Mellitus 1,451	Alzheimer's Disease 2,581
7	Homicide 13	Influenza & Pneumonia ---	Benign Neoplasms ---	Five Tied ---	Diabetes Mellitus ---	Liver Disease 22	Diabetes Mellitus 57	Chronic Low Respiratory Disease 123	Cerebrovascular 301	Nephritis 1,185	Diabetes Mellitus 2,045
8	Maternal Pregnancy Comp. 13	Anemias ---	Heart Disease ---	Five Tied ---	Influenza & Pneumonia ---	Diabetes Mellitus 18	Cerebrovascular 45	Cerebrovascular 108	Septicemia 182	Unintentional Injury 1,164	Nephritis 1,388
9	Bacterial Sepsis ---	Four Tied ---	Homicide ---	Five Tied ---	Cerebrovascular ---	Complicated Pregnancy 13	Septicemia 32	Septicemia 64	Suicide 155	Septicemia 879	Septicemia 1,154
10	Two Tied ---	Four Tied ---	---	Five Tied ---	Chronic Low Respiratory Disease ---	Congenital Anomalies 13	Chronic Low Respiratory Disease 23	Nephritis 55	Nephritis 142	Parkinson's Disease 771	Suicide 972

WISQARS Note: Counts of less than 10 deaths have been suppressed (---).

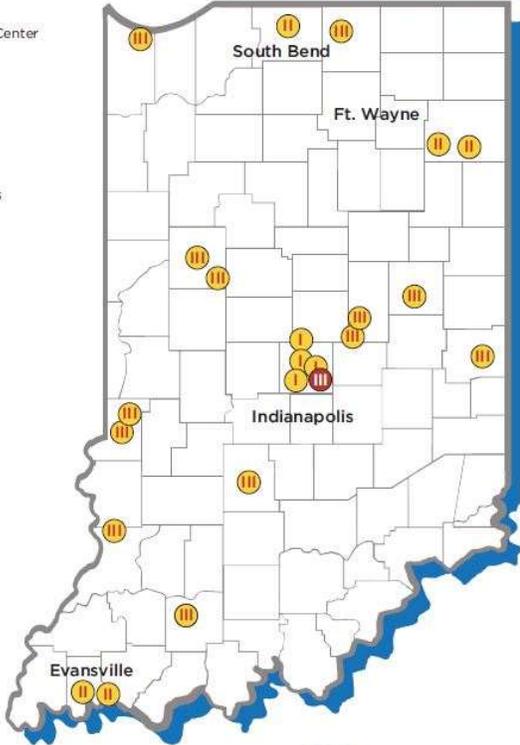
Produced By: Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC  
 The blue squares represent unintentional deaths and the red and green squares represent violence-related deaths.  
 Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System

# Trauma Centers in Indiana

## Trauma Centers *in Indiana*

- Level I**
  - Indianapolis**
    - Eskenazi Health
    - IU Health Methodist Hospital
    - Riley Hospital for Children at IU Health
    - Ascension St. Vincent Hospital
- Level II**
  - Evansville**
    - Deaconess Hospital
    - Ascension St. Vincent - Evansville
  - Ft. Wayne**
    - Lutheran Hospital of Indiana
    - Parkview Regional Medical Center
  - South Bend**
    - Memorial Hospital of South Bend
- Level III**
  - Anderson**
    - Ascension St. Vincent Regional Hospital
    - Community Hospital - Anderson
  - Bloomington**
    - IU Health Bloomington
  - Crown Point**
    - Franciscan Health - Crown Point
  - Elkhart**
    - Elkhart General Hospital
  - Terre Haute**
    - Terre Haute Regional

- Jasper**
  - Memorial Hospital and Health Care Center
- Lafayette**
  - Franciscan Health - Lafayette East
  - IU Health - Arnett Hospital
- Muncie**
  - IU Health - Ball Memorial Hospital
- Richmond**
  - Reid Hospital & Health Care Services
- Terre Haute**
  - Union Hospital - Terre Haute
- Vincennes**
  - Good Samaritan Hospital
- Provisional**
  - Indianapolis**
    - Franciscan Health - Indianapolis



**Total Trauma Centers in Indiana\***

- Level I = 4
- Level II = 5
- Level III = 13
- Provisional = 1

**Total = 23**

\* Total includes current and in process Trauma Centers



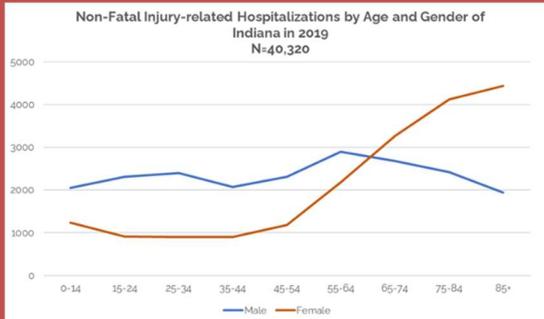
As of 8/19/20

# SNAPSHOT OF THE INDIANA TRAUMA SYSTEM

VERIFICATION	<b>22 Trauma Centers</b>
	4 Level I
	5 Level II
	13 Level III
DESIGNATION	<b>1 "In Process" Trauma Center</b>
	1 Level III

## Indiana Trauma Registry Reporting

### Hospitals Reporting Trauma Records



**5**

The top five causes of injury leading to hospitalization in 2019 were:

- 1 Falls
- 2 Motor vehicle/Traffic
- 3 Struck by/Against
- 4 Firearm
- 5 Cut/Pierce

Indiana Trauma Registry, 2019

## Indiana efforts to reduce injuries and violence

A variety of strategies can be effective for preventing injuries and mitigating their effects. These strategies generally fall within three categories: legal or policy changes, product and environmental safety developments, and education. While the burden remains high, Indiana has implemented policies, programs and prevention efforts to reduce injury and trauma morbidity and mortality.

The Trust for America’s Health published the 2017 *The Facts Hurt: A State-By-State Injury Prevention Policy Report* with funding from the Robert Wood Johnson Foundation. The report focused on a series of 10 indicators that provides a snapshot of the efforts states are making to prevent and reduce injuries and violence. Indiana met seven of the 10 indicators; although not a comprehensive evaluation of injury and violence prevention, the measures do provide information about the strengths and weaknesses of each state’s injury prevention program.

Indicator	Indiana Status	Number of States Meeting Indicator
1. Does the state have a primary seat belt law?	Yes	34 states and Washington, D.C., have primary seat belt laws.
2. Does the state require mandatory ignition interlocks for all convicted drunk drivers, even first-time offenders?	Yes	21 states require mandatory ignition interlocks for all convicted drunk drivers, even first-time offenders.
3. Does the state require car seats or booster seats for children up to at least the age of 8?	Yes	35 states and Washington, D.C., require that children ride in car seats or booster seats up to at least the age 8.
4. Does the state restrict teens from nighttime driving after 10 p.m. (most states have a Graduated Driver's License [GDL] with some time and passenger restrictions, but this indicator requires a 10 p.m. restriction)?	Yes	49 states restrict nighttime driving for teens starting at 10 p.m. in their GDL laws.
5. Does the state require bicycle helmets for all children?	No	21 states and Washington, D.C., require bicycle helmets for all children.
6. Does the state have fewer homicides than the national goal established by the U.S. Department of Health and Human Services (HHS)?	Yes	31 states have homicide rates at or below the national goal of 5.5 per 100,000 people.
7. Does the state have a child abuse and neglect rate at or below the national rate?	No	25 states have child abuse and neglect rates at or below the national rate of 9.1 per 1,000 children. Indiana's rate is 13.7 per 1,000 children.
8. Does the state have fewer deaths from falls than the national goal established by HHS?	Yes	13 states have fewer fall-related deaths than the national goal of 7.2 per 100,000 people. Indiana's rate is 5.9 per 100,000 people.

Indicator	Indiana Status	Number of States Meeting Indicator
9. Does the state require mandatory use of data from the prescription drug monitoring program (PDMP) by at least some healthcare providers?	Yes	25 states require mandatory use of PDMPs for healthcare providers in at least some circumstances.
10. Does the state have laws in place to expand access to, and use of, naloxone, an overdose rescue drug?	Yes	34 states and Washington, D.C., have a law making it easier for medical professionals to prescribe and dispense naloxone and/or for lay administrators to use it without the potential for legal ramifications.

Robert Wood Johnson Foundation (June 2015). *The facts hurt: A state-by-state injury prevention policy report 2015*. Retrieved from <https://www.tfah.org/releases/injuryprevention15/>.

## System development

The statute granting IDOH authority over the state’s trauma system includes a directive that IDOH develop that system. System development is a process in which different stakeholders cooperate to enhance and improve performance. As trauma center and non-trauma center programs develop and emerge, it is important to integrate individual facility and regional trauma systems into a larger public health framework. The division will collaborate with statewide partners to integrate systems and improve the standard of trauma care across the state of Indiana.

Development Objectives	Strategies
1. Build relationships with internal and external organizations involved with trauma-related activities (e.g., disaster preparedness, mental health, burns, rehabilitation and specific patient populations).	1.1 Identify partners and stakeholders to be involved with the Indiana State Trauma Care Committee.
	1.2 Obtain data sharing agreements and memorandums of understanding (MOUs) with entities.
	1.3 Provide data reports relevant to their areas of focus.
	1.4 Attend meetings and events to engage with new partners and provide information about Indiana’s trauma system and how it pertains to their work.
2. Develop regional trauma systems.	2.1 Continually update the roadmap to help districts develop their regional trauma committees.
	2.2 Encourage regular collaboration within the region.

	2.3 Provide region-specific data to assist regions in identifying areas of opportunity.
	2.4 Provide state-level updates to regions to align regional and state goals and initiatives.
	2.5 Establish patient care review processes.
	2.6 Explore methods to monitor regional trauma system development.
	2.7 Facilitate cross-regional communication and collaboration, especially in areas without verified trauma centers.
	2.8 Implement regional PI processes that feed into statewide PI processes.
	2.9 Evaluate region-specific resources to maximize the continuum of trauma care while minimizing expenses.
	2.10 Identify experts from other states to present successes and lessons learned in regional trauma system development.
	2.11 Connect American College of Surgeons (ACS)-verified trauma centers and non-trauma centers through mentorship program.
	2.12 Identify top priority areas and funding needed to support these activities. Research other states' trauma funding streams and budgets to identify trauma system activities that improve patient care.
3. Develop a budget to fund a statewide trauma system.	3.1 Present the budget to the ISTCC.
	3.2 Present the budget to the IDOH chief financial officer.
	3.3 Explore the capabilities of establishing a trauma care fund as referenced in the executive order for ISTCC.
	3.4 Work with the Indiana Hospital Association to budget funds left over from 2008 ACS consultation visit.
	3.5 Provide a budget and justification as part of the budget legislative proposal for FY24 and FY25.
4. Establish a funding stream to sustain the statewide trauma system.	4.1 Work with IDOH Finance Division to identify and apply for funding opportunities (federal, state and local) based on the division's priority areas.
	4.2 Work with the Healthy Hoosiers Foundation (HHF) to promote donations earmarked for trauma programs.
	4.3 Work with other IDOH divisions to identify collaborative funding opportunities.
	4.4 Share funding opportunities with stakeholders and partners to enhance local trauma and injury prevention efforts.

	4.5 Invite ACS to return to Indiana for a statewide trauma system reassessment.
5. Establish next steps in statewide trauma system development with the ACS.	5.1 Work with the ACS advocacy group to identify what has worked in other states regarding trauma system development and funding.
	5.2 Create an awards subcommittee to establish awards and criteria to qualify for awards.
6. Establish an annual awards banquet for those providing excellent trauma care in the state.	6.1 Utilize end-of-the-year meetings or events to include an awards ceremony.
7. Create state Designation Rule.	7.1 Work with the designation subcommittee of ISTCC to establish criteria for state designation of trauma centers.
	7.2 Ensure that the designation rule subsumes "in process" designation and adds the ability to review "in process" hospitals during the two-year process.
8. Update executive order for the Indiana State Trauma Care Committee (ISTCC).	8.1 Update the executive order to reflect the current state of the trauma system (post-acute care representative and air medical representative).
	8.2 Discuss creating ISTCC in state law versus executive order.
	8.3 Establish the terms of committee members.
9. Create tools that can be utilized by new trauma stakeholders regarding the history of statewide trauma system development.	9.1 Update the orientation packet monthly and share with new ISTCC members, as well as new trauma stakeholders.
	9.2 Establish an orientation folder that contains: <ul style="list-style-type: none"> <li>• Orientation document.</li> <li>• <i>Trauma Times</i> newsletter</li> <li>• Opportunities to get involved with the development of the statewide trauma system</li> <li>• Contact information for division staff</li> </ul> The orientation folder will be given to hospitals submitting "in the process" applications and new ISTCC members.
10. Focus on staff development for the Division of Trauma and Injury Prevention.	10.1 Evaluate the skills of current staff and identify areas of opportunity for advancement within the division.
	10.2 Identify continuing education opportunities for staff.
11. Maintain Indiana Spinal Cord and Brain Injury Research Fund Board.	11.1 Coordinate meetings for Indiana Spinal Cord and Brain Injury Research Fund Board.
	11.2 Coordinate a biannual conference for recipients of Indiana Spinal Cord and Brain Injury Research Fund.
	12.1 Coordinate state policymaker visits to trauma centers.

12. Encourage opportunities for policymakers and health department leadership regarding public health approaches to trauma and injury prevention.	12.2 Facilitate opportunities (i.e., trauma tour events) with policymakers to increase recognition of the role of public health in injury prevention and trauma care system development.
13. Focus on pediatric population injury prevention and trauma care needs.	13.1 Identify and implement pediatric injury prevention programs, including child passenger safety, Neonatal Abstinence Syndrome (NAS) and Sudden Unexpected Infant Death (SUID).
	13.2 Support pediatric readiness initiatives including pediatric care coordinators at facilities through the Pediatric Emergency Care Coordinator (PECC) Advisory Board.
	13.3 Conduct surveillance and disseminate pediatric trauma and injury findings to support prevention programs.

## Pre-hospital

The first phase of Indiana’s trauma system activates immediately following an injury or overdose.

When a call is made to the 911 operator, the response can be coordinated among various first responders, including emergency medical services (EMS) ambulances, law enforcement and fire.

If the trauma or overdose call is initially directed to EMS, the first assessments and diagnoses of the patient are made and the patient is stabilized and quickly but safely transported to a local hospital or trauma center. EMS crews are often the critical link between the injury-producing event and definitive care at a trauma center or local hospital. The first hour post-injury is known as “the golden hour,” when critical skilled care must be provided. The Indiana Department of Homeland Security (IDHS) is responsible for EMS oversight in Indiana.

If the initial call is directed to law enforcement or fire for an overdose, naloxone is given if available.

<b>Pre-hospital Objectives</b>	<b>Strategies</b>
1. Evaluate the Triage & Transport Rule in collaboration with the EMS Commission.	1.1 Convene the extended designation subcommittee (consists of hospitals and EMS providers) to review the rule in detail and make suggestions on what can be done to update the rule.

	1.2 Analyze pre-hospital data to assist with recommendations.
	1.3 Present the recommendations established by the designation subcommittee to the Indiana State Trauma Care Committee (ISTCC).
	1.4 Make recommendations to the EMS Commission based on the ISTCC discussion and IDOH review.
	1.5 Support learning opportunities to educate EMS providers about rule changes.
2. Evaluate compliance of EMS providers with Triage and Transport Rule.	2.1 Work with IDHS to establish educational opportunities for EMS providers to gain better understanding of the rule.
	2.2 Work with IDHS to analyze EMS and trauma registry data to determine compliance with the rule.
	2.3 Work with IDHS to provide regular data reports to EMS Commission and ISTCC to determine rule compliance.
3. Enhance knowledge of EMS workforce.	3.1 Coordinate conference events related to EMS education, including annual EMS Leadership Conference, to increase the knowledge and expertise of Indiana's EMS workforce.
	3.2 Provide and support trauma education opportunities for pre-hospital workforce.
4. Assist with developing emerging policies, practices and standards.	4.1 Work with IDHS and IDOH Division of Chronic Disease, Primary Care and Rural Health to establish community paramedicine practices in Indiana.
	4.2 Support IDHS with initiatives, such as liability coverage for EMS medical directors.
5. Evaluate pre-hospital resources.	5.1 Identify types of services provided by each EMS provider.
	5.2 Identify gaps in pre-hospital care.
6. Coordinate annual EMS Leadership Conference.	6.1 Work with EMS Leadership Conference planning committee to identify areas of focus and speakers.
	6.2 Obtain continuing education (CE) hours for the event.
7. Ensure that naloxone rescue kits are available.	7.1 Supply naloxone rescue kits to first responders (includes EMS, law enforcement and fire). Currently working to recruit first responders that are not carrying naloxone through a SAMHSA grant for rural counties.
	7.2 Supply naloxone rescue kits to local health departments for distribution to community members and partners. IDOH is working to recruit local health departments that have not received naloxone kits in the past through 21 <sup>st</sup> Century CURES funds.

## Trauma Center/Emergency Department

Trauma centers are hospitals that have applied for, and been granted, verification as a trauma center by the ACS. Hospitals in Indiana that are working on becoming verified trauma centers can apply for “in the process of ACS verification” trauma center status for purposes of the triage and transport rule. Elkhart General Hospital is the only “in the process” trauma center in Indiana. ACS-verified centers for Levels I, II and III. Level I trauma centers provide the highest level of trauma care.

Trauma centers are unique in their capabilities and are not the typical community hospital emergency department (ED). Indiana now has 22 ACS-verified trauma centers around the state: Eskenazi Health, IU Health Methodist Hospital, Riley Hospital for Children at IU Health, Ascension St. Vincent Indianapolis, Deaconess Hospital, Ascension St. Vincent Evansville, Lutheran Hospital of Indiana, Parkview Regional Medical Center, Memorial Hospital of South Bend, Terre Haute Regional, Ascension St. Vincent Regional Anderson, Community Hospital in Anderson, IU Health Bloomington, Franciscan Health Crown Point, Methodist Hospital Northlake, Memorial Hospital and Health Care Center, Franciscan Health Lafayette East, IU Health Arnett, IU Health Ball Memorial, Reid Hospital and Health Care Services, Union Hospital Terre Haute and Good Samaritan Hospital. In addition to the in-state trauma centers, there are also more than 20 trauma centers located across state lines in Ohio, Michigan, Kentucky and Illinois that receive patients from Indiana.

But for all the trauma centers Indiana has, there are not enough of them to adequately meet the needs of injured Hoosiers and visitors to the state. Hospital EDs are part of the statewide trauma system, as not all injured patients are taken to trauma centers; the vast majority of injured patients can be, and are, treated at local non-trauma center hospitals. Non-trauma center hospitals stabilize and provide definitive life-saving care for patients who do not require trauma center care. Many times, especially in rural areas where timely access to trauma centers is not possible, non-trauma center hospital EDs provide definitive care to trauma patients out of necessity.

## Indiana Trauma Center Access: Areas Within a 45-Minute Drive

 45-Minute Accessible Trauma Center \*

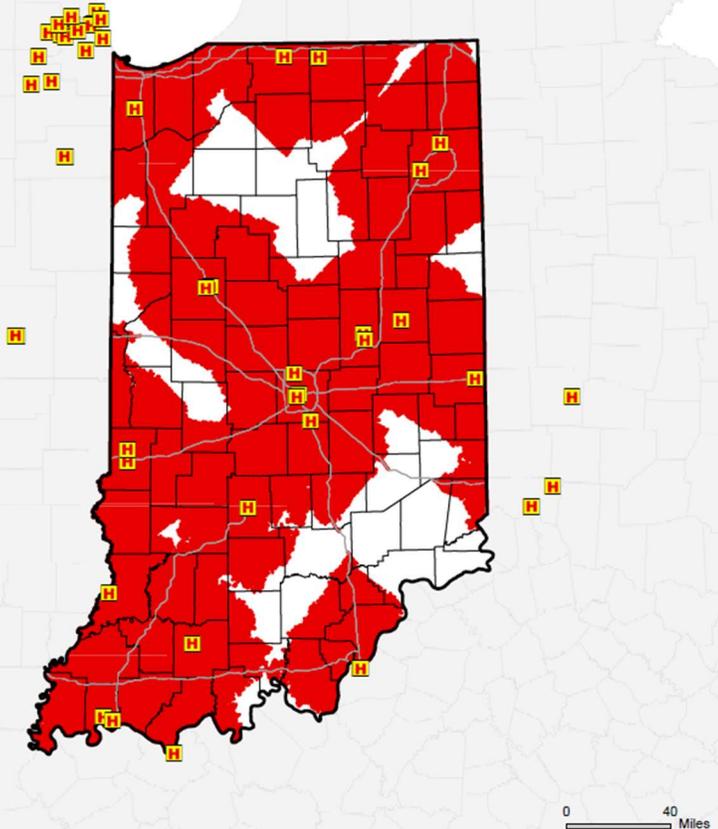
**45-Minute Accessible Areas**

 Average Travel Time  
*based on posted and historical speeds*

	45-Minute Coverage (at average speed)		State Total
	n	% of state	n
Land Area	26,648 sq mi	74%	35,826 sq mi
Population	5,937,078 people	92%	6,483,802 people
Interstates	1,219 miles	96%	1,266 miles

\* Considered a trauma center for purposes of the triage and transport rule.

Travel times are calculated with 2016 street network reference data published by Esri. Travel times do not take into account current traffic volume or restrictions. Population and land area are calculated from the 2010 U.S. Census block summary geography. Interstate mileage is calculated using a single direction of a divided highway (source: INDOT). All statistics should be considered an estimate.



Map Author: ISDH ERC PHG and ISDH Trauma & Injury Prevention - September, 2020

Trauma Objectives	Strategies
1. Increase trauma system coverage in Indiana.	1.1 Develop more ACS-verified trauma centers.
	1.2 Monitor trauma system coverage through 45-minute travel map with continuous updates and inclusion of new trauma centers on the map.
2. Enhance knowledge of trauma workforce.	2.1 Coordinate conference events related to trauma education.
	2.2 Provide and support trauma education opportunities for non-trauma centers.
	2.3 Identify and address gaps in trauma knowledge and training qualification requirements.
	2.4 Survey hospital workforce to track educational progress.
	2.5 Encourage hospitals to establish minimum educational requirements for emergency department staff.
	2.6 Produce a report of each hospital's staff qualification requirements (e.g., TNCC, TCAR, ATLS, PHTLS, ITLS, TNATC, ATCN, CCRN, CEN, PALS, etc.).

	2.7 Encourage Indiana Trauma Network meetings as an opportunity for all trauma centers to network and work together on knowledge gaps.
3. Assist the Emergency Preparedness Division in evaluating and maintaining a database of trauma center resources.	3.1 Identify types of surgeons.
	3.2 Identify burn care services.
	3.3 Identify classifications of physicians providing burn care services.
	3.4 Investigate the role of burn centers in the trauma system.
	3.5 Categorize trauma activation criteria per facility.
	3.6 Collect admission volumes: adult trauma center treating injured children, burn centers, Level I trauma centers and pediatric trauma centers.
	3.7 Collect trauma certifications per facility.
	3.8 Assemble information on the types of injury prevention programs the trauma centers are implementing.
	3.9 Gather performance improvement audit filters.
	3.10 Identify types of psychological and psychiatric services available per facility for trauma patients.
	3.11 Categorize types of in-patient rehabilitation services per facility.
	3.12 Compile interfacility transfer agreements per facility.
4. Encourage Level I and II trauma centers to serve as regional resource centers.	4.1 Encourage trauma centers to teach Rural Trauma Team Development Course (RTTDC).
	4.2 Maintain interfacility transfer criteria (ACS).
5. Track the performance improvement of trauma centers.	5.1 Standardize the subset of trauma system performance improvement activities per each facility.

## Acute Medical Care

Acute medical care facilities are hospitals that provide care for short periods of time. Trauma patients are admitted to an acute medical care facility to allow them to recover from their injuries as well as recover from procedures and surgeries used to fix their injuries. Patients with the most serious injuries recover in the intensive care unit, while less seriously injured patients may recover in a critical care unit, step-down care unit or medical-surgical care unit. There are more than 120 hospitals in Indiana, all of which are regulated by IDOH. In recent years, with the addition of new neighborhood hospitals developed by the larger hospital networks as free-standing emergency departments, the state also collects their data as well.

<b>Acute Care Objectives</b>	<b>Strategies</b>
1. Assist the Emergency Preparedness Division in compiling a list of acute care resources.	1.1 Compile a database of services provided by each hospital with an emergency department to identify areas of need in trauma care.
2. Connect acute care facilities to the trauma centers to which they transfer patients.	2.1 Encourage non-trauma centers to receive Rural Trauma Team Development Course (RTTDC) training from trauma centers.
	2.2 Assist acute care facilities with identifying their role in Indiana's trauma system.
3. Communicate with free-standing emergency departments as part of the trauma system.	3.1 With the rise of neighborhood hospitals, the state communicates to facilities the requirements to collect trauma data as part of trauma system development.

## Rehabilitation

Rehabilitation centers care for trauma patients' post-acute care and seek to enable these patients to realize their fullest post-injury potentials. Often, these patients have sustained severe or catastrophic injuries resulting in long-standing or permanent impairments. Rehabilitative interventions strive to allow the patient to return to the highest level of function, reducing disability and avoiding handicap whenever possible. When rehabilitation results in independent patient function, there is a 90 percent cost savings compared with costs for custodial care and repeated hospitalizations. Unfortunately, the rehabilitation phase of care often is not sufficiently integrated into the trauma system, even in the most mature, well-developed statewide trauma systems.

<b>Rehabilitation Objectives</b>	<b>Strategies</b>
1. Assist the Emergency Preparedness Division with compiling a list of rehabilitation resources.	1.1 Compile services provided by each rehabilitation facility to identify areas of need in rehabilitation trauma care.
2. Integrate rehabilitation phase of care into the statewide trauma system.	2.1 Build relationships with divisions, agencies and organizations that are involved with trauma-related activities, specifically rehabilitation.
	2.2 Identify partners and stakeholders to be involved with the ISTCC.
	2.3 Provide data reports relevant to their area of focus.

	2.4 Attend events and meetings to engage with new partners and provide information about Indiana’s trauma system and how it pertains to their line of work.
--	-------------------------------------------------------------------------------------------------------------------------------------------------------------

## Time-sensitive systems

Nationally, state health departments are starting to expand the scope of time-critical diagnosis systems to include stroke and ST-segment evaluation myocardial infarction (STEMI). This has been identified as a best practice by NHTSA and other national organizations. Starting in 2017, the Indiana Department of Health was tasked with the responsibility of maintaining a stroke center list. All certified hospitals are required to provide a copy of their certification, the certifying organization and transfer agreements with other stroke care facilities.

Time-sensitive System Objectives	Strategies
1. Maintain stroke center list.	1.1 Compile a list of hospitals that provide stroke care.
	1.2 Attend events and meetings to engage with new partners and provide information about Indiana’s trauma system and how it pertains to their line of work.
	1.3 Build relationships with divisions, agencies and organizations that are involved with stroke-related activities.

## Injury Prevention and Outreach

Injury prevention and outreach begins with the collection and analysis of population and patient data from a variety of sources to describe the status of injury morbidity, mortality and burden distribution throughout the state. Injury epidemiology is concerned with the evaluation of the frequency, rates and pattern of injury events in a population and is obtained by analyzing data from sources such as death records; hospital discharge databases; and data from EMS, emergency departments and trauma registries. Trauma systems must develop strategies that help prevent injury as part of an integrated, coordinated and inclusive trauma system. For years, IDOH has conducted an array of injury prevention programs. With the creation of the IDOH Trauma and Injury Prevention Division in 2011, the agency focused on the collection and analysis of injury data and injury prevention programming implementing best available evidence-based practices in the field. The overall mission is to prevent injuries in Indiana through collaborative efforts in leadership, education and policy.

Developed in collaboration with the Indiana Injury Prevention Advisory Council (IPAC), this injury prevention strategic plan outlines objectives and strategies, featuring specific, data-informed injury mechanisms and targets. The plan provides a blueprint for individuals, organizations and agencies to use in facing challenges to the health and lives of Indiana residents. While there are certainly many injury issues that require consideration, the injury issues selected for the plan were based on the analysis of relevant data, of which some is extracted in this plan report. Injury data was used to establish these priorities and to select best available evidence strategies. The Division's *Preventing Injuries in Indiana: A Resource Guide* – <https://www.in.gov/isdh/25396.htm> provides detailed information on a variety of injuries affecting Hoosiers.

<b>Injury Prevention and Outreach Objectives</b>	<b>Strategies</b>
<p>1. Identify and support the use of evidence-based injury prevention interventions.</p>	<p>1.1 Identify and support data-informed priorities and opportunities to prevent injuries and reduce the burden of injury and violence.</p>
	<p>1.2 Facilitate opportunities for collaborative injury prevention efforts in:</p> <ul style="list-style-type: none"> <li>• Traffic safety</li> <li>• Poisoning</li> <li>• Traumatic brain injury (TBI)</li> </ul>
	<p>1.3 Provide statewide direction and focus for older adult (age 65 and older) falls prevention.</p>
	<p>1.4 Provide statewide direction and focus for child injury prevention efforts in:</p> <ul style="list-style-type: none"> <li>• Safe sleep</li> <li>• Child abuse and maltreatment</li> <li>• Child passenger safety</li> <li>• Bullying</li> </ul>
	<p>1.5 Explore cross-cutting and multisectoral injury prevention efforts that share risk and protective factors around:</p> <ul style="list-style-type: none"> <li>• Adverse childhood experiences</li> <li>• Overdoses</li> <li>• Suicide</li> </ul>
	<p>1.6 Provide statewide direction and focus for violence prevention aimed at reducing homicides, suicides, intimate partner violence and sexual assault and other types of violence.</p>
	<p>1.7 Conduct public health surveillance of injury and violence to identify priorities and opportunities.</p>

<p>2. Establish a sustainable and relevant infrastructure that provides leadership, funding, data, policy and evaluation for injury and violence prevention.</p>	<p>2.1 Provide access and technical assistance for best practices and evidence-based injury prevention strategies, especially related to:</p> <ul style="list-style-type: none"> <li>• Child passenger safety for all children in Indiana</li> <li>• CDC Stopping Elderly Accidents, Deaths &amp; Injuries (STEADI) toolkit implementation and Stepping On for older adult falls prevention</li> </ul>
	<p>2.2 Apply for injury-related funding opportunities to support the continuation of efforts.</p>
	<p>2.3 Collect, analyze and disseminate injury and violence data through fact sheets, maps and other data reports.</p>
	<p>2.4 Select, implement and evaluate effective policy and program strategies.</p>
	<p>2.5 Evaluate and assess outcomes, successes and opportunities for injury prevention.</p>
	<p>2.6 Build injury prevention program evaluation capacity.</p>
	<p>2.7 Maintain a list of trauma center-based injury prevention programs on the division’s website.</p>
	<p>2.8 Support other IDOH divisions conducting injury prevention efforts, such the Office of Women’s Health Rape Prevention and Education Program, Fatality Review and Prevention Program and the Maternal and Child Health Division.</p>
<p>3. Increase the quality and availability of injury data for planning, surveillance and evaluation.</p>	<p>3.1 Maintain, update and enhance the <i>Preventing Injury in Indiana: A Resource Guide</i> and associated mobile application.</p>
	<p>3.2 Promote the usability and flexibility of the <i>Preventing Injury in Indiana: A Resource Guide</i> and associated mobile application.</p>
	<p>3.3 Increase public awareness activities through the resource guide and mobile app.</p>
	<p>3.4 Analyze alcohol- and drug-related injuries and share trend data with stakeholders.</p>
	<p>3.5 Produce more timely data, including preliminary data, to share emerging trends with stakeholders.</p>
	<p>3.6 Provide analysis of data at the city-level, when appropriate.</p>
	<p>3.7 Collaborate with the Management Performance Hub (MPH) to produce more comprehensive, linked datasets.</p>
<p>4. Enhance the skills, knowledge and resources</p>	<p>4.1 Maintain and increase Indiana Injury Prevention Advisory Council (IPAC) membership.</p>

of injury prevention workforce.	4.2 Plan and host an IPAC Injury Prevention Conference as an educational and awareness effort.
	4.3 Provide technical assistance to support injury prevention workforce.
	4.4 Establish and maintain regular communication through email, conference calls, newsletter, ListServs and social media to collaborate and keep the injury workforce engaged and up-to-date on emerging injury data trends.
	4.5 Engage partners from various sectors for collaboration, especially related to priority strategies.
5. Facilitate violent death data collection, analysis and dissemination through the Indiana Violent Death Reporting System (INVDRS).	5.1 Utilize stakeholder networks to increase partner participation in providing and using data.
	5.2 Build relationships with other organizations and agencies that are working on violence prevention to identify best practices and emerging trends.
	5.3 Encourage partners to promote INVDRS's mission and vision.
6. Stay current with trauma and injury prevention trends and emerging issues.	6.1 Collaborate with partners to inform the division of local, state and national emerging issues within the field.
	6.2 Utilize committees and subject matter experts to provide direction and guidance to the division.

The Indiana Department of Health, in partnership with the IPAC and associated partners and stakeholders, will use these objectives and priorities as a framework to strengthen statewide injury prevention coordination and expansion in Indiana. Impacting the morbidity and mortality associated with the aforementioned injuries will require collaboration by many agencies and organizations; continued education of the public, healthcare providers, partner agencies and organizations; and consideration of environmental safety measures that can be implemented.

## Injury Prevention and Trauma Public Education

Injury Prevention and Trauma Public Education Objectives	Strategies
1. Create trauma training opportunities.	1.1 Utilize IN-TRAIN system to provide distance learning opportunities.
	1.2 Utilize webcast system to provide distance learning opportunities.
2. Utilize multiple communication outlets to provide trauma	2.1 Maintain website content.
	2.2 Maintain handouts and fact sheets.
	2.3 Create relevant and timely social media content for Twitter account @INDTrauma.

stakeholders with consistent messaging.	2.4 Promote DTIP content on IDOH main social media.
	2.5 Release bimonthly newsletter, <i>Trauma Times</i> , highlighting the work of IDOH and its trauma partners throughout the state.
	2.6 Release the weekly newsletter <i>Drug Overdose Prevention Newscast</i> .
	2.7 Travel the state (trauma tour) providing trauma stakeholders with opportunities to share what is going on in their community.
	2.8 Utilize the Indiana Trauma Network to promote ongoing local trainings.
3. Support the Indiana Coroner’s Training Board (ICTB)	3.1 Build relationships with coroners.
	3.2 Partner with coroners to identify training needs and funding opportunities.
	3.3 Provide administrative support of the ICTB.

### Drug Overdose Prevention

In response to the increasing drug overdose crisis in Indiana, beginning in 2015 the Division of Trauma and Injury Prevention pursued federal funding to address the crisis. The division was awarded funding through the CDC’s Prevention for States (PFS) grant in 2015 and through the Enhanced State Opioid Overdose Surveillance (ESOO) grant in 2017. That same year, the division was awarded the First Responder Comprehensive Addiction and Recovery Act grant through SAMHSA, and in 2018, the division was awarded funding from the BJA under the Comprehensive Opioid Abuse Site-based Program. In 2019, the division was awarded funding for the Overdose Data 2 Action grant from the CDC. Since then, the division has implemented and piloted several drug overdose-related projects. This issue has become a priority for not only the division, but the Indiana Department of Health and Governor Eric J. Holcomb through his 2018, 2019 and 2021 Next Level Agenda.

Drug Overdose Prevention Objectives	Strategies
1. Collaborate with state agencies to attack the opioid epidemic.	1. Work with state agencies to support the Next Level Recovery agenda.
2. Expand naloxone access and education.	2.1 Provide naloxone to more local health departments (LHDs) across Indiana.
	2.2 Provide naloxone to more rural first responders.
	2.3 Increase public awareness of OptIN through avenues such as the DOP weekly newsletter, DOP booth events, DOP website and community outreach coordinators.

	2.4 Continue to carry out biannual audits to ensure OptIN is up-to-date.
	2.5 Continue to provide naloxone trainings to organizations such as LHDs, correctional facilities, educational institutions, community groups and faith-based organizations.
3. Provide public education regarding prescription opioids.	3.1 Create and distribute educational materials.
	3.2 Utilize the drug overdose booth to engage with the public and pertinent professionals.
	3.3 Work to continuously update the website with relevant and emerging content.
	3.4 Attend conferences and events (both in-person and virtual) with the Drug Overdose Prevention mobile booth.
4. Gather and analyze comprehensive drug overdose-related data.	4.1 Continue to partner with the IU Fairbanks School of Public Health on the naloxone postcard survey project.
	4.2 Collect and analyze data gleaned from OptIN, such as doses of naloxone sold.
	4.3 Fund toxicology testing for Indiana coroners, and create monthly/quarterly reports with toxicology results.
	4.4 Collect and analyze syndromic surveillance data.
	4.5 Educate coroners to improve drug overdose investigations and death certificate data.
	4.6 Collect recovery and opioid data through the 2021 Behavior Risk Factor Surveillance System.
5. Disseminate drug overdose data.	5.1 Send various reports to the governor's office (toxicology results, drug overdose deaths, naloxone administrations).
	5.2 Improve the webpage interface to better direct stakeholders to available data for public information.
	5.3 Update Stats Explorer and the Drug Overdose Dashboard on IDOH's Drug Overdose webpage with emerging data.
	5.4 Disseminate ESSENCE alerts to appropriate stakeholders (LHDs, hospitals, etc.).
	5.5 Disseminate comprehensive issue briefs related to opioid overdoses collected in INVDRS/SUDORS.
6. Abstract SUDORS-related cases in NVDRS.	6.1 Utilize NVRDS abstractors to abstract cases.
	6.2 Create a new toxicology abstraction system to optimize abstraction of toxicology reports.
	7.1 Utilize the Indiana Communities Advancing Recovery Efforts (IN CAREs) Extension for Community Healthcare

7. Build local capacity to respond to the drug overdose epidemic.	Organizations (ECHO) to build local knowledge and capacity for substance use prevention and response efforts.
	7.2 Provide technical assistance to IN CAREs ECHO counties through the division’s three community outreach coordinators.
	7.3. Fund local communities to engage in prevention, harm reduction and recovery efforts.
8. Increase and improve coordination of SUD services.	8.1 Partner with FSSA to fund Lyft to support transportation costs for individuals in need of treatment.
	8.2 Partner with organizations such as the Indiana Addiction Issues Coalition and PACE, Inc., to increase the reach of peer recovery services.
	8.3 Partner with Indiana United Way to provide technical assistance to implement an electronic referral and follow-up tool to improve linkage to care.
9. Implement and expand drug overdose fatality review (OFR) teams.	9.1 Continue to expand the Indiana Overdose Fatality Review Program by adding additional counties.
	9.2 Conduct reviews and collect observational data on fatality reviews.
	9.3 Identify opportunities to improve prevention in participating counties and create stronger prevention plans based on OFR findings.
	9.4 Develop OFR issue briefs with recommendations for state-wide enactment.
	9.5 Serve as a national peer leader for other states new to OFR.
10. Strengthen relationships between public health and public safety.	10.1 Assist with the funding, planning and execution of the Public Safety and Public Health Opioid Conference.
	10.2 Implement SHIELD – a harm reduction and occupational safety training for law enforcement.
11. Implement risk reduction messaging for vulnerable populations.	11.1 Promote the CDC’s Rx Awareness Campaign in partnership with the Indianapolis Colts.
	11.2 Fund the Marion County Public Health Department to conduct a mixed media mass marketing campaign to educate about substance use disorder and eliminate the stigma around it.

## Injury Surveillance and Quality Improvement

A state’s trauma registry not only is the repository for data about trauma in its state, but also exists to improve outcomes for injured patients. The trauma registry data is used to measure and analyze all aspects of the system to ensure the highest quality care is provided to all. IDOH

operates the Indiana Trauma Registry and is responsible for instituting processes to evaluate the performance of all aspects of the system, from the EMS provider to the trauma center/acute care hospital to the rehabilitation provider. The Indiana Trauma Registry monitors variations in incidence and outcomes and system performance. The IDOH Trauma Registry began receiving trauma data in 2007 from the seven ACS-verified trauma centers at that time. Today, more than 100 hospitals are reporting on a quarterly basis. In 2019, more than 44,000 cases were submitted.

<b>Injury Surveillance and Quality Improvement Objectives</b>	<b>Strategies</b>
1. Increase and maintain the participation of EMS providers, hospitals with EDs and rehabilitation facilities trauma data reporting.	1.1 Work with hospitals that are already reporting data to serve as mentor facilities for hospitals that are not yet reporting data. 1.2 Maintain and update a reporting schedule. 1.3 Provide consistent communication with entities that are required to report to serve as reminders of the reporting deadlines. 1.4 Promote free software that is available for entities to use. 1.5 Provide trauma registry training and support for entities reporting data. 1.6 Provide data reports for entities that have submitted data. 1.7 Publish a list of providers submitting data to the Indiana Trauma Registry. 1.8 Utilize stakeholder networks to increase partner participation. 1.9 Offer funding opportunities to data providers (if funding is available).
2. Increase and maintain the participation of coroners and law enforcement agencies reporting violent death cases.	2.1 Work with associations to serve as supporting entities to encourage entities to participate in INVDRS. 2.2 Maintain and update a reporting schedule. 2.3 Provide consistent communication with entities that are required to report to serve as reminders of the reporting deadlines. 2.4 Promote free software that is available for entities to use. 2.5 Provide registry training and support for entities reporting data. 2.6 Provide data reports for entities that have submitted data.

	2.7 Publish a list of providers submitting data to INVDRS.
	2.8 Utilize stakeholder networks to increase partner participation.
	2.9 Offer funding opportunities to data providers.
3. Develop processes to exchange data with surrounding states (Illinois, Kentucky, Ohio and Michigan).	3.1 Establish data sharing agreements with equivalent state agencies.
	3.2 Establish and maintain a reporting deadline schedule.
	3.3 Include the information in the division's data reports.
	3.4 Utilize work groups (i.e., Midwest Injury Prevention Alliance [MIPA]) to establish data exchanges.
4. Build relationships with other state agencies working on similar projects (i.e., state trauma registry, NVDRS, etc.) to identify best practices and emerging trends.	4.1 Utilize ListServes, conference calls, webinars, regional subcommittees, national conferences, etc. to collaborate with key partners.
	4.2 Adapt and modify existing strategies established by other states.
5. Utilize committees (Indiana State Trauma Care Committee, Indiana Trauma Network, Injury Prevention Advisory Council, INVDRS Advisory Board, etc.) and subject matter experts to provide direction and guidance to the division.	5.1 Meet regularly to review the state's current landscape and ask for feedback to guide the future direction.
	5.2 Engage in regular communication (email, phone calls, newsletter, ListServes, social media, etc.) to keep committees up-to-date on developments.
6. Create clear and comprehensive databases to establish the division as a leader in statewide data collection.	6.1 Utilize our committees to address data quality concerns and to review data analysis.
	6.2 Send data quality reports to data providers.
	6.3 Encourage data providers to submit feedback regarding data reports.
	6.4 Continue recruiting efforts to increase completeness (number of entities reporting data).
	6.5 Maintain and update a reporting deadline schedule.
	6.6 Review individual cases to identify data quality issues and report summary findings to committees.
	6.7 Link datasets to provide a complete picture of the burden of violence and injury in Indiana.
	6.8 Develop standard operating procedures to handle data system issues (i.e., data storage, large data files, etc.).
	6.9 Provide ongoing educational opportunities (monthly quizzes, training events, etc.) to help with the education of

	registrars to ensure consistency and accuracy in data reporting.
	6.10 Provide analysis of data at the city-level, when appropriate.
7. Maximize the utilization of data.	7.1 Identify the burden of injury in Indiana.
	7.2 Process data requests submitted by vested partners.
	7.3 Adapt and modify existing data analysis and dissemination strategies established by other states.
	7.4 Disseminate data to injury prevention stakeholders, data providers and other interested parties through reports, fact sheets and other materials.
	7.5 Complete all legislatively mandated reports.
	7.6 Report data graphically through charts, tables and maps as appropriate.
	7.7 Investigate best practices for data analysis and reporting, including ACS Resources for Optimal Care of the Injured Patient.
	7.8 Collaborate with clinical researchers to use their expertise and provide clinical relevance of metrics.
	7.9 Analyze alcohol- and drug-related injuries and share trend data with stakeholders.
	7.10 Produce more timely data, including preliminary data, to share emerging trends with stakeholders.
8. Use technology to stay current in injury surveillance database best practices.	8.1 Utilize and update the process to take data directly from hospitals' Electronic Medical Record (EMR) into the Indiana Trauma Registry – "Blue Sky Project".
	8.2 Improve the accessibility while minimizing costs of reporting data through the "Blue Sky Project" by providing technical assistance to facilities that want to use new technologies.
	8.3 Promote new technologies through a variety of communication outlets (e.g., HL7).
	8.4 Develop technology to transfer data across data systems and improve existing data systems.
	8.5 Research new technologies to improve communication in the trauma system (Field Bridge, Hospital Hub, etc.).
	8.7 Explore the feasibility of implementing unique patient identifiers to track patients through a healthcare system. Work with the Traffic Records Coordinating Committee to investigate possibilities for a tracking system.
	8.8 Develop and integrate ESSENCE surveillance data into injury prevention efforts (toxicology, ACEs, TBI and MVC).

	8.9 Improve toxicology syndromic surveillance for fatal and nonfatal drug-related overdoses.
9. Utilize Performance Improvement (PI) Subcommittee to identify areas of opportunity in the statewide trauma system.	9.1 Track and trend data results in improving the overall system.
10. Track the performance of the statewide trauma system.	10.1 Create a dashboard of metrics (mortality rate, ACS Needs Assessment Tool, education for trauma care providers, [pre-hospital & hospital] risk factors, etc.) that will be shared with the PI Subcommittee and ISTCC. The division will be mindful of seasonality in trauma.
	10.2 Improve and maintain baseline metrics for grant deliverables (i.e., ICJI NHTSA grant).
	10.3 Implement regional PI processes that feed into statewide PI processes.

Through this strategic plan, the Division of Trauma and Injury Prevention plans to develop a more comprehensive trauma system that prevents injuries, saves lives and improves the care and outcomes of trauma patients. Through the IDOH priorities, the division will use information and data from electronic sources to develop and sponsor outcome-driven programs; improve relationships and partnerships with key stakeholders, coalitions and networks throughout the state and nation; decrease disease incidence and burden; improve response and preparedness networks and capabilities; and reduce administrative costs by improving operational efficiencies and the recruitment, evaluation and retention of top public health talent.

# Appendix

## Indiana trauma system history

### 2004

- Trauma System Advisory Task Force formed.

### 2006

- IC 16-19-3-28 (Public Law 155) named the Indiana Department of Health (IDOH) the lead agency for a statewide trauma system:

***State department designated as lead agency of a statewide trauma care system; rule-making authority***

*Sec. 28*

*(a) The state department is the lead agency for the development, implementation, and oversight of a statewide comprehensive trauma care system to prevent injuries, save lives, and improve the care and outcome of individuals injured in Indiana.*

*(b) The state department may adopt rules under IC 4-22-2 concerning the development and implementation of the following:*

*(1) A state trauma registry.*

*(2) Standards and procedures for trauma care level designation of hospitals.*

- IDOH hired a trauma system manager.

### 2007

- Federal funding from the National Highway Transportation Safety Administration (NHTSA 408) for the state trauma registry was received from the Indiana Criminal Justice Institute (ICJI). A contract with a trauma registry software vendor (ImageTrend) was completed.
  - ICJI funding continues today.

### 2008

- Senate Bill 249 gave the Indiana Department of Homeland Security (IDHS) the authority to adopt Emergency Medical Services (EMS) triage and transportation protocols.
- IDOH hired its first state trauma registry manager.
- The American College of Surgeons (ACS) conducted an evaluation of Indiana's trauma system.

### 2009

- ACS provided a set of recommendations for further development of Indiana's trauma system.
- Gov. Mitch Daniels created the Indiana State Trauma Care Committee (ISTCC) by executive order.

### 2010

- The first meeting of the ISTCC (previously the Trauma Care Task Force) was held. The ISTCC serves as an advisory body to IDOH on all issues involving trauma.

## 2011

- IDOH hired a trauma and injury prevention division director, prioritizing trauma as a division within the agency.
- IDOH created the Trauma and Injury Prevention Division.

## 2012

- The EMS Commission adopted the Triage and Transport Rule.

## 2013

- Gov. Mike Pence reissued Gov. Mitch Daniels's original executive order creating the Indiana Trauma Care Committee.
- IDOH and the IDHS EMS Commission worked together to approve "in the process of ACS verification" trauma centers for purposes of the Triage and Transport Rule, which greatly increased the number of trauma centers in Indiana and better prepared Indiana hospitals to become ACS-verified trauma centers.
- Gov. Pence signed the Trauma Registry Rule. The trauma registry rule requires all EMS providers, hospitals with emergency departments, and rehabilitation hospitals to submit their trauma data to the state trauma registry.

## 2014

- IDOH hosted the first statewide EMS Medical Directors' Conference.
- IU Health Arnett Hospital and IU Health Ball Memorial Hospital became the state's first ACS-verified level III trauma centers.
- IDOH received \$1.4 million from the Centers for Disease Control and Prevention (CDC) to gather critical data on violent deaths using the National Violent Death Reporting System (NVDRS).

## 2015

- IDOH hosted the first statewide Injury Prevention Conference.
- IDOH hired an INVDRS epidemiologist, INVDRS law enforcement records coordinator, INVDRS records consultant and injury prevention program coordinator.
- IDOH hosted the second annual EMS Medical Directors' Conference.
- The EMS registry responsibilities shifted from IDOH to IDHS.
- IDOH published and released "Preventing Injuries in Indiana: A Resource Guide" and application on iOS and Android platforms.

## 2016

- IDOH hired an events project coordinator.
- IDOH received \$5.6 million from the CDC through the prescription drug overdose prevention for states grant to support enhancements to INSPECT, the Indiana prescription drug monitoring program at the Indiana Professional Licensing agency; improve opioid prescribing practices; support prevention efforts at the state and community levels to address new and emerging problems related to prescription drug

overdoses; and establish a partnership with the IU Richard M. Fairbanks School of Public Health to evaluate opioid prescribing practices in Indiana. This is a 3 1/2-year grant.

- IDOH received \$800,000 in the state budget bill for naloxone kit distribution to local health departments over the course of the next three years.
- IDOH hired a prescription drug overdose (PDO) community outreach coordinator, a records consultant and a PDO epidemiologist.
- IDOH received a public health associate through the CDC's Public Health Associate Program (PHAP). This was a two-year position.

## 2017

- IDOH received \$800,000 from the Indiana Family and Social Services Administration (FSSA) for the 21st Century Cures Act grant to distribute naloxone kits to local health departments for the next two years.
- IDOH received \$957,000 from the CDC through the enhanced state surveillance of opioid-related morbidity and mortality grant to: 1) increase the timeliness of aggregate nonfatal any-drug, any-opioid, and heroin overdoses reporting; 2) increase the timeliness of aggregate fatal opioid overdose and associated risk factor reporting using the NVDRS web-based data entry system; and 3) create, implement and customize a Dissemination Plan to share fatal and nonfatal surveillance findings to key stakeholders, including the public, working to prevent or respond to opioid overdoses. This was a two-year grant.
- IDOH received \$3.2 million from the Substance Abuse and Mental Health Services Administration (SAMHSA) through the first responder comprehensive addiction and recovery act (FR CARA) grant to 1) provide resources through the Indiana Naloxone Kit Distribution Program for First Responders for emergency treatment of known or suspected opioid overdoses in rural communities; 2) train first responders on carrying and administering naloxone; and 3) expand the Indiana Recovery and Peer Support Initiative for referral to appropriate treatment and recovery communities.
- IDOH hired three additional records consultants, two additional PDO community outreach coordinators and a naloxone program manager.
- IDOH received an additional PHAP from the CDC.

## 2018

- IDOH compiled a list of certified stroke centers per IC 16-31-2-9.5 requirements.
- IDOH no longer required firework injury reporting per IC 35-4-7-7.
- IDOH received \$1 million over three years from the Administration for Community Living (ACL) through the Traumatic Brain Injury (TBI) grant to maximize health outcomes and reduce disability following TBI. The division is partnering with the Rehabilitation Hospital of Indiana to carry out the work of this grant.
- IDOH received \$1 million over three years from the Bureau of Justice Administration (BJA) through the STOP School Violence Prevention and Mental Health Training Program grant to expand in-school services and prevention education of school personnel, mental health professionals, students and families; increase the collection and data timeliness of

aggregate school violence, bullying and adolescent mental health reporting; and operate a crisis intervention team that will coordinate with law enforcement agencies and school personnel.

- IDOH received \$1 million over three years from the BJA through the Comprehensive Opioid Abuse Site-based Program grant to fund the current toxicology program for coroners, expand current efforts to test all suspected overdoses in emergency departments (fatal and nonfatal) and link data between INSPECT (the state's prescription drug monitoring program), the Coroner Case Management System and toxicology program.
- IDOH rolled out the coroner toxicology program that requires all coroners to submit toxicology screens for suspected drug overdose deaths and report the findings to the agency. IC 36-2-14-6(b)(4), As of January 2019, all 92 counties were participating in the program.

## 2019

- IDOH received \$21 million over three years from the CDC for the Overdose Data to Action grant to undertake multiple strategies that leverage high-quality, comprehensive, and timely data surveillance to drive state and local drug overdose prevention efforts. The DTIP plans on accomplishing the following with the awarded grant funding:
  - Collect, analyze and disseminate timely syndromic emergency department (ED) data on suspected all-drug, all opioid, heroin, and all-stimulant overdoses. Increase the timeliness of hospital/billing ED discharge data.
  - Collect and disseminate descriptions of drug overdose death circumstances for all unintentional or undetermined intent drug overdose deaths. Participate in the State Unintentional Drug Overdose Reporting System (SUDORS) optional activity to collect preliminary opioid overdose death counts within a month of decedent date of death from a subset of interested high-burden counties.
  - Conduct several innovative surveillance projects that will include tracking public health risk of the illicit opioid drug supply, linking overdose and Prescription Drug Monitoring Program (PDMP) data to other data systems and integrating Indiana Poison Center and Emergency Medical Services data with ESSENCE.
  - Enhance and maximize Indiana's PDMP.
  - Integrate state and local prevention and response efforts by partnering with the Marion County Public Health Department, implementing the Indiana Communities Advancing Recovery Efforts Extension for Community Healthcare Outcomes, partnering with the Indiana Department of Education and the Indiana United Ways (IUW) to implement school-based drug prevention programs, and increasing preventative services and decreasing the likelihood of substance use and abuse among adults and children.
  - Establish linkages to care for those with substance use disorder by partnering with FSSA to build infrastructure and service systems to support transportation

costs, partnering with PACE, Inc., to increase peer recovery reach and partnering with IUW to provide technical assistance to a community partner to implement an electronic referral and follow-up tool.

- Provide support to providers and health care systems by creating and implementing online opioid-prescribing dentistry courses and working with EDs to implement post-overdose protocols.
  - Enhance public safety partnerships by providing harm reduction training to law enforcement officials and building collaborations among public health and public safety through the annual Public Safety and Public Health Opioid Conference.
  - Empower individuals to make safer choices by partnering with the Indianapolis Colts to advertise the CDC's RxAwareness campaign; maintaining the OptIN website, which connects substance users to naloxone and treatment resources; and collecting data on adverse childhood experiences through the Behavioral Risk Factor Surveillance System.
  - Propose an innovative project focused on decreasing the rates of hepatitis C in high-risk populations by training inmates as peer educators.
  - Serve as a peer-to-peer learning mentor for other states attempting to implement overdose fatality review teams.
- IDOH received \$1 million over three years from the CDC to gather critical data on violent deaths using the NVDRS.

## 2020

- The Division of Trauma and Injury Prevention logged 9,830 hours to support COVID-19 pandemic efforts in 2020.